



Troubleshooting

IMPORTANT INFORMATION

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Troubleshooting T2000

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Service mode

When an error occur, the power LED will turn into red or orange.






















Visibility of the error codes is in the temperature settings. Each bar combination is indicating a different code.

Overview error codes

01		17	
02		18	
03		19	
04		20	
05		21	
06		22	
07		23	
08		24	
09		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

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Error codes

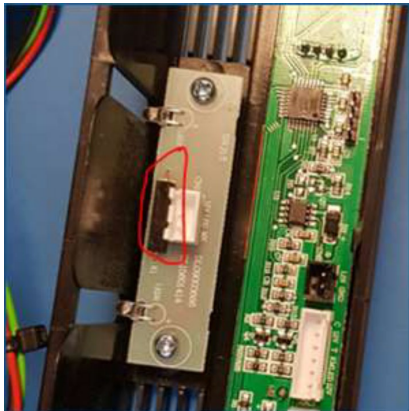
Display	LED colour	Error code	Description
 	Red (continuously)	14	Fan cabinet defect
 	Orange (continuously)	15	Fan condenser defect
 	Red flashes	19	2-way valve defect
 	Red flashes	20	Thermistor cabinet defect
 	Red flashes	21	Thermistor freezer defect
 	Red flashes	22	Thermistor ambient defect
 	Red flashes	23	Defect in CI-Bus connection
 	Red flashes	25	Voltage too low or too high
 	Red flashes	27	Thermal cut-out compressor
	Red flashes	None	Door open too long/contact not recognized

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Red flashes: no error code

Regarding T2090, T2152, T2156

Check the magnet and the cable near the display. Is it present and in the correct position?



No



T2090: Reposition magnet/reed switch
or
replace display

T2152: Reposition solenoid/reed switch
or
replace door switch panel

T2156: Replace circuit board

Note: if the door is left open for more than two minutes, the interior lighting goes out and the cooling stops. Refrigerator restarts automatically when door is closed.

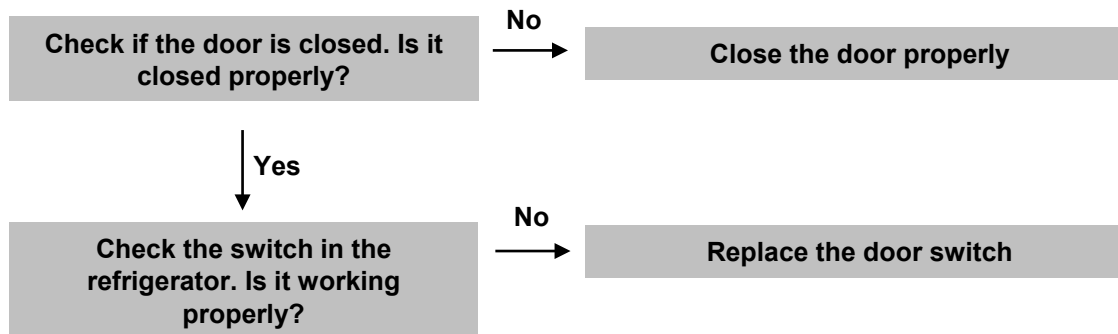
T2090 refrigerators with serial numbers before SN#080XDW00652 can also display the error.



