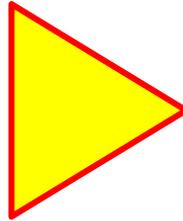


**Cooling - FS BM 60 cm**  
**Facelift X<sup>2</sup>**  
**Total No Frost**  
**Artica & Clever Main Board**

---

# General Information - Legend:



**Please, press to open the LEGENDS for all products brands.**

# General Information:

## BRANDS:

- Whirlpool, Hotpoint, Bauknecht

## NEW AESTHETIC:

- Door Touch
- Clever In & Out
- Artica led

## MAIN BOARD:

- Artica and Clever main board

## PRODUCTION SITES:

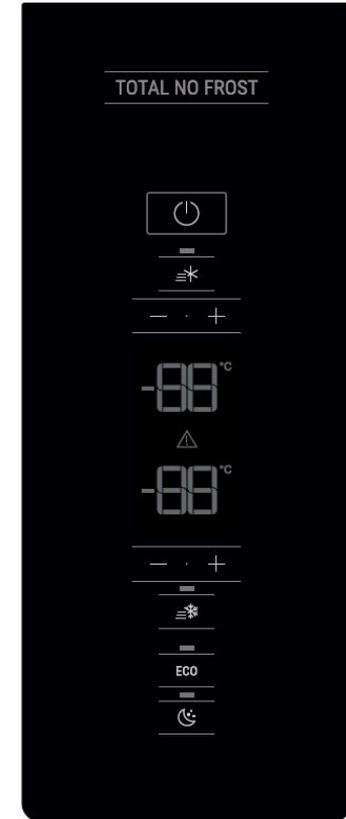
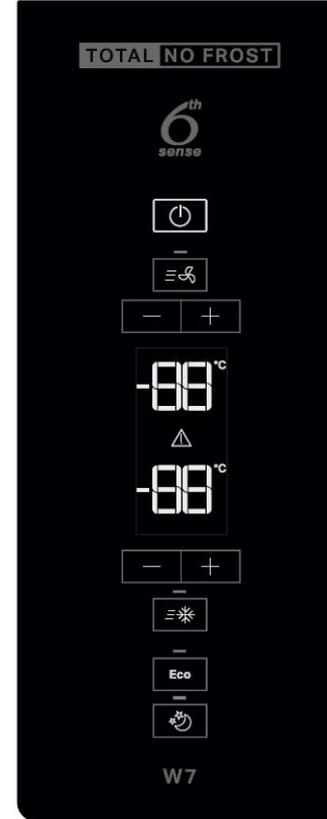
- Wroclaw

## VOLUMES:

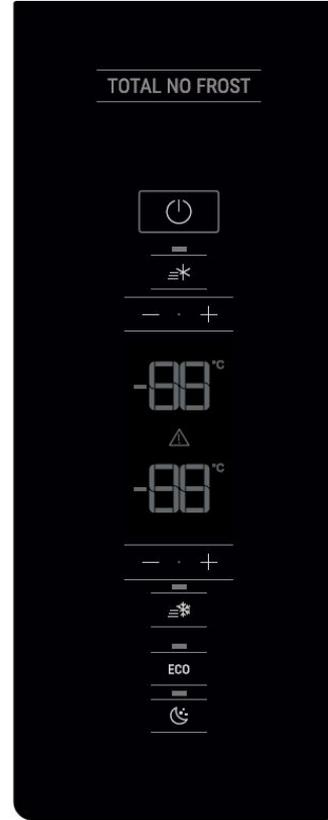
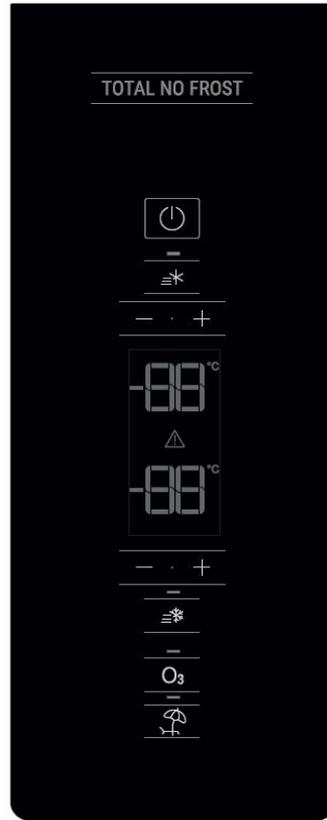
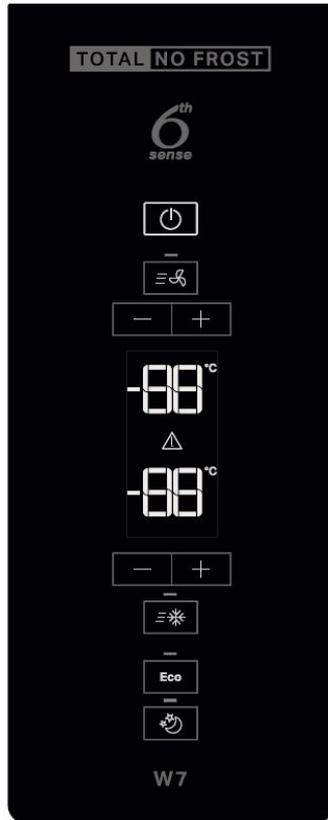
- 530.000 pieces for 2019 - 135 SKUs

## COUNTRIES INVOLVED (Rump Up):

- Uk, Poland, France, Germany
- In a second step: all others EMEA markets

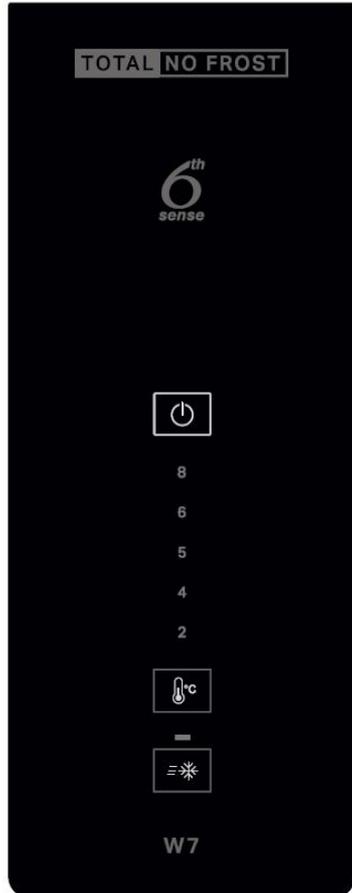


# General Information – HMI: DOOR TOUCH



- Stand-by button
- Fast Cool button + LED
- RC Temp regulation buttons
- RC active set-point digits
- Alarm LED
- FC active set-point digits
- FC Temp regulation buttons
- Fast Freeze button + LED
- Eco / O3 button + LED
- Goodnight / Holiday button + LED

# General Information – HMI: CLEVER OUT



Stand-by button

Set-point LEDs

Temp regulation button

Fast Freezing LED

Fast Freezing button

# General Information – HMI: CLEVER IN



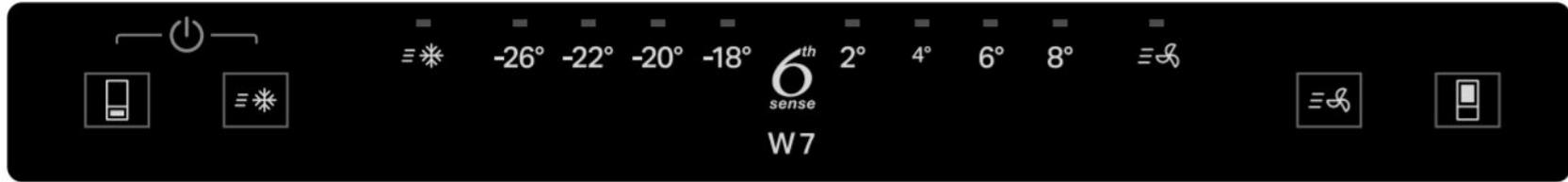
Stand-by  
button

Temp. regulation  
button

Set-point LEDs

Fast Freezing  
button + LED

# General Information – HMI: ARTICA LED



Fast Freezing button

Set-point LEDs

Fast Cooling / O3 LED

RC Temp regulation button

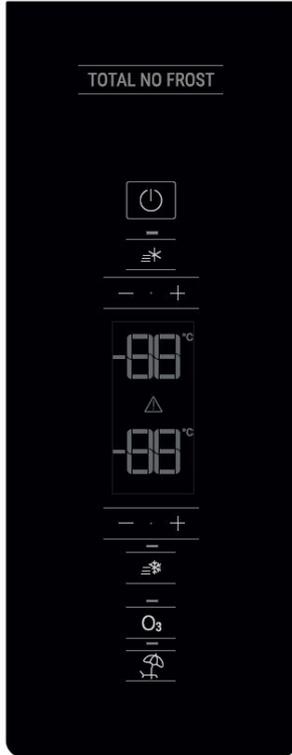
FC Temp regulation button

Fast Freezing LED

Fast Cooling / O3 button

Stand-by

# What happens - in case of HMI problems:



If the HMI (user interface) does not work for some reason or the wiring between the ACU (Appliance Control Unit) and the HMI (Human Machine Interface) has problem, the product will continue to work using the LAST parameters setted by the customer.

In any case, the usability is guaranteed !!!!

Absolutely, it is not possible to active Service Test and it is not possible to identify some other problem (Fault) that product could have.

# Temperature Adjustment:



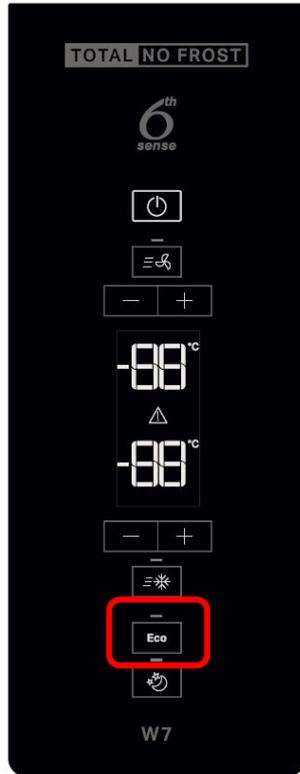
## Fridge Adjustment:

The product has up to 7 levels of temperature control, which are: +8; +7; +6; +5; +4; +3; +2; (*4 cyclic regulations are available for the Artica Led board, 5 cyclic regulations are available for Clever In and Clever Out*). By pressing the dedicated buttons, the temperature will change until it reaches the desired temperature.

