



SERVICE MANUAL

Food preservation

FOR INTERNAL AND PARTNERS USE ONLY

© ELECTROLUX HOME PRODUCTS
Consumer Service - EMEA
Quality & Continuous Improvement - Technical Support

FRENCH DOOR ICE & WATER COMBI WITH
VARIABLE CONTROL ZONE (VCZ)

MDR4



EN

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1 PURPOSE OF THIS MANUAL

The purpose of this Service Manual is to provide Service Engineers who are already familiar with the repair procedures with information regarding: **Appliances** fitted with **NIUx** electronic control systems.

1.1 Document Revisions

Rev.	Date	Description	Author
00	07/2019	Document creation	Anna Grimlund

2 SAFETY

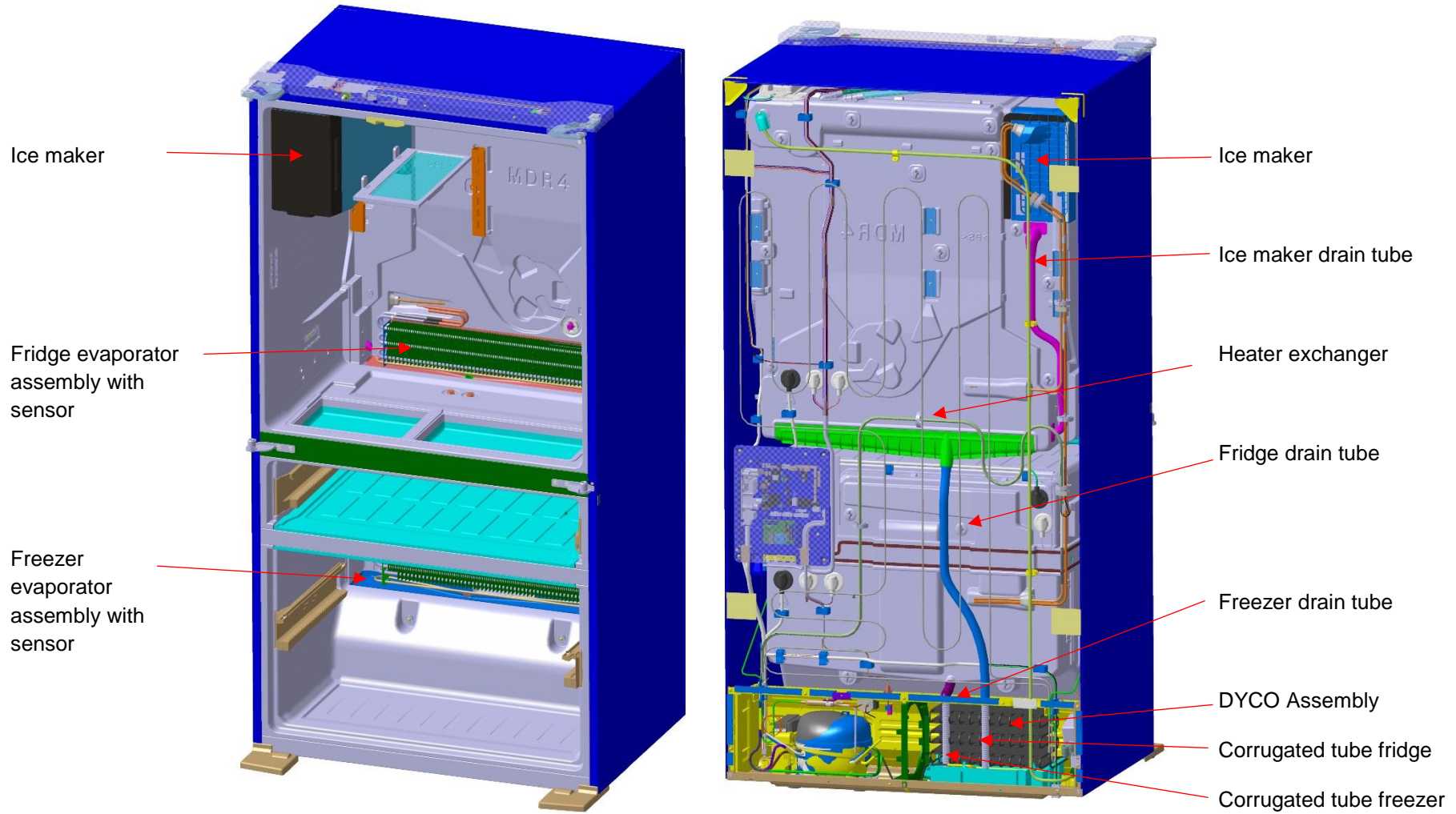


- All the work to be performed inside the appliance requires specific skills and knowledge and may only be carried out by qualified and authorised Service Engineers
- Before you access internal components, take the plug out of the socket to disconnect the power supply.
- Some of the components in the mechanical part could cause injuries, so wear suitable protection and proceed with caution.