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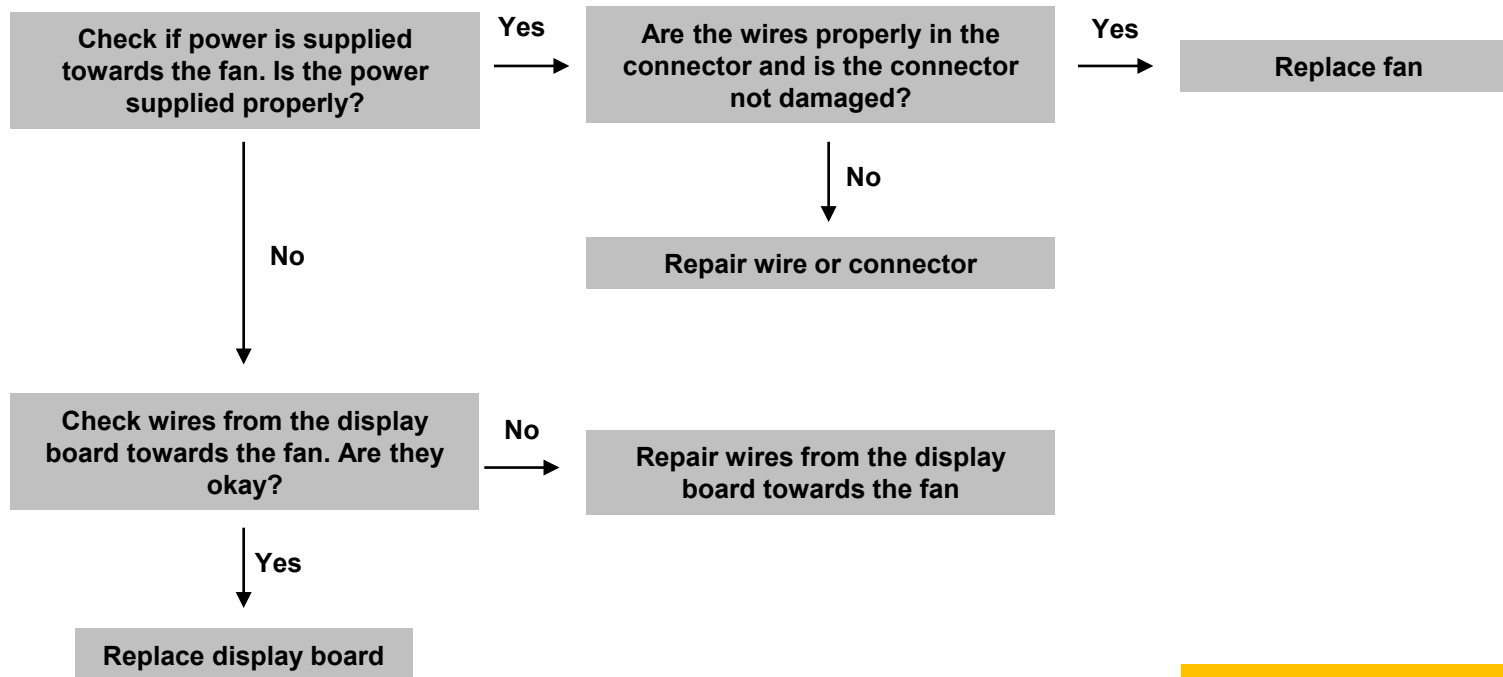
Red flashes: no error code

Regarding T2138, T2160, T2175



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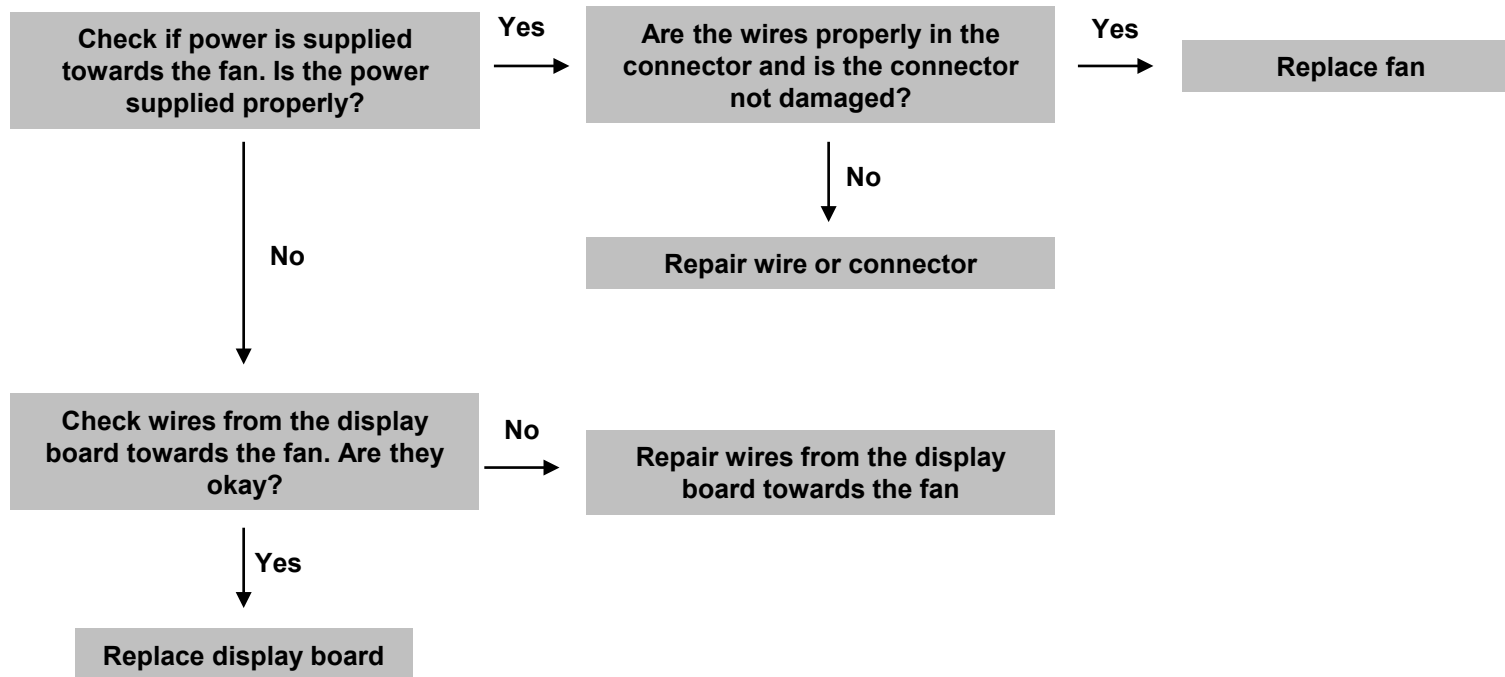
Error code 14: Fan cabinet defect