## Freezer Adjustment:

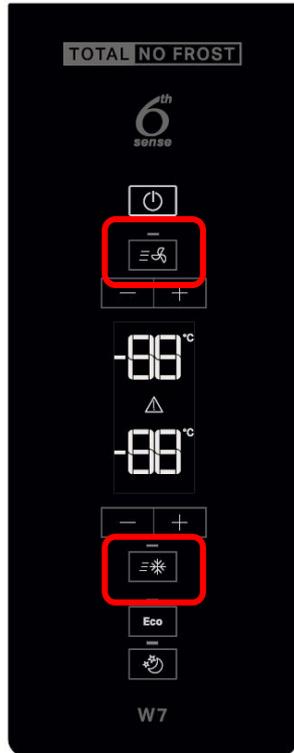
The product has up to 9 levels of temperature control, which are: -18; -19; -20; -21; -22; -23; -24; -25; -26 (*4 cyclic regulations are available for the New Entry Led board*). By pressing the dedicated buttons, the temperature will change until it reaches the desired temperature.

## ECO option:



**The ECO option:** is activated and deactivated by pressing the relative key. When the “ECO” function is active, the temperatures of +5°C in the fridge compartment and -18°C in the freezer compartment are automatically set. The fridge air probe determines when to start and stop chilling the fridge compartment based on the temperature setting on the display board. When the fridge compartment needs to be cooled, the compressor is activated, the fan switched on and the damper opened. At the end of every cooling demand from the fridge compartment, the freezer compartment is always cooled by closure of the damper with the freezer fan running for a fixed time, which can vary depending on the setting, from a minimum of 5 minutes to a maximum of 35 minutes. The freezer air probe determines when to start and stop chilling the freezer compartment based on the temperature readings. When the freezer compartment needs to be cooled, the compressor is activated and the freezer fan switched on. Damper remains closed.

# Options:



## Super Cool / Speed Cool:

It operates by setting the target temperature of the *fridge at a colder value* in order to optimize the cooling capacity and making *the compressor operate at the colder target temperature for 6 or 12 hours (depending on the variant)*. Once this interval has elapsed, the fridge resumes normal operation.

In some models, Super Cool will be replaced by the “Good Night” function.

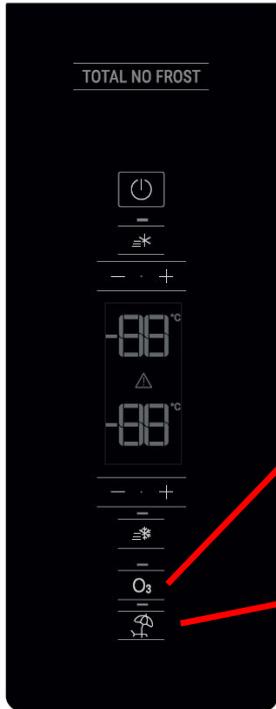
## Super Freeze / Quick Freeze:

Only the *24-hour Super Freeze* function is available (remember that the 48-hour Super Freeze function has been eliminated completely from ALL products of the Artica Platform).

When this function is activated, the appliance will defrost only if the time since the last defrost is longer than 3 consecutive hours of ON Compressor. A *colder target temperature* is set automatically, in background after activating the function in order to optimize the freezing capacity.

*The function ends at the end of 24 hours or by manually deactivating it via the dedicated key.*

# Options:



## Active Oxygen:

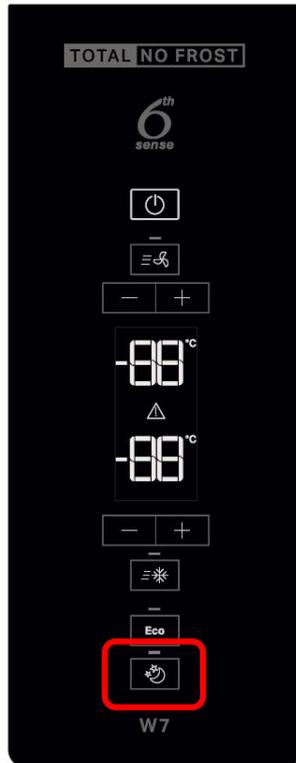
The device works according to a time duty cycle of 2 minutes ON and 13 minutes OFF. When the fridge door is opened the device turns off, when it is closed the cycle starts again with 2 minutes ON.

**To check the correct operation of the device it is necessary to open the refrigerator door, and place a magnet on the dashboard, to simulate the door closing. Check the appliance operation LED switching on and off.**

## Holiday:

The target operating temperatures are set automatically (**Fridge: +12°C / Freezer: -18°C**).

# Options:



## Good Night (only for appliances with VCC compressor):

*The purpose is to keep the temperatures at the level preset by the user, while minimizing the noise level, for a period of 6 hours.*

When the function is selected, the compressor stays on the whole time at a speed of 1300 rpm and, fan will run at the 7 Volts speed.

Should the fridge and freezer temperatures happen to exceed the respective safety thresholds for a period longer than 30 minutes, the function will deactivate automatically and the control system seeks to restore safe temperatures in as short a time as possible to ensure that the food in the appliance does not spoil.

# Components:

Temperature (degC)	Resistance (Ohms)
-30	175199,63
-25	129286,93
-20	96358,16
-15	72500,36
-10	55045,94
-5	42156,97
0	32554,20
5	25338,55
10	19872,17
15	15698,46
20	12487,74
25	10000,00
30	8059,08
35	6534,72
40	5329,87
45	4371,72
50	3605,27
55	2988,68
60	2489,95
65	2084,43
70	1753,04

## Temperature probe:

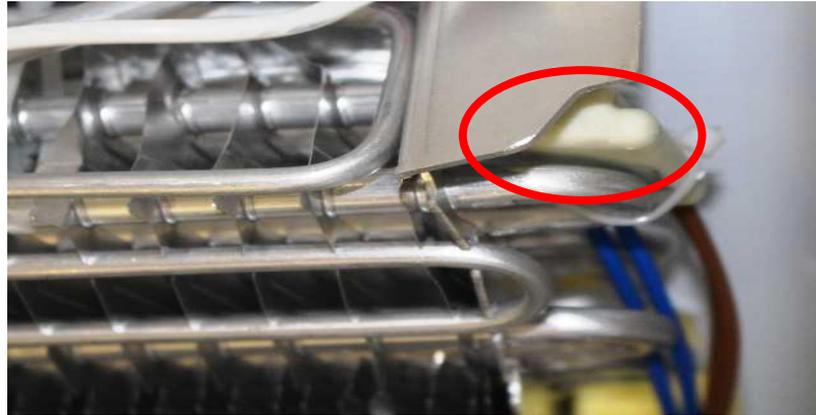
The temperature probes are the components that send the temperature data used to the ACU for switching on, modulation and switching off the compressor and also to manage the defrost ending.

The probes are NTC type and they can be checked using the table here aside.

The probes available in these products are:

1. Refrigerator air probe: Which measures the temperature inside the refrigerator compartment and relays to the ACU any cooling demand and/or the fact that the thermostat temperature has been reached.
2. Freezer air probe: Which measures the temperature inside the freezer compartment and relays to the ACU any cooling demand and/or the fact that the thermostat temperature has been reached.
3. Freezer Evaporator probe: manages the end of the defrost cycle by detecting when the temperature of +17/40°C is reached.

## Components:



### Double Thermal Fuse:

The TOTAL NO FROST products have two thermal-fuse; they are protection components that intervene in case of malfunction of any control component such as the ACU, NTC, etc.

### Technical data:

Maximum current:	10A
Nominal tension:	250V
Temperature of intervention:	72°C

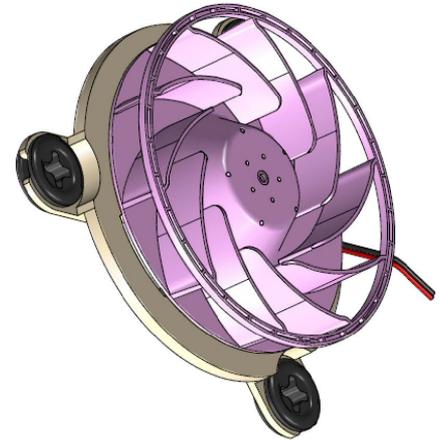
# Components:

## Freezer Fan:

The freezer fan available in Full No Frost appliances has the task of pushing air from the evaporator to the freezer compartment or to the fridge compartment, it depending of who is requiring cold air.

### This component operates at 3 speeds:

- **from 7 to 10 Volt:**
  - During defrost to remove the possible presence of water on the fan impellers
  - During the product normal operation
  - During the autotest
- **10 or 12 Volt:**
  - When the compressor stays On for more than 3 hours
  - When the “SUPER” functions are activated



## Components:



### Damper On/Off:

This damper (two wiring) is used in Clever products.

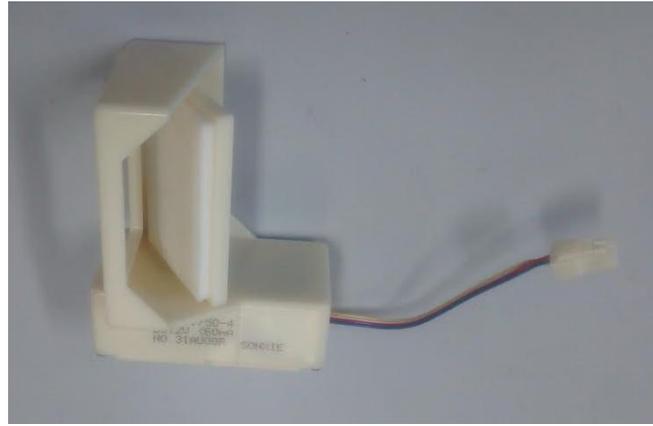
For each request of cold air request, in the refrigerator compartment, the compressor and the freezer fan start operating and the damper opens to "satisfy" these request.