3 TECHNICAL SPECIFICATIONS

Voltage (V)	220-240	
Frequency (Hz)	50	
Watts (W)	593	
Current (A)	1.4	
Defrost Power (W)	593	
High Pressure (psig/kPa)	49 / 730	
Low Pressure (psig/kPa)	-7,6 / 91	
Consumption (kWh)	925060314, 925060319, 925060320 – 448 kWh. 925060321 – 348 kWh	
Dimensions (cm)	Width	913
	Depth	746
	Height	1782
Liquid weight (kg)	140	
Refrigerating Gas	R600a	
Gas charge (g)	95 ± 5	
Parts / Accessories	Lamp	Lighting modules in the freezer, refrigerator and drawer. Refrigerator door switch
	Caster	2 rear casters / 2 front casters
	Levelling	Through the front levelling feet, front feet only can be levelled.
Power cord length (cm)	257	
Motor	Fan motor of freezer compartment	
	Fan motor of refrigerator compartment	
	Ice Maker Evaporator Fan	
	VCZ Fan (VCZ)	
	Auger Motor	
	Condensation fan	
Compressor (1)	Compressor	
	VCC	
	Winding resistance of compressor wiring terminal	

4 PARTS LIST



5 TOP COVER

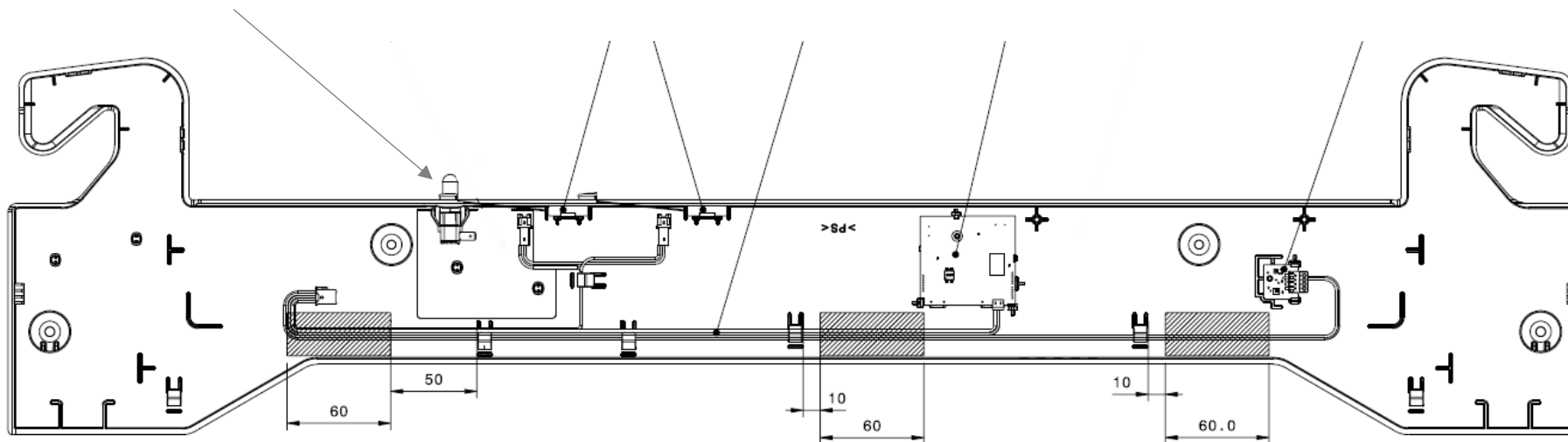
Auger motor safety switch

Door reed switch

Wiring WiFi (connected models)