Note: the fan of the cabinet never runs when the door is open. Put a magnet in between the interior lights this will open the reed contact and supply power towards the fan. Or shut of the power, put it on again and the first 5 min the fan is forced to run.

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Error code 15: Fan condenser defect

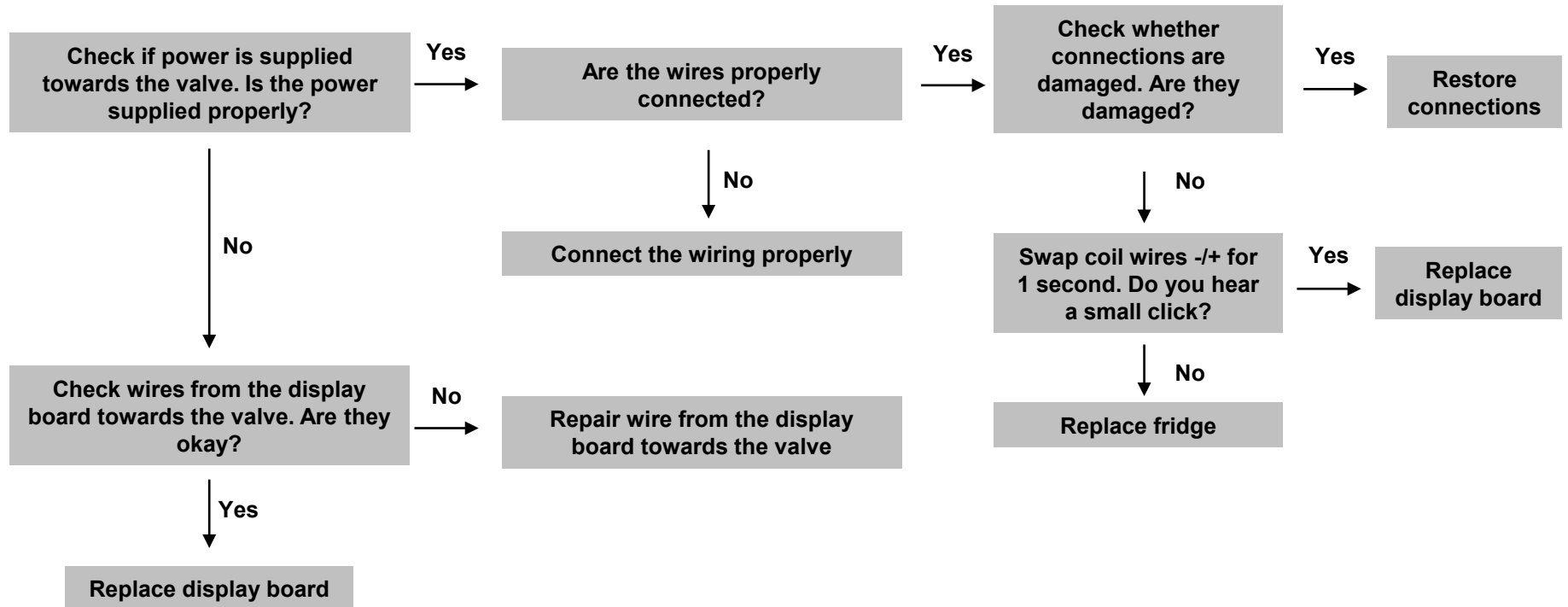


Note: the fan of the condenser is always running when the compressor is running as well



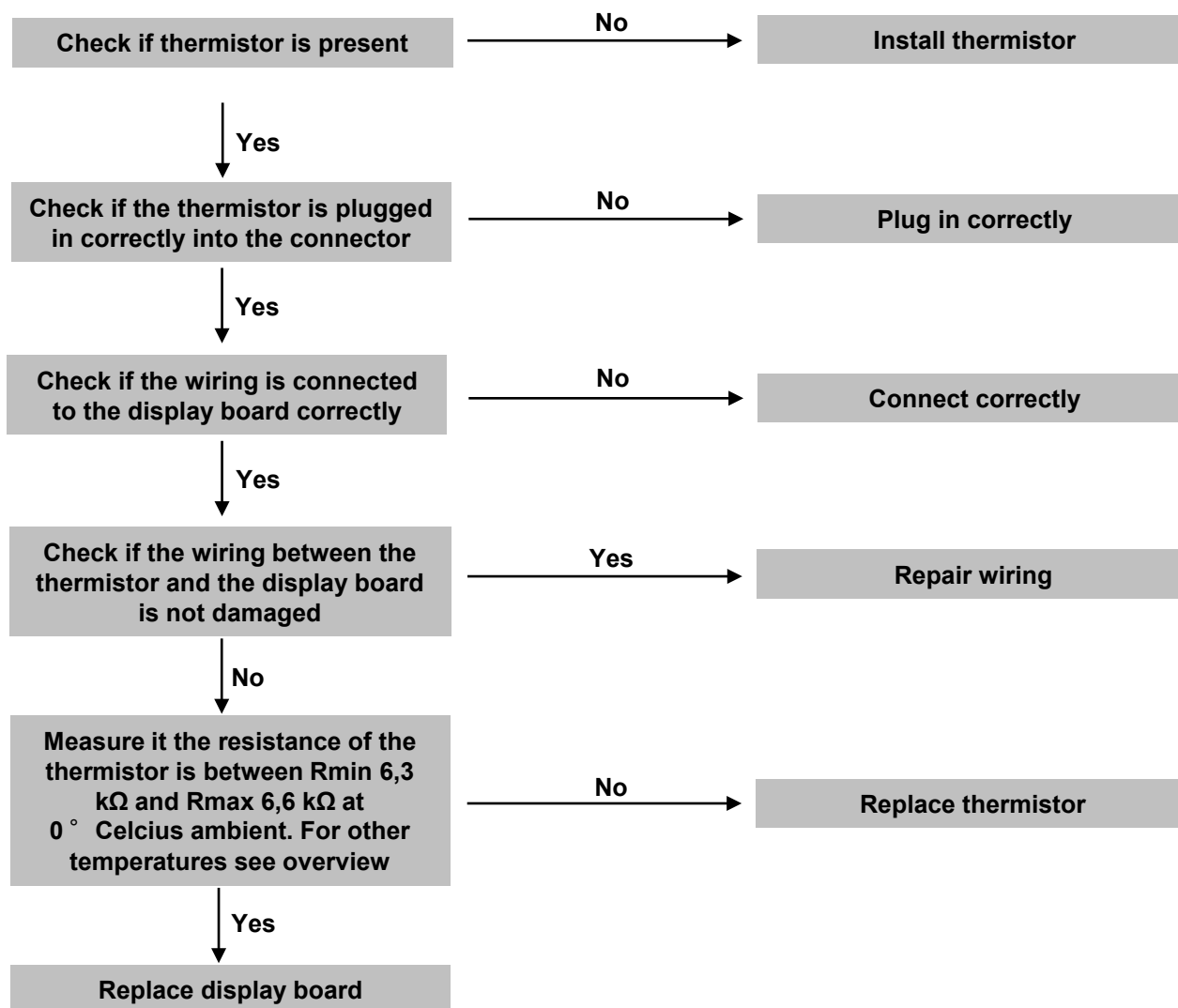
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Error code 19: 2-way valve defect