After reaching the target temperature the damper will be closed again. The compressor and the fan will be switched off.

In case of cold air request inside of the freezer compartment, it will remain closed.

When the fridge door is opened during a cooling demand from the fridge compartment, the damper is closed and the freezer fan is switched off if there is no cooling demand from the freezer. When the fridge door is closed again, the damper is re-opened and the fan is switched back on.

## Components:



### Stepper Damper:

The damper used in the other products is the four-wire stepper type.

For each request of cold from the refrigerator compartment the compressor and the freezer fan start operating and the damper opens to "satisfy" it.

After reaching the target temperature the damper will be closed again. The compressor and the fan will be switched off or not depending if there is a request of cold or not in the freezer compartment.

When the fridge door is opened during a cooling demand from the fridge compartment, the damper is closed and the freezer fan is switched off if there is no cooling demand from the freezer. When the fridge door is closed, the damper is re-opened and the fan is switched back on again.

## Components:



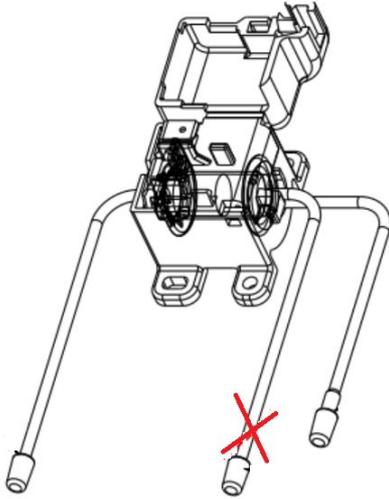
### **The heating element:**

The heating element are switching On when condition to defrost procedure are reached.

During this period, all components are off less than the heaters.

When end-of-defrost temperature is achieves, around +17/40°C, the heating elements will be switched off.

# Stop Valve



## What is it?

The Stop valve is exactly the same component used on electrovalved products. The difference is that, in this case it as just one route opens and the other one is blocked (to stop the gas flow within the thermal-dynamic circuit)

## When it works?

Valve switches to blocked patch when compressor turns OFF and switches to open position when compressor ON request is detected.

## Why is it like that?

To prevent high pressure from condenser side of the circuit to enter evaporator/suction line (low pressure side) during compressor OFF. In other words, to maintain the gas pressure difference between the high and the low pressure areas.

That helps to maintain lower pressure on compressor suction side and due to that allows easier start of compressor - lower power consumption.

**This will permit SAVE ENERGY during the switch on compressor moment !!!**

## Stop Valve:

- Voltage: 220-240VAC, 50-60Hz
- Current: -
- Power: -
- Resistance value: 2800 Ohm  
+/-150 Ohm @ T=20°C

# Alarms:



## “Door Opening” Alarm:

The activation of this type of alarm (where provided) has not undergone any kind of modification. If the refrigerator door is left open continuously for more than 2 minutes this alarm is triggered; it consists in the fridge lamp flashing and at the same time the emission of an acoustic signal (some "BEEPS") to draw the user's attention.

To cancel this alarm just close the fridge door.

# Alarms:

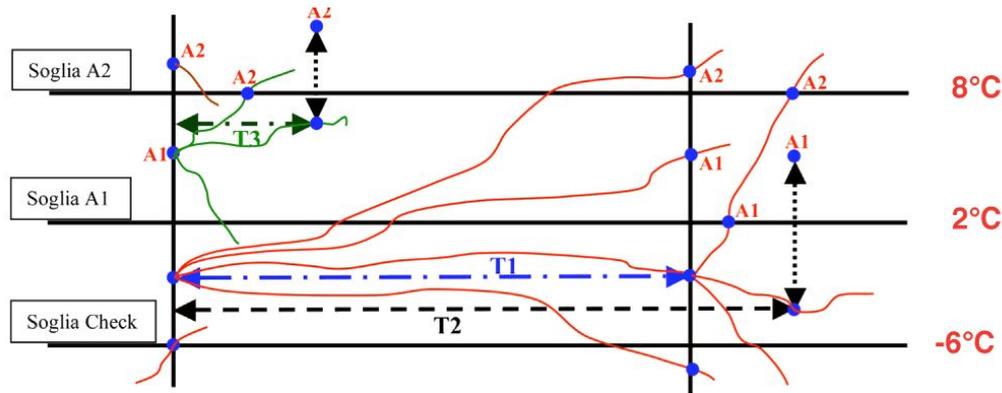


**A1 Alarm:** Flashing the first led and the last one of the freezer compartment

**A2 Alarm:** Flashing ALL the leds of the freezer compartment

Product must have freezer air sensor to visualize the Alarms when it will be necessary.

# Alarms:



**T1 = 2 1/2 Hours**

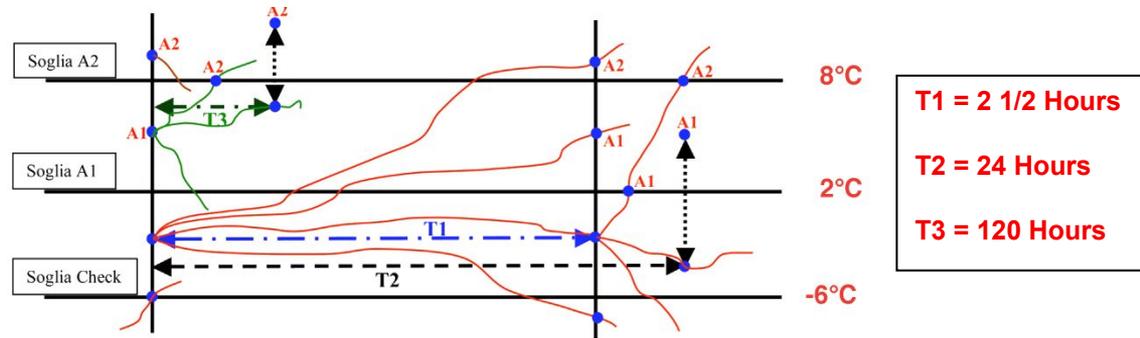
**T2 = 24 Hours**

**T3 = 120 Hours**

## Description "A1" Alarm:

- The "A1" alarm is only displayed if there is no Pre-Fault or Fault.
- The alarm is activated when the temperature measured by the freezer air probe is such that food might be damaged. In this case, it is advisable to use food immediately or cook it and then refreeze it.
- When an alarm condition occurs, it is indicated on the user interface with the message "A1" or the simultaneous flashing of specific LEDs, in addition to an acoustic signal.
- The buzzer can be muted by opening and closing the refrigerator door.
- The alarm can be reset by switching the appliance off using the control panel.
- Fridge compartment function remains the same as during normal functioning.
- The freezer compartment functions at temperatures that will not refreeze the food stored inside (0°C).
- Defrost cycles are forced every 2 hours.

# Alarms:



## Description "A2" Alarm:

- The "A2" alarm is only displayed if there is no Pre-Fault or Fault.
- The alarm is activated when the temperature measured by the freezer air probe is so high or has remained above the safety threshold for so long that all the food stored in the freezer compartment needs to be thrown away.
- The alarm condition is indicated on the user interface with the message "A2" or the simultaneous flashing of specific LEDs, in addition to an acoustic signal.
- The buzzer can be muted by opening and closing the refrigerator door.
- To reset the alarm, switch the appliance off.
- Fridge compartment function remains the same as during normal functioning.
- The freezer compartment attempts to reach a temperature of "- 12°C" in order to avoid unpleasant odors inside the freezer compartment.
- Defrost cycles are forced every 2 hours.

# Defrost

# Defrost cycle:

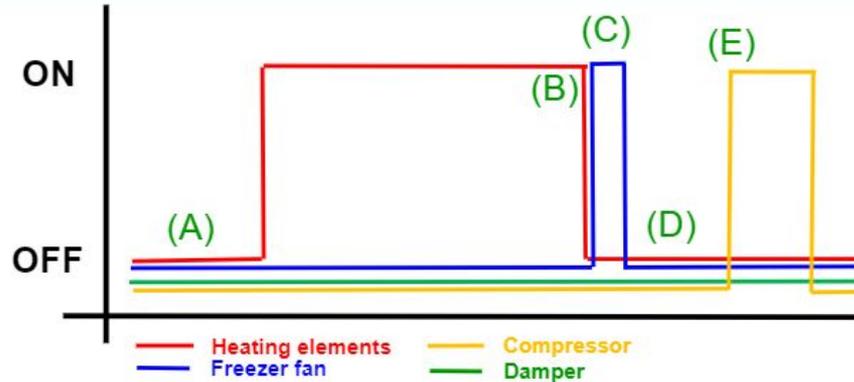
## Start of the defrost cycle depends on:

- Duration of last defrost
- Time of fridge door opening (every 5 cumulative minutes of door open time reduces the start of the next defrost cycle by one hour)
- Compressor ON cumulative time (10 / 12 hours)
- Time between 2 defrost cycles (minimum 12 hours / maximum 30 hours)

## Defrost cycles activated by particular circumstances:

- If the Door Open Alarm remains active for more than 30 minutes, a defrost cycle will be performed every 2 hours until the door is closed (Alarm Reset)
- In the event of activation of the Super Freeze Function, if at least 3 cumulative hours of Compressor ON have passed since the last defrost cycle and always at the end of the Super Freeze Function
- If the Fridge Air Probe registers a value above +10.5°C for 4 consecutive hours.
- In the event of Alarms "A1" and "A2", a defrost cycle is carried out every 2 hours.

