

Subject : Troubleshooting guide for electronic board of blast chiller

This document will explain the basic checks a technician can do whenever the electronic board is completely off.

What you need is a couple of screwdriver to remove panels and a multimeter to measure voltages and resistances.

Let's start !

The explanation is based on a blast freezer 10 grids GN 1/1, but the same consideration are still valid for all the other models.



1. CHECK IF THE UNIT IS CONNECTED TO THE CORRECT POWER SUPPLY VOLTAGE

- 400/3+N/50
 - ✓ blast chiller/freezer 6 grids lengthwise;
 - ✓ blast chiller/freezer 10 grids lengthwise;
 - ✓ blast freezer 28Kg crosswise.
- 230/1+N/50
 - ✓ blast chiller/freezer 20 grids lengthwise;
 - ✓ blast chiller/freezer 10Kg crosswise;
 - ✓ blast chiller/freezer 15Kg crosswise;
 - ✓ blast chiller 28Kg crosswise.
- 2. SET THE MAIN SWITCH IS IN "1" POSITION to switch on the electronic board



If all leds and displays are off go next step.



3. OPEN THE ELECTRICAL BOX AND CHECK THE COMPONENTS AS DESCRIBED BELOW.



Connect the supply cord to the power supply as in next steps we are going to check the voltage applied to several components.

4. CHECK THE CORRECT VOLTAGE ON THE MAIN TERMINAL BOARD using a multimeter (reference MA on the wiring diagram)



If the voltages are not correct, check the supply cord and the connection at the terminal board.

5. VERIFY THE FUSE (reference PF on the wiring diagram)

Remove the fuse from the fuseholder and check its resistance with a multimeter: it must be very low (i.e. fraction of ohms).



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If the fuse is an opened circuit, replace it with an identical one. As shown in the wiring diagram the fuse protect all the 1 phase circuit, including the fans.

6. CHECK THE VOLTAGE ON THE FILTER (reference F1 on the wiring diagram)



V	^ν _{PIN L2 - PIN N4} : 230V
V	⁷ PIN U1 – PIN U3: 230V

If the voltages are not correct, check the connections, otherwise replace the filter.

7. CHECK THE VOLTAGE ON THE AUXILIARY TERMINAL BOARD (reference MB on the wiring diagram)



V	⁷ Position L – Position N: $230V$

If the voltages are not correct, check the connections.

8. CHECK THE VOLTAGE APPLIED ON POWER AND USER ELECTRONIC BOARD (reference E1 on the wiring diagram)





If the voltages are not correct, check the connections and go through step 10 and 11.

9. CHECK IF THE CONNECTOR J7 IS WELL CONNECTED TO THE POWER ELECTRONIC BOARD (reference E1 on the wiring diagram)



Also check that the flat cable, which connect power board to user interface, it is not damaged.

10. CHECK THE VOLTAGE APPLIED TO THE TRANSFORMER (reference U1 on the wiring diagram)



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If the high circuit voltage is not correct, check the connections. If the high circuit side is fine and the low circuit side is not correct, replace the transformer.

11. CHECK THE RELAY RG (reference RG on the wiring diagram)

a) Its coil must be supplied at 24V (see positions 10/A and 11/B).

b) The contacts 7-4, and 9-6 must be closed.



If the statement a) and b) are not verified, check the connection and the status of the relay.

12. REMOVE THE FRONT PANEL OF THE UNIT AND CHECK THE VOLTAGE APPLIED TO THE USER INTERFACE (reference E2 on the wiring diagram)



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- **13**. If clauses 1-12 are satisfied try to replace the user interface or the power board.
 - Try to replace the user interface board without changing the power board
 - If it still doesn't work replace the power board
 - In this second case it must work ! In any case, I would suggest you to try to connect again the original user interface board to understand which board is really damaged.

Find attached the pdf file of the wiring diagram (604796701).