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Error code 20,21,22: Thermistor cabinet, freezer, ambient defect

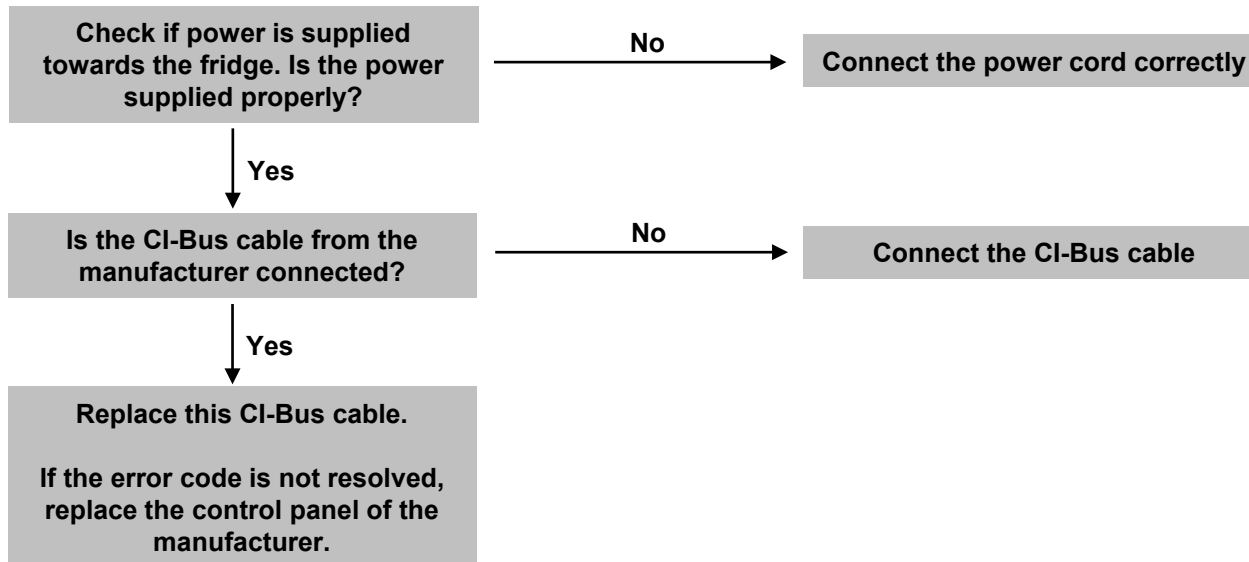


T(°C)	Rmin	Rmax
0	6,3	6,7
1	6,0	6,3
2	5,7	6,0
3	5,5	5,7
4	5,2	5,4
5	5,0	5,2
6	4,7	4,9
7	4,5	4,7
8	4,3	4,5
9	4,1	4,3
10	3,9	4,1
11	3,7	3,9
12	3,5	3,7
13	3,4	3,5
14	3,2	3,4
15	3,0	3,2
16	2,9	3,1
17	2,8	3,0
18	2,6	2,8
19	2,5	2,7
20	2,4	2,6
21	2,3	2,5
22	2,2	2,4
23	2,1	2,3
24	2,0	2,2
25	1,9	2,1
26	1,8	2,0
27	1,8	1,9
28	1,7	1,8
29	1,6	1,8
30	1,6	1,7