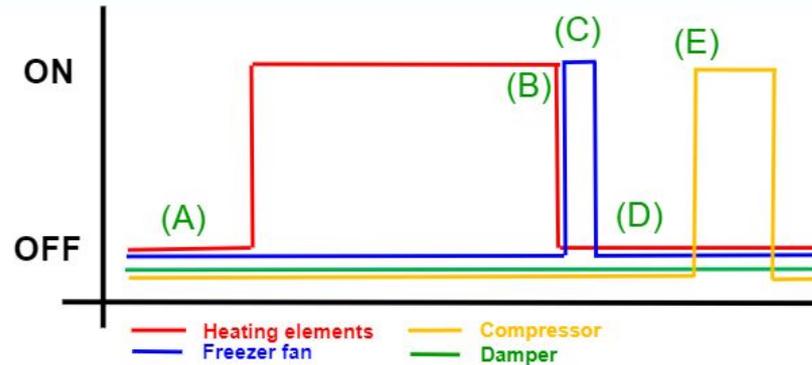
# Defrost cycle - Products with On/Off compressor:



## Description:

- **(A)** - All loads are disabled and the defrost heating elements are switched on.
- **(B)** - The heating elements switch off when the freezer evaporator probe reaches +17/+40°C or after 50/70 minutes (Defrost Time Out). In case of damaged freezer evaporator probe, the defrost Time Out will be reduced to 25 minutes.
- **(C)** - As soon as the heating elements switch off, the freezer fan activates for 5 seconds in order to deliver warm air to the cold air inlet pipe from the freezer compartment into the fridge compartment and to remove the drop of water on the fan impellers. All the others components remain switched off during this time.
- **(D)** - All the loads remain disabled for around 12 minutes to allow the water to flow into the compressor drawer.
- **(E)** - The compressor is switched on to cool the coil that has heated up during defrosting until a temperature of -18°C is reached before product starts to work normally again.

# Defrost cycle - Products with VCC compressors:



The conditions for activation of the defrost cycle are:

If (Fridge air temp. > (Temp. set by the display + 2°C) for 3 hours **and**  
 Evaporator sensor Temp. < -25°C for 30 minutes) **or**  
 Time since last defrost > 24 hours

Fridge air temp. > (Display Temp. + 2°C) for 180 minutes

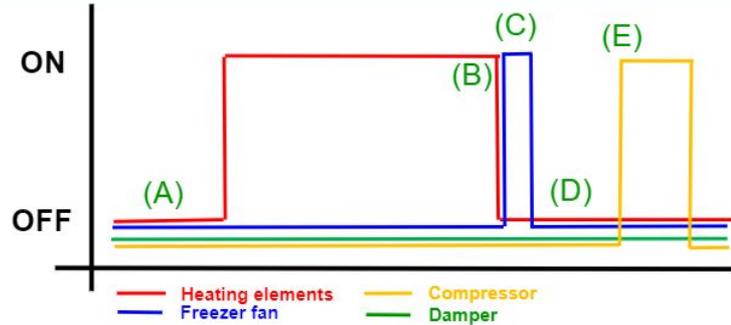
**&**

Evaporator probe Temp. < -25°C for 30 minutes

**or**

Time since last defrost > 24 hours

# Defrost cycle:



In normal operating mode, the "Defrost End" occurs with:

- Evaporator sensor temperature  $\geq +17/40^{\circ}\text{C}$  (depending product)
- Time out 50/70 minutes (depending product)

If appliance is undergoing power consumption test:

- ECO active
- At least 14 hours since fridge door last opened

In power consumption test mode, defrost will take place every 48 hours.

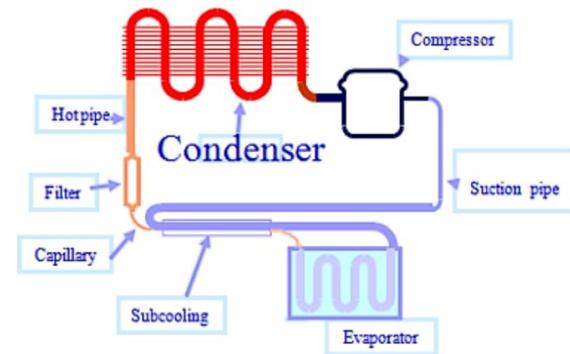
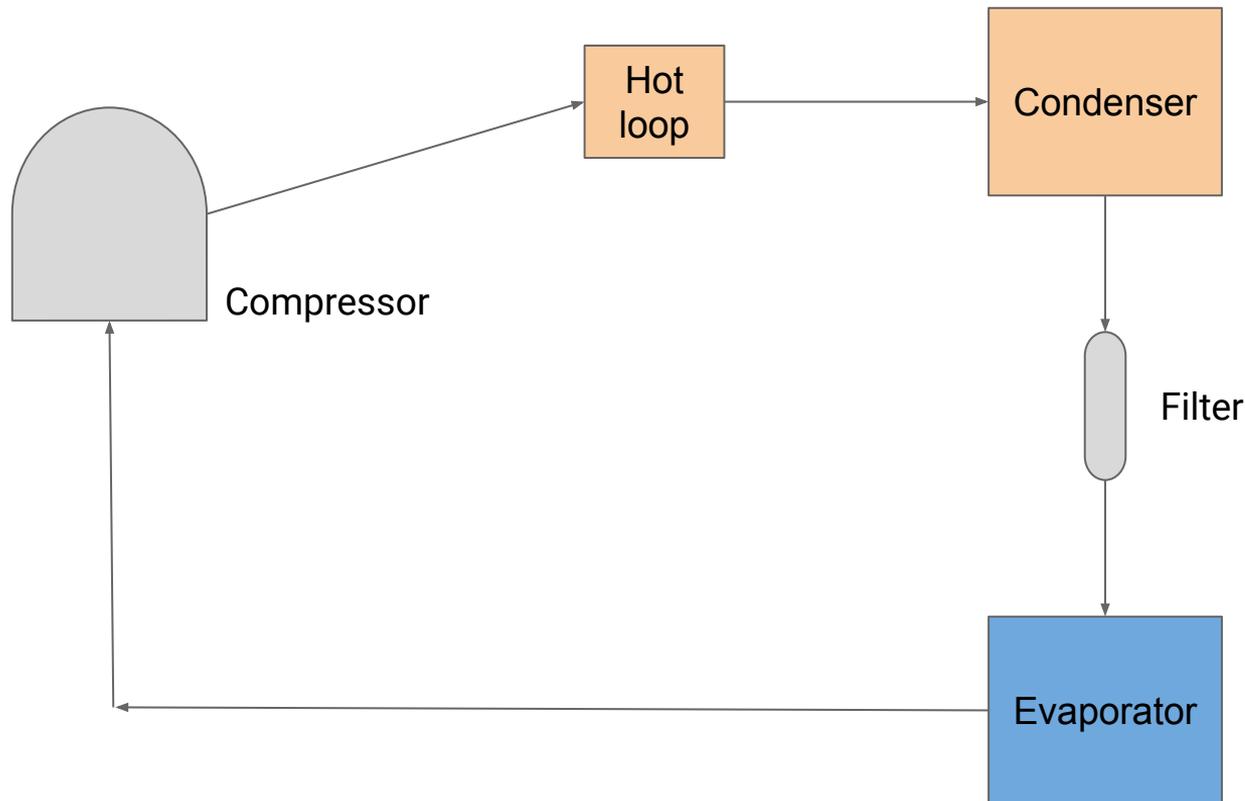
End of Defrost conditions:

- Evaporator temperature  $\geq +17/40^{\circ}\text{C}$  or TimeOut 50/70 minutes.
- If case of faulty Evaporator Probe the defrost duration is 25 min.

# Thermal-Dynamic circuit and internal Air Flow

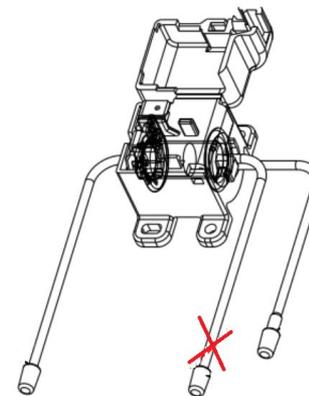
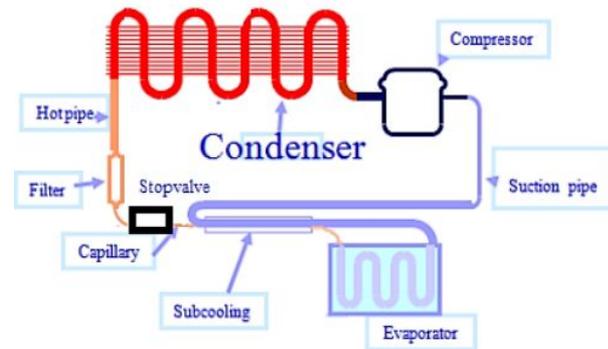
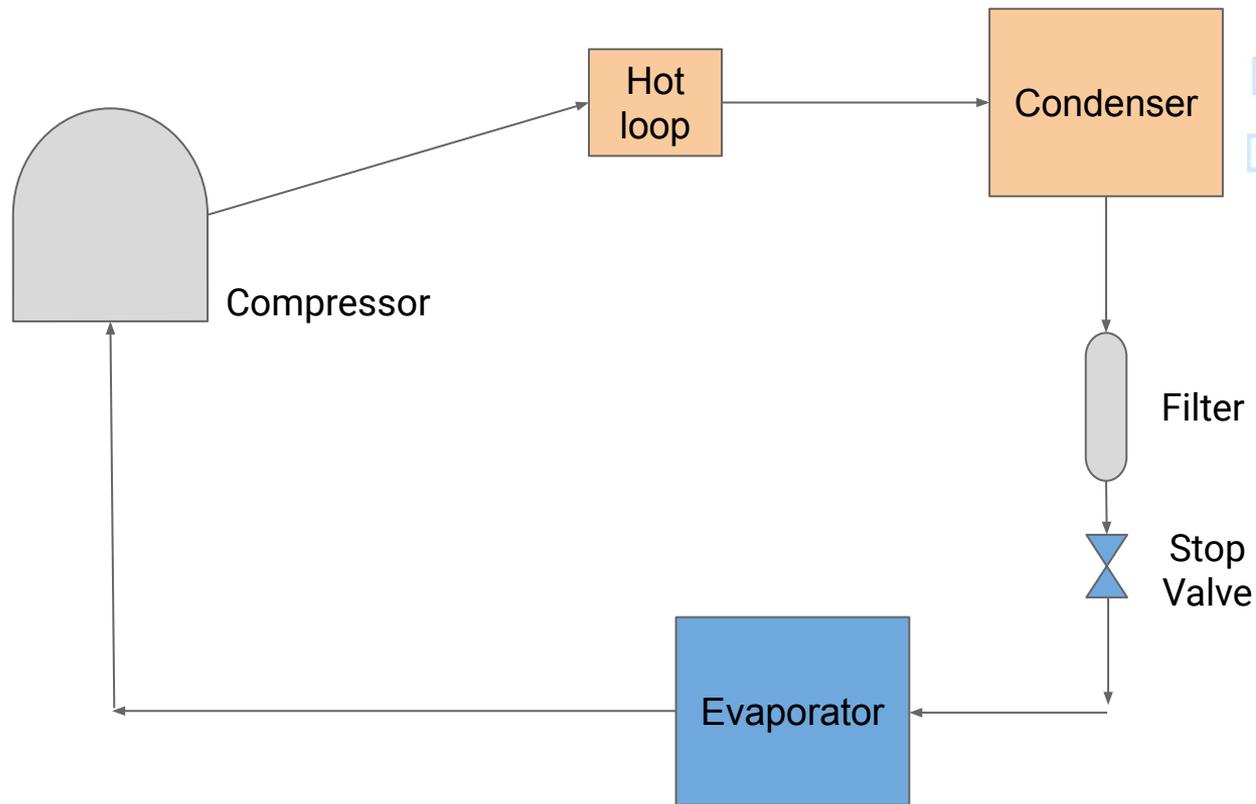
# Thermal-Dynamic circuit:

(Total No Frost without Stop Valve and On/Off Compressor)

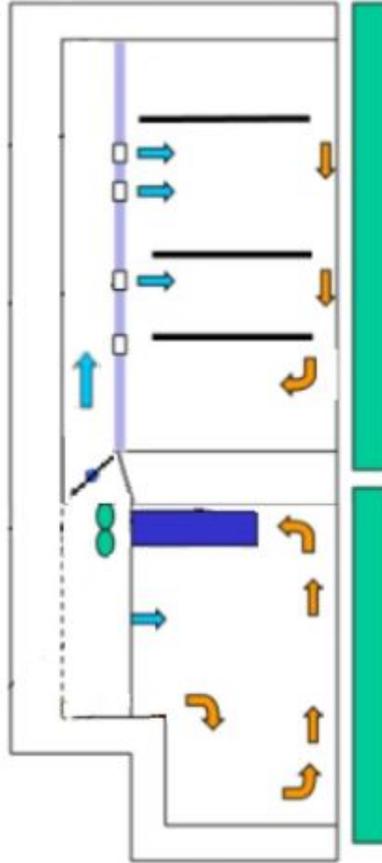


# Thermal-Dynamic circuit:

(Total No Frost with Stop Valve and VCC Compressor)

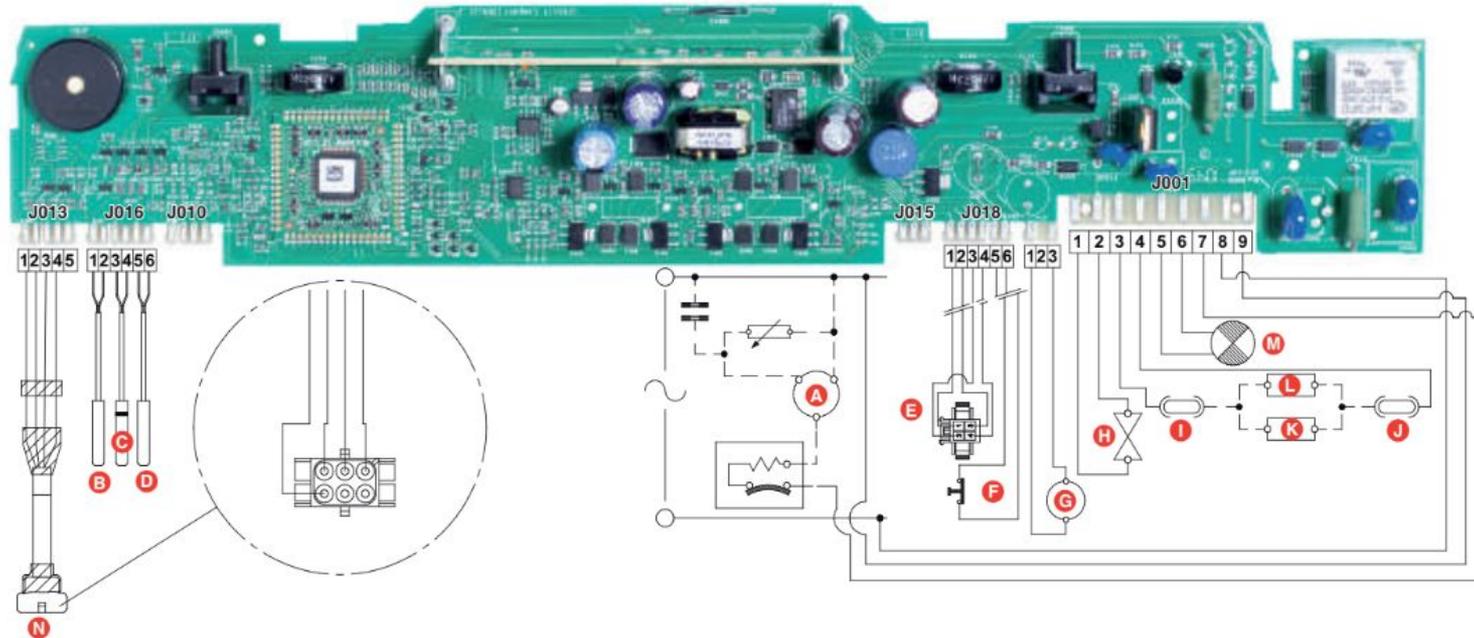


# Internal Air flow:



# Wiring Diagram

# Wiring diagram: Total No Frost with Artica Entry LED - On Off compressor

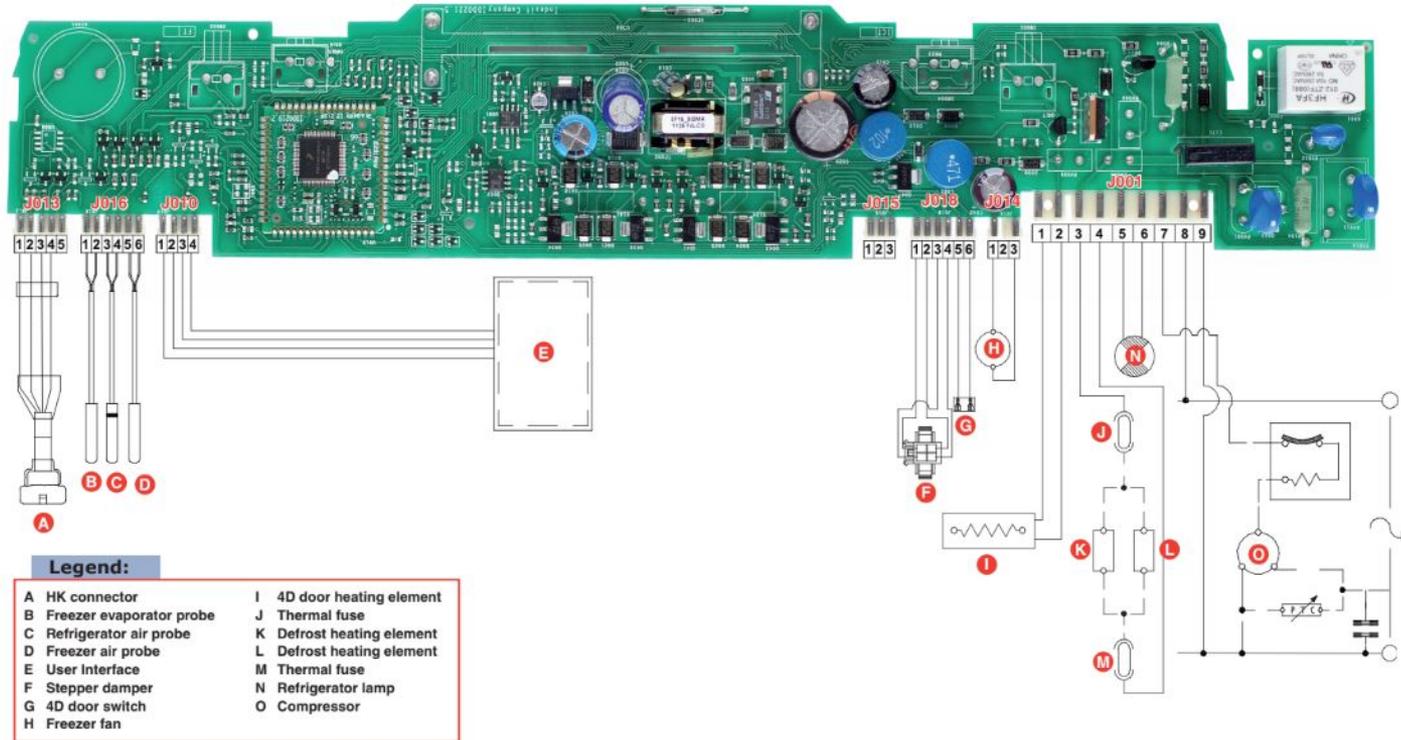


**Key:**

A	Compressor	H	Solenoid valve
B	Freezer evaporator probe	I and J	Fuses
C	Refrigerator air probe	K and L	Defrost heating elements
D	Freezer air probe	M	Fridge light
E	Stepper damper	N	HW key connector
F	Fridge door switch		
G	Freezer fan (12 Volt)		