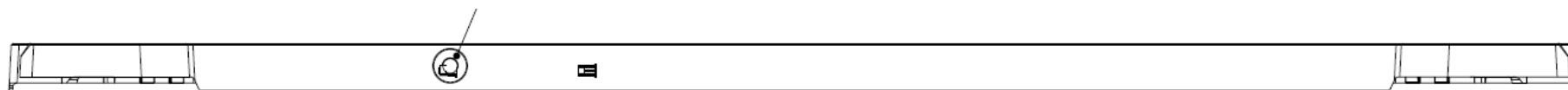
NIUx

H&T sensor



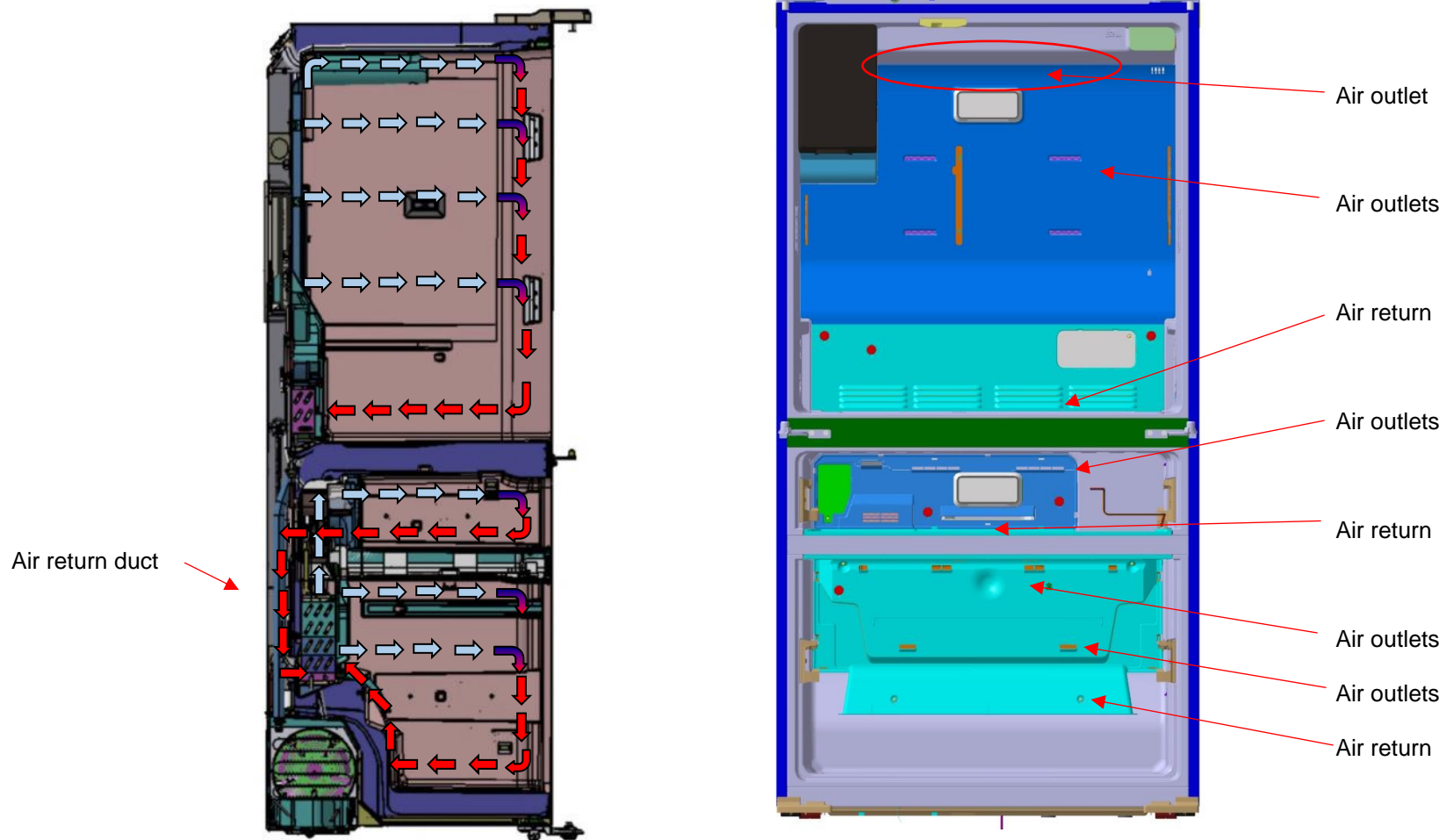
Bottom view

Switch