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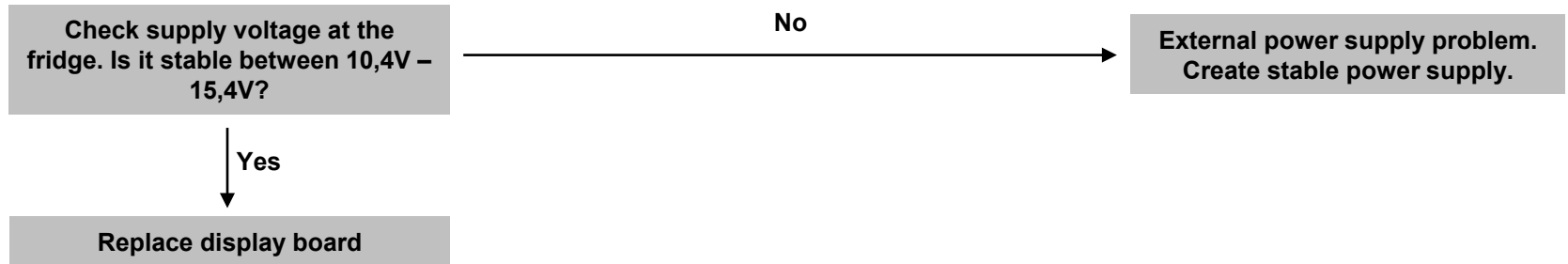
Error code 23: Error in the CI-Bus connection





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Error code 25: Voltage too low or too high

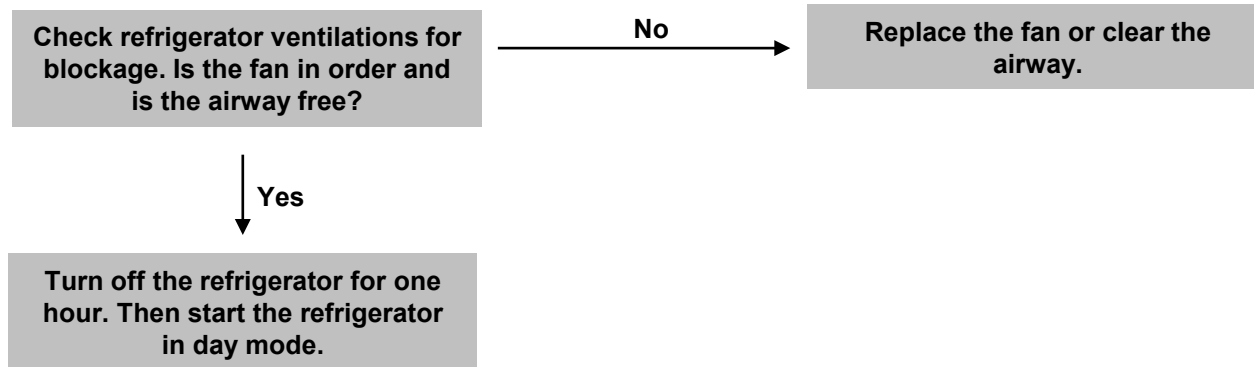


Note: the display also functions at voltages below 10.4 V (from approx. 3.4 V). However, the compressor needs requires a minimum of 10.4 V is required. There is no cooling below 10.4 V.



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Error code 27: Thermal cut-out compressor





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General problem solutions

Problem	Possible cause	Solution
Refrigerator is not cooling, compressor does not run at all	Battery voltage too low	Recharge battery
	Start delay of 1 minute (no issue)	Wait 1 minute
	Overheat due to high ambient	Turn off refrigerator for 1 hour, vent the vehicle, switch to day mode
	Vehicle fuse has blown	Check fuse rating, replace with 15A
Frozen food compartment not freezing	Interior temperature in vehicle is lower than 16°C	Raise the temperature of the vehicle inside and/or select a higher cooling level to minimal level 4
Refrigerator is not cooling, compressor starts but switches off directly	Overheat due to high ambient temperature	Turn off refrigerator for 1 hour, vent the vehicle, switch to day mode
Refrigerator is overcooling	Temperature setting too high	Choose a lower temperature setting
Refrigerator is not cooling, compressor runs continuously	Go to a service centre	
Refrigerator cannot be switched on, display does not work (*see note)	Power supply not available	External power supply problem. Create stable power supply.
	Insufficient voltage at the control panel? (Voltage should be between 10.4V and 15.4V)*	
	Fuse is not working properly	
	Not all connectors are properly installed	
	Wiring is damaged	
	None of the above	Replace control panel

Note: the display also functions at voltages below 10.4 V (from approx. 3.4 V). However, the compressor needs a minimum of 10.4 V is required. There is no cooling below 10.4 V.