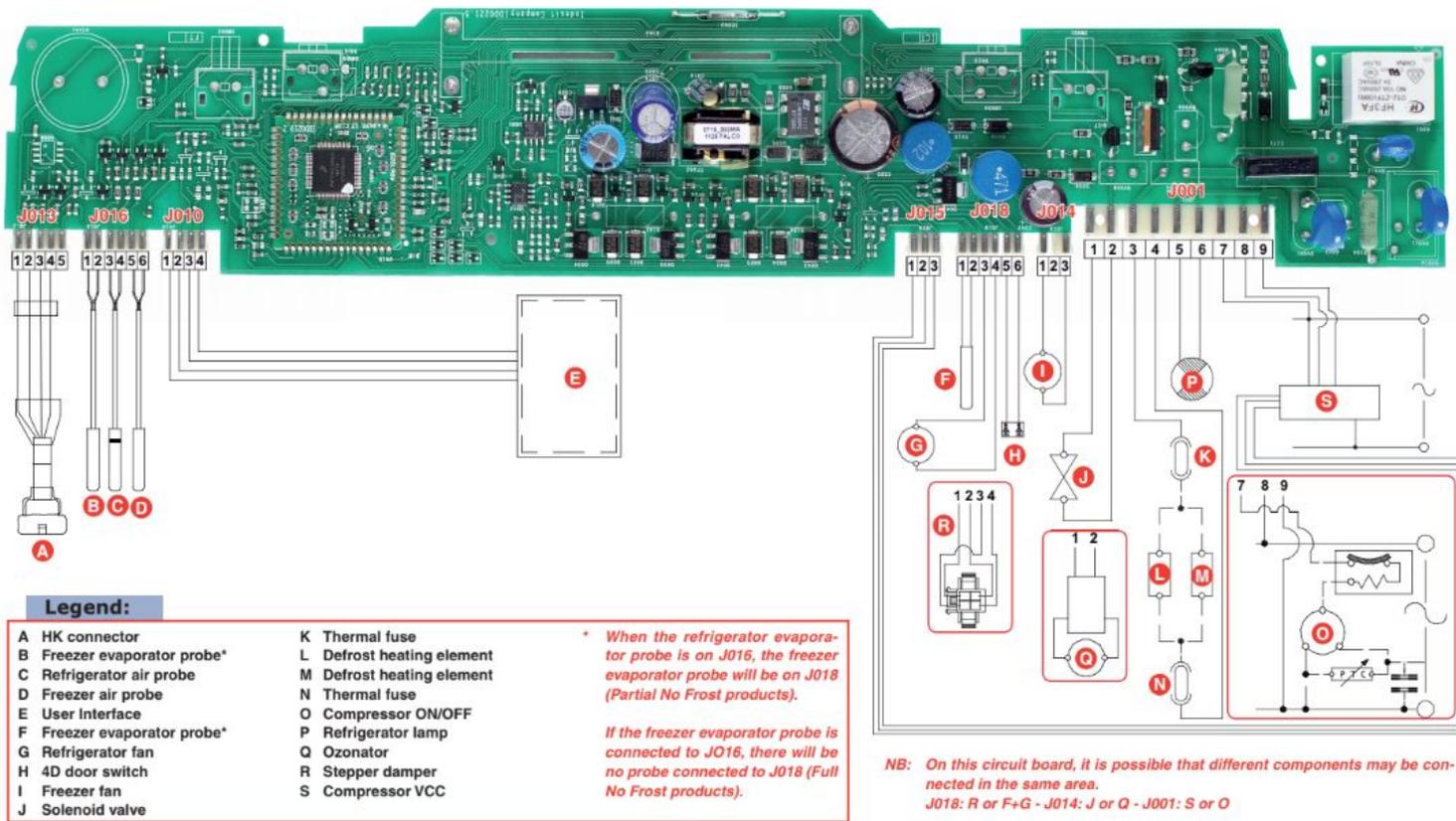
# Wiring diagram:

## Total No Frost with Artica Entry (with external UI) - On Off compressor



# Wiring diagram:

## Total No Frost with Artica Entry (with or w/o external UI) - VCC Comp.

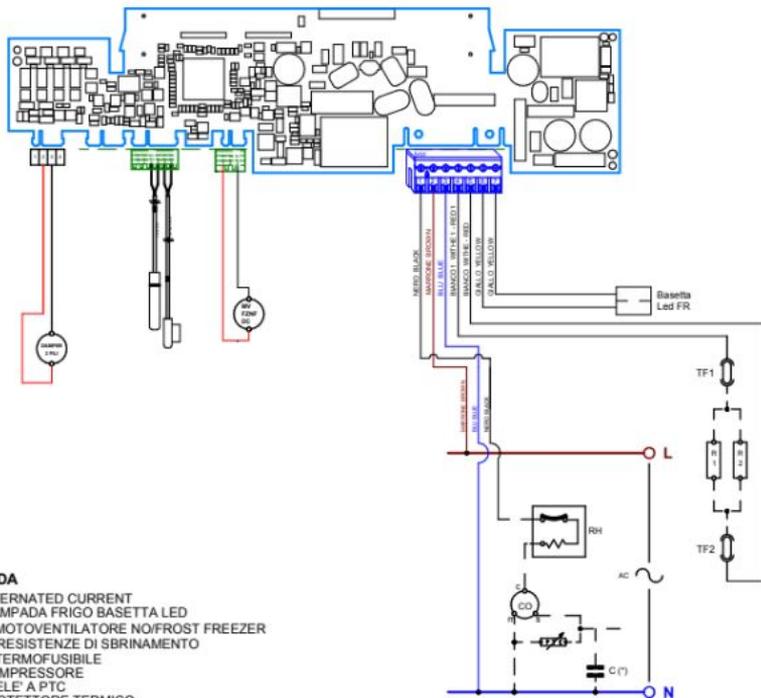


# Wiring diagram:

## Total No Frost with Clever 2.0 (with or w/o external UI) - On Off compressor



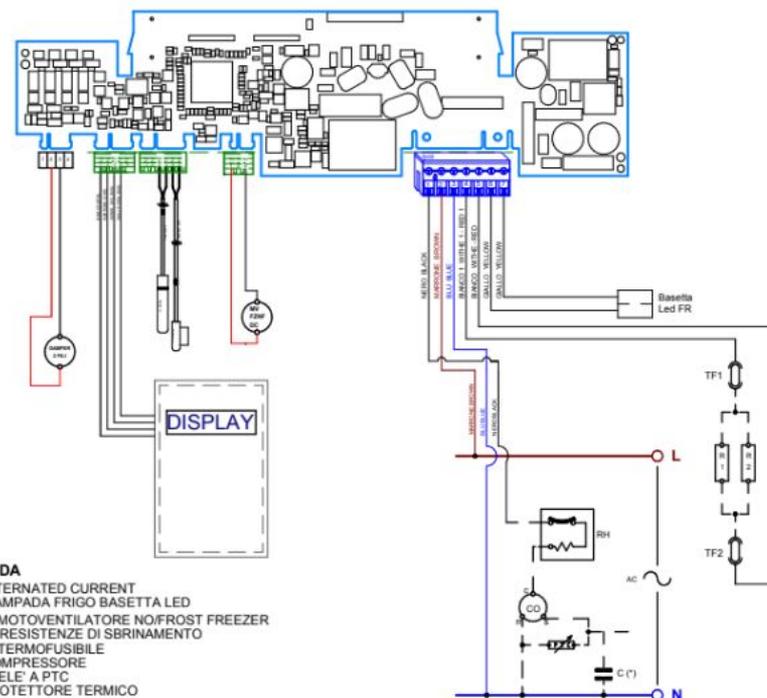
**CB FNF LODZ - CLEVER 2.0**



- LEGENDA**
- LN : ALTERNATED CURRENT
  - LFR : LAMPADA FRIGO BASETTA LED
  - MVFZ : MOTOVENTILATORE NO/FROST FREEZER
  - R1-R2 : RESISTENZE DI SBRINAMENTO
  - TF1-2 : TERMOFUSIBILE
  - CO : COMPRESSORE
  - PTC : RELE' A PTC
  - RH : PROTETTORE TERMICO
  - C (\*) : CONDENSATORE DI MARCIA (OVE PREVISTO)
  - SND : SONDE DI TEMPERATURA



**CB FNF LODZ - CLEVER 2.0 (Clever Out)**



- LEGENDA**
- LN : ALTERNATED CURRENT
  - LFR : LAMPADA FRIGO BASETTA LED
  - MVFZ : MOTOVENTILATORE NO/FROST FREEZER
  - R1-R2 : RESISTENZE DI SBRINAMENTO
  - TF1-2 : TERMOFUSIBILE
  - CO : COMPRESSORE
  - PTC : RELE' A PTC
  - RH : PROTETTORE TERMICO
  - C (\*) : CONDENSATORE DI MARCIA (OVE PREVISTO)
  - SND : SONDE DI TEMPERATURA
  - DISPLAY : DISPLAY PORTA FRIGO

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## All link in original versions:

[Total No Frost with Artica Entry LED - On Off compressor](#)

[Total No Frost with Artica Entry \(with external UI\) - On Off compressor](#)

[Total No Frost with Artica Entry \(with OR w/o external UI\) - Variable Speed compressor](#)

[Total No Frost with Clever 2.0 \(with OR w/o external UI\) - On Off compressor](#)

### NOTE:

External UI used together with Artica Entry is called Door Touch

External UI used together with Clever Main 2.0 is called Clever Out

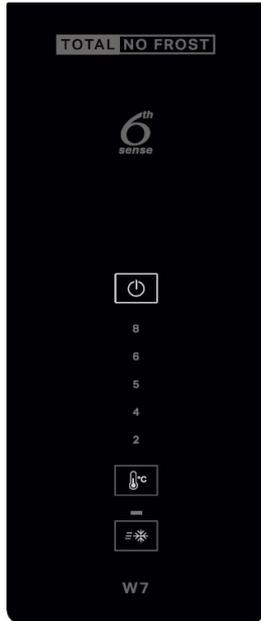
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## Serviceability:

- **DEMO mode**
- **Autotest sequence**
- **Start Autotest**
- **Autotest sequence for Washing Machine & Wash & Dryer Machines**
- **Failure indication**
- **Failure codes**
- **Programming**

Demo Mode *is NOT PRESENT* in X<sup>2</sup> products !!!!