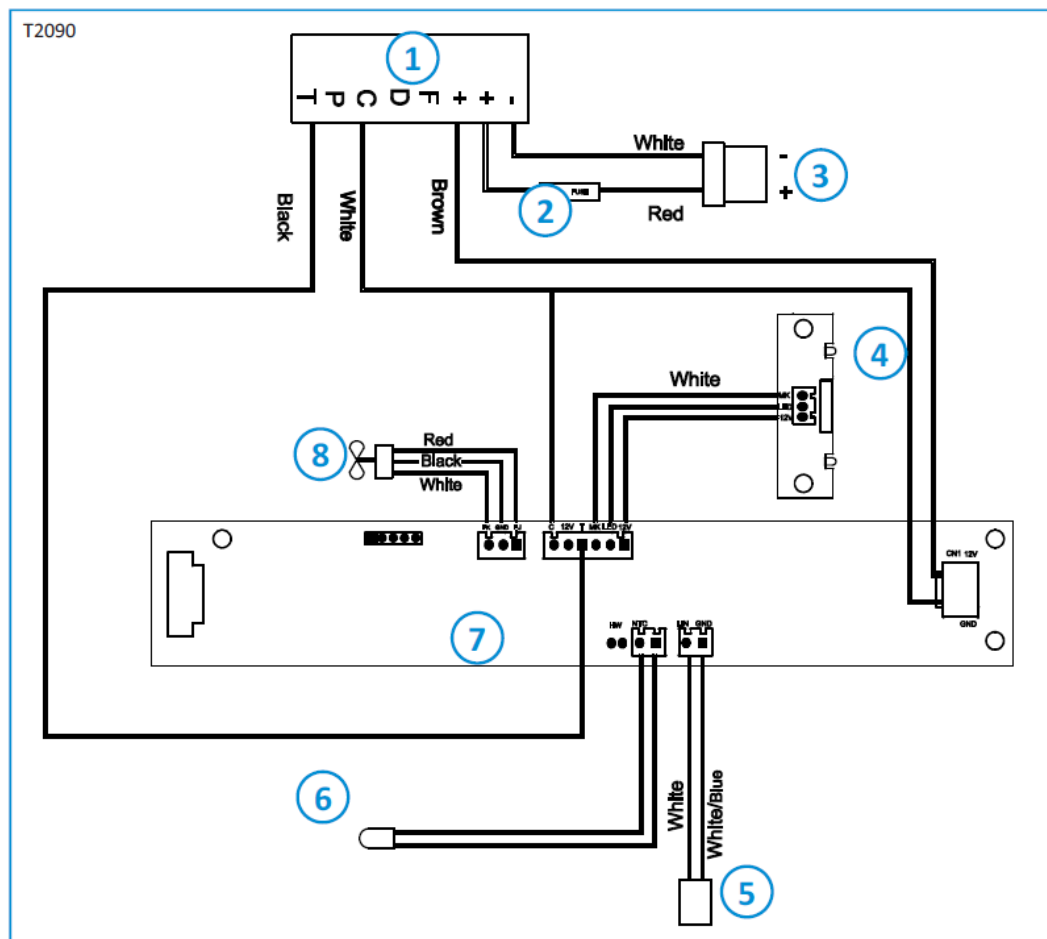
Troubleshooting T2000

General problem solutions

Problem	Possible cause	Solution
Refrigerator has insufficient cooling	Overheat due to high ambient temperature	Turn off fridge for 1 hour, vent the vehicle, switch to day mode
	Ventilation openings, complete or partially blocked	Clean or remove blockage
	Door is not properly closed	Close door, make sure door seal in good order
	Too much ice on evaporator (more than 3mm)	Defrost evaporator, make sure door seal is in good order
	The fan does not start.	Replace fan
	The ambient temperature is not correct. The refrigerator requires a minimum ambient temperature (passenger compartment) of 10°C. The T2090C and T2090E requires a minimum of 16°C. The maximum is 32°C (night mode), 38°C (T1090) and 43°C (T1152).	Ensure the correct ambient temperature
	The thermistor is not working	Replace the thermistor
Refrigerator makes more noise in night mode	High ambient temperature (more than 30°C)	Wait until the refrigerator has reached the selected temperature setting
	Warm products have been placed inside the refrigerator	
	Refrigerator is turned on after it has been off for a long time	
	A low temperature setting is selected	
Refrigerator does not cool	Refrigerator makes a continuous, clearly audible bubbling noise. It can be assumed that the compressor is not sufficiently full.	First try to remove the refrigerator and operate it completely autonomously (with fully self-sufficient operation, the pure function of the refrigerator can be tested without influenced by the vehicle installation). Replace the refrigeration
	Check that the compressor starts. If the compressor is faulty or blocked, cooling cannot be performed.	
	The compressor can be checked by bridging the "C" and "T" connections on the control card of the compressor's control board.	

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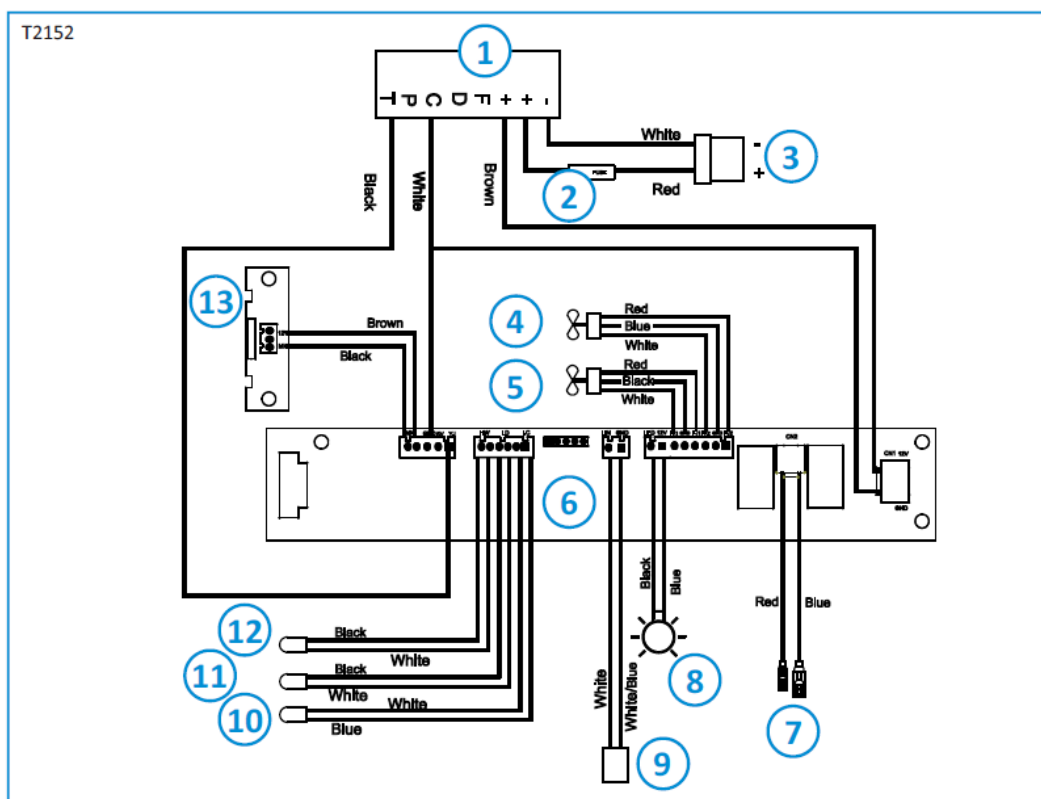
Appendix: Wiring diagram T2090C & T2090E



1. Main PCBA cooling unit
2. Fuse 15 A
3. Input power 12V DC
4. LED module
5. CI-BUS connection
6. Interior refrigerator thermistor
7. Display module
8. Fan cooling unit

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Appendix: Wiring diagram T2152



1. Main PCBA cooling unit
2. Fuse 15A
3. Input power 12V DC
4. Interior fan
5. Fan cooling unit
6. Display module
7. 2-way valve
8. Interior light
9. CI-BUS connection
10. Interior refrigerator thermistor
11. Interior freezer thermistor
12. Ambient temperatures thermistor
13. LED module

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Appendix: Wiring diagram T2138, T2160, T2175