# Service-Test activation:



## For the Activation:

Starting from the product off, press the Super Freeze (Quick Freeze) or Super Cool (Cool Speed) button, depending on the option on the product, for 6/12 seconds. If there are present both buttons, press Super Freeze !!!

All LEDs will be lit simultaneously for 2 seconds and at the same time an acoustic signal of the same duration will be heard. Then the Autotest sequence will start.

**Note:** If there is a “**Last Fault**” this will be displayed for 15/20 seconds, after 2 seconds of LEDs lighting on and before starting the control sequence. The **Last Fault** only clears at the end of the Autotest sequence.

## For Deactivation:

1. Automatically at the end of the Service Test. Appliance goes back to "OFF"
2. By switching on the appliance (using "On/Off" button)
3. Unplugging the appliance from the electrical supply

# Service-Test activation:

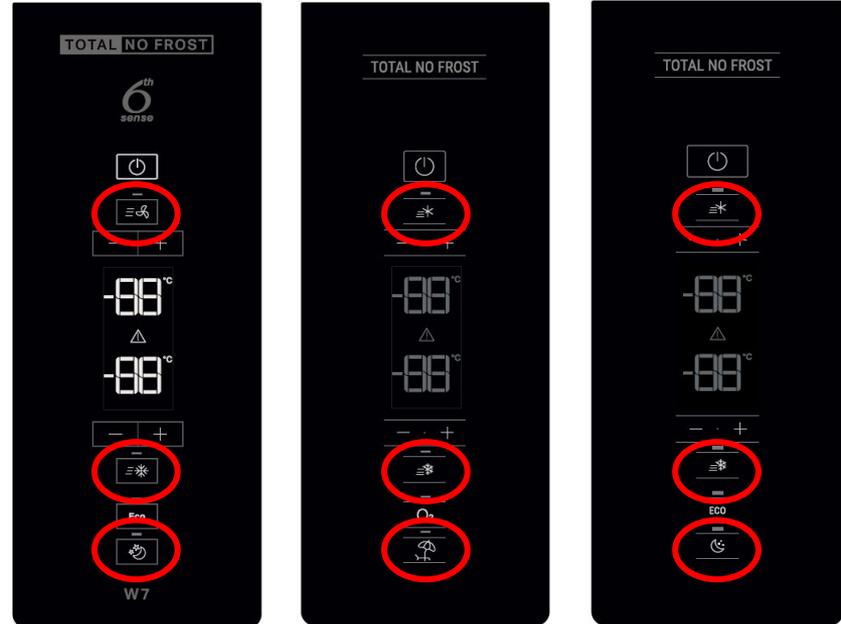
## Service-Test Activation:

The function can be activated only with the appliance turned OFF by pressing the buttons HOLIDAY/GOODNIGHT (depending on the configured button), SUPER COOL and SUPER FREEZE simultaneously for 6 seconds.

## Service-Test Deactivation:

The appliance can exit the autotest procedure in 3 different ways:

1. After 255 seconds (duration of procedure)
2. By switching on the appliance (using On/Off button)
3. By unplugging the appliance from the mains socket



## Service-Test Sequence:

Step	Duration	Action	Light	Notes
1	5 seconds	Pause	OFF/ON	
2	1 second	Probe check	OFF/ON	If the probes have not failed, skip to step 3. If the probes have failed, skip to step 6
3	4 seconds	Pause	OFF/ON	
4	125 seconds	FZ fan ON Heating element ON (*) Damper open	OFF/ON	
5	120 seconds	FZ fan ON Heating element ON (*) Damper closed	OFF/ON	Skip to step 8
6	125 seconds	FZ fan ON Heating element ON (*) Damper open	Flashing	
7	120 seconds	FZ fan ON Heating element ON (*) Damper closed	Flashing	
8	Autotest closes			

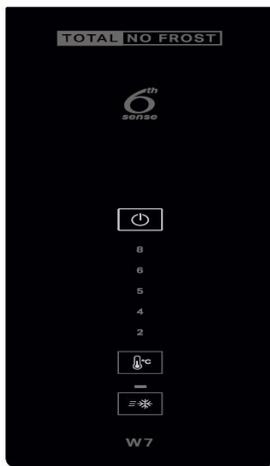
**(\*) Important:** Bear in mind that the heating elements are connected in parallel way between them so, in the event in which only one of them is interrupted, this Fault will not be detected and the Autotest procedure will finish without signalling any problems.

## Service-Test Sequence:

Step	Duration	Action	FG lamp	Notes
1	6 seconds	FZ ON fan	OFF	
2	20 seconds	Defrost Heating Element ON Show last fault	OFF	If no faults persist in the memory skip directly to step 3
3	1 second	Pause	OFF	
4	1 second	Probe Test	OFF	If there are no probe faults, it skips to at step 3. If there are probe faults, it skips to step 5.
5	1 second	Pause	OFF	
6	125 seconds	FZ Fan ON Defrost Heating element ON*	ON	After this test the sequence proceeds to step 8
7	125 seconds	FZ fan ON Defrost Heating element ON*	Blinking	
8	6 seconds	All LEDs list and beeper	OFF	
9	Autotest End			

(\*) Bear in mind that the heating elements are connected in parallel so, if only one of them is interrupted, the Fault will not be displayed.

# Fault visualization:



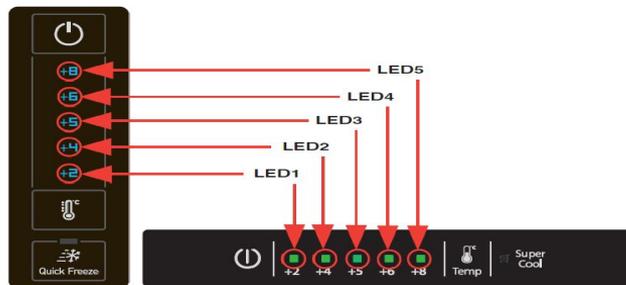
## Service Quick Guide

SQG\_CL\_39\_IT

Indesit Company, Service Department

### Tabella Fault interfaccia Clever In e Clever Out

#### Visualizzazione dei Fault interfaccia Clever In e Clever Out:



In caso di interfaccia Clever, la codifica guasto avviene in formato binario da sinistra (led meno significativo) a destra (led più significativo) e dal basso verso l'alto a seconda se l'interfaccia è Clever In o Clever Out.

FAULT	COMBINAZIONI LED				
	LED 1	LED 2	LED 3	LED 4	LED 5
F01	Acceso	Spento	Spento	Spento	Spento
F04	Spento	Spento	Acceso	Spento	Spento
F07	Acceso	Acceso	Acceso	Spento	Spento
F12	Spento	Spento	Acceso	Acceso	Spento
F24	Spento	Spento	Spento	Acceso	Acceso
F25	Acceso	Spento	Spento	Acceso	Acceso
F26	Spento	Acceso	Spento	Acceso	Acceso

#### Tabella Fault interfaccia Clever In e Clever Out

FAULT	CAUSA	AZIONI DI CONTROLLO
F01	Scheda Main difettosa	<ul style="list-style-type: none"> <li>Controllare efficienza dei contatti sul connettore CN3 su scheda;</li> <li>Sostituire scheda;</li> <li>Sostituire compressore.</li> </ul>
F04	Ventola	<ul style="list-style-type: none"> <li>Controllare efficienza dei contatti del connettore CN4 su scheda;</li> <li>Controllare l'efficienza della connessione della Ventola al connettore schiumato;</li> <li>Sostituire Ventola;</li> <li>Sostituire Scheda.</li> </ul>
F07	Resistenza sbrinamento	<ul style="list-style-type: none"> <li>Controllare efficienza contatti del connettore su scheda CN3;</li> <li>Verificare sui pin 5 e 4 del connettore sopra scritto la continuità della resistenza di sbrinamento, verificando che il valore di resistenza letta sia coerente;</li> <li>Controllare la corretta connessione della resistenza sbrinamento su scatola connessioni vano freezer;</li> <li>Controllare il corretto valore ohmico della resistenza di sbrinamento ai capi della stessa;</li> <li>Controllare la non apertura dei termofusibili;</li> <li>Sostituire resistenza;</li> <li>Sostituire scheda.</li> </ul>
F12	Mancata comunicazione tra scheda UI e scheda Main	<ul style="list-style-type: none"> <li>Controllare efficienza contatti del connettore CN2 su scheda;</li> <li>Controllare continuità connettore CN2/connettore a 5 vie della scheda interfaccia;</li> <li>Controllare l'efficienza dei contatti del connettore sulla scheda display;</li> <li>Sostituire scheda main;</li> <li>Sostituire scheda display.</li> </ul>
F24 F26	Sonda aria	<ul style="list-style-type: none"> <li>Controllare efficienza dei contatti del connettore CN6 su scheda;</li> <li>Verificare la sonda NTC controllando sul connettore CN6 (pin 3 e 4) che il valore di resistenza letta sia coerente con i dati presenti nella tabella di correlazione temperatura-resistenza;</li> <li>Scaldare anche la sonda toccandola con la mano ove possibile e controllare il variare del valore resistivo;</li> <li>In caso di sonda starata tagliare l'apposito cablaggio lato scheda;</li> <li>Sostituire scheda main.</li> </ul>
F25	Sonda evaporatore	<ul style="list-style-type: none"> <li>Controllare efficienza dei contatti del connettore CN6 su scheda;</li> <li>Verificare la sonda NTC controllando sul connettore CN6 (pin 5 e 6) che il valore di resistenza letta sia coerente con i dati presenti nella tabella di correlazione temperatura-resistenza;</li> <li>Scaldare anche la sonda toccandola con la mano ove possibile e controllare il variare del valore resistivo;</li> <li>In caso di sonda starata tagliare l'apposito cablaggio lato scheda;</li> <li>Sostituire scheda main.</li> </ul>

# Fault visualization:



Fault	LED interface Fault display		
	LED1	LED2	LED3
<b>F01</b>	Off	Blinking	Off
<b>F02</b>	On	Blinking	Off
<b>F05</b>	Blinking	Blinking	On
<b>F07</b>	Off	Blinking	Blinking
<b>F08</b>	Blinking	Blinking	Off
<b>F09</b>	Blinking	Blinking	Blinking
<b>F10</b>	On	Off	Off
<b>F12</b>	Off	Off	On
<b>F16</b>	Off	Off	Off
<b>F18</b>	On	On	Off
<b>F22</b>	Blinking	On	On
<b>F23</b>	Blinking	On	Blinking
<b>F24</b>	Off	On	Blinking
<b>F25</b>	On	Off	Blinking
<b>F26</b>	Blinking	Off	On

## Fault visualization:

FAULT	CAUSE	CHECKS
<b>F01</b>	<b>Main board defective</b>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J1</b> on PCB;</li> <li>- Check ohmic continuity at wiring connector <b>J014</b> pins <b>2</b> and <b>1</b>, checking the impedance value of the fan;</li> <li>- Check for correct connection of freezer fan at freezer compartment junction box;</li> <li>- Replace compressor;</li> <li>- Replace freezer fan unit;</li> <li>- Replace PCB.</li> </ul>
<b>F02*</b>	<b>Compressor relay open</b>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J1</b> on PCB;</li> <li>- Check that there is a consistent impedance value at wiring connector <b>J1</b> between pins <b>3</b> and <b>2</b>;</li> <li>- Check the motor terminal block (possible problems due to bad connection);</li> <li>- Check that the compressor is not overheating (thermal cutout open).</li> <li>- Replace compressor;</li> <li>- Replace PCB.</li> </ul>
<b>F02**</b>	<b>Compressor fault</b>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J1</b> on PCB;</li> <li>- Check the motor terminal board (any problems due to bad connection may cause a short-circuit)</li> <li>- Check efficiency of contacts inside inverter.</li> <li>- Replace inverter;</li> <li>- Replace compressor;</li> <li>- Replace PCB.</li> </ul>
<b>F04</b>	<b>FAN: faulty/not wired contact, break in wiring, short circuited wiring, PCB pilot circuit fault, feedback fault</b>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts <b>CN4</b> contacts on PCB;</li> <li>- Check the efficiency of the fan connection to the foamed connector;</li> <li>- Replace the Fan;</li> <li>- Replace the Main Board.</li> </ul>

★ = Fault typical of appliance with ON/OFF compressor (conventional compressor).

★★ = Fault typical of appliance with inverter-controlled compressor (Variable Capacity Compressor).

## Fault visualization:

FAULT	CAUSE	CHECKS
<b>F05</b>	<b>STEPPER DAMPER:</b> contact faulty/not wired, break in wiring, break in motor coil circuits; PCB pilot circuit fault, feedback fault	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J018</b> on PCB;</li> <li>- Check efficiency of electronic damper connection at foam-protected connector behind multiflow;</li> <li>- Replace electronic damper;</li> <li>- Replace PCB.</li> </ul>
<b>F07</b>	<b>DEFROST ELEMENT:</b> contact faulty/not wired, break in wiring, fuse break, element disconnected, element ground fault (earth leakage); triac short-circuit, feedback fault.	<ul style="list-style-type: none"> <li>- Check efficiency of connector contacts on PCB: <b>J003</b> on appliances with Artica Full and <b>J001</b> on appliances with Artica Entry;</li> <li>- Check continuity of defrost heating element at pins <b>3</b> and <b>4</b> of above connector, checking that the impedance value is consistent;</li> <li>- Check correct connection of defrost heating element at freezer compartment junction box;</li> <li>- Check for correct impedance value of the defrost heating element across its terminals;</li> <li>- Check that fuses have not blown;</li> <li>- Replace heating element;</li> <li>- Replace PCB.</li> </ul>
<b>F08</b>	Static Appliance, <b>SOLENOID VALVE 1:</b> contact faulty/not wired, break in wiring, break in solenoid coil circuit; triac short circuit, feedback fault	<ul style="list-style-type: none"> <li>- Check efficiency of connector contacts on PCB: <b>J002</b> on appliance with Artica Full and <b>J001</b> on appliances with Artica Entry;</li> <li>- Check ohmic continuity at pins <b>1</b> and <b>2</b> of above connector, checking that the impedance value is consistent;</li> <li>- Check operation of solenoid valve (open doors for 5 min. close doors and switch off fridge compartment);</li> <li>- Replace solenoid valve;</li> <li>- Replace PCB.</li> </ul>
<b>F09</b>	<b>Setting file error detected by main board</b>	<ul style="list-style-type: none"> <li>- Reprogram Setting file;</li> <li>- Replace PCB.</li> </ul>

## Fault visualization:

<b>F10</b>	<p>Static Appliance, Artica Full only.  <b>SOLENOID VALVE 2:</b>          contact faulty/not wired, break in wiring, break in solenoid coil circuit; triac short circuit, feedback fault on</p>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J002</b> on PCB;</li> <li>- Check for ohmic continuity at wiring connector <b>J002</b> pins <b>3</b> and <b>4</b>, checking that the impedance value is consistent;</li> <li>- Check operation of solenoid valve (open doors for 5 min. close doors and switch off fridge compartment);</li> <li>- Replace solenoid valve;</li> <li>- Replace PCB.</li> </ul>
<b>F12</b>	<p>Artica Full only.  <b>No communication between UI board and Main board</b></p>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J012</b> on PCB;</li> <li>- Check continuity of connector <b>J012/4-way</b> interface PCB connector;</li> <li>- Check efficiency of connector contacts on display PCB;</li> <li>- Replace main PCB;</li> <li>- Replace display PCB.</li> </ul>
<b>F16</b>	<p>Artica Full only.  <b>FRIDGE FAN:</b>          contact faulty/not wired, break in wiring, break in motor winding circuit; triac short circuit, feedback fault</p>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J009</b> on PCB;</li> <li>- Check ohmic continuity at wiring connector <b>J009</b> pins <b>1</b> and <b>2</b>, checking that the impedance value is consistent;</li> <li>- Check for correct connection of fridge fan inside fridge compartment;</li> <li>- Replace fridge fan unit;</li> <li>- Replace main PCB.</li> </ul>
<b>F18</b>	<p><b>Serial Communication Fault between Artica PCB and Inverter</b></p>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J015</b> on PCB;</li> <li>- Check efficiency of contacts inside inverter.</li> <li>- Replace PCB;</li> <li>- Replace inverter.</li> </ul>
<b>F22</b>	<p><b>FRIDGE AIR PROBE:</b>          probe not wired, break/short circuit in wiring, probe open/short circuit</p>	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J016</b> on PCB;</li> <li>- Check NTC probe, checking at connector <b>J016</b> (pins <b>1</b> and <b>2</b> for Artica High, pins <b>3</b> and <b>4</b> for Artica Entry) that the impedance value is consistent with data in the temperature-impedance correlation table;</li> <li>- Heat the probe by hand contact where possible and check the change in the resistance value;</li> <li>- If the probe is wrongly calibrated, detach the relative wiring at PCB end;</li> <li>- Replace main PCB.</li> </ul>

## Fault visualization:

FAULT	CAUSE	CHECKS
<b>F23</b>	Static Appliance, <b>FRIDGE EVAP PROBE:</b> probe not wired, break/short circuit in wiring, probe open/short circuit	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J016</b> on PCB;</li> <li>- Inspect the NTC probe, checking at connector <b>J016</b> (pins <b>7</b> and <b>8</b> for Artica High, pins <b>1</b> and <b>2</b> for Artica Entry) that the impedance value is consistent with data in the temperature-impedance correlation table;</li> <li>- Heat the probe by hand contact where possible and check the change in resistance value;</li> <li>- If the probe is wrongly calibrated, detach the relative wiring at PCB end;</li> <li>- Replace main PCB.</li> </ul>
<b>F24</b>	<b>FREEZER AIR PROBE:</b> probe not wired, break/short circuit in wiring, probe open/short circuit	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J016</b> on PCB;</li> <li>- Inspect the NTC probe, checking at connector <b>J016</b> (pins <b>3</b> and <b>4</b> for Artica High, pins <b>5</b> and <b>6</b> for Artica Entry) that the impedance value is consistent with data in the temperature-impedance correlation table;</li> <li>- Heat the probe by hand contact where possible and check the change in resistance value;</li> <li>- If the probe is wrongly calibrated, detach the relative wiring at PCB end;</li> <li>- Replace main PCB.</li> </ul>
<b>F25</b>	No Frost Appliance, <b>FREEZER EVAP PROBE:</b> probe not wired, break/short circuit in wiring, probe open/short circuit	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J016</b> on PCB;</li> <li>- Inspect the NTC probe, checking at connector <b>J016</b> (pins <b>7</b> and <b>8</b> for Artica High, pins <b>1</b> and <b>2</b> for Artica Entry) that the impedance value is consistent with data in the temperature-impedance correlation table;</li> <li>- Heat the probe by hand contact where possible and check the change in resistance value;</li> <li>- If the probe is wrongly calibrated, detach the relative wiring at PCB end;</li> <li>- Replace main PCB.</li> </ul>
<b>F26</b>	Artica Full only. <b>TVZ AIR PROBE:</b> probe not wired, break/short circuit in wiring, probe open/short circuit	<ul style="list-style-type: none"> <li>- Check efficiency of contacts at connector <b>J016</b> on PCB;</li> <li>- Inspect the NTC probe, checking at wiring connector <b>J016</b> pins <b>5</b> and <b>6</b> that the impedance value is consistent with data in the temperature-impedance correlation table;</li> <li>- Heat the probe by hand contact where possible and check the change in resistance value;</li> <li>- If the probe is wrongly calibrated, detach the relative wiring at PCB end;</li> <li>- Replace main PCB.</li> </ul>



# Dismantling

The dismantling processes is the same used actually for products Indesit heritage.  
Machine is the same in structural terms.

## **IMPORTANT INFORMATION:**

Remember, before start to work on the machine, ***it is very important to disconnect electrically the appliance, drain out the water inside the product and on the compressor.***

Moreover, remember to use all required safety tools (example: Rubber gloves, etc.).

***Your safety is important, avoids injuries.***

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# Dismantling:



**Thank you !!!**  
**Round table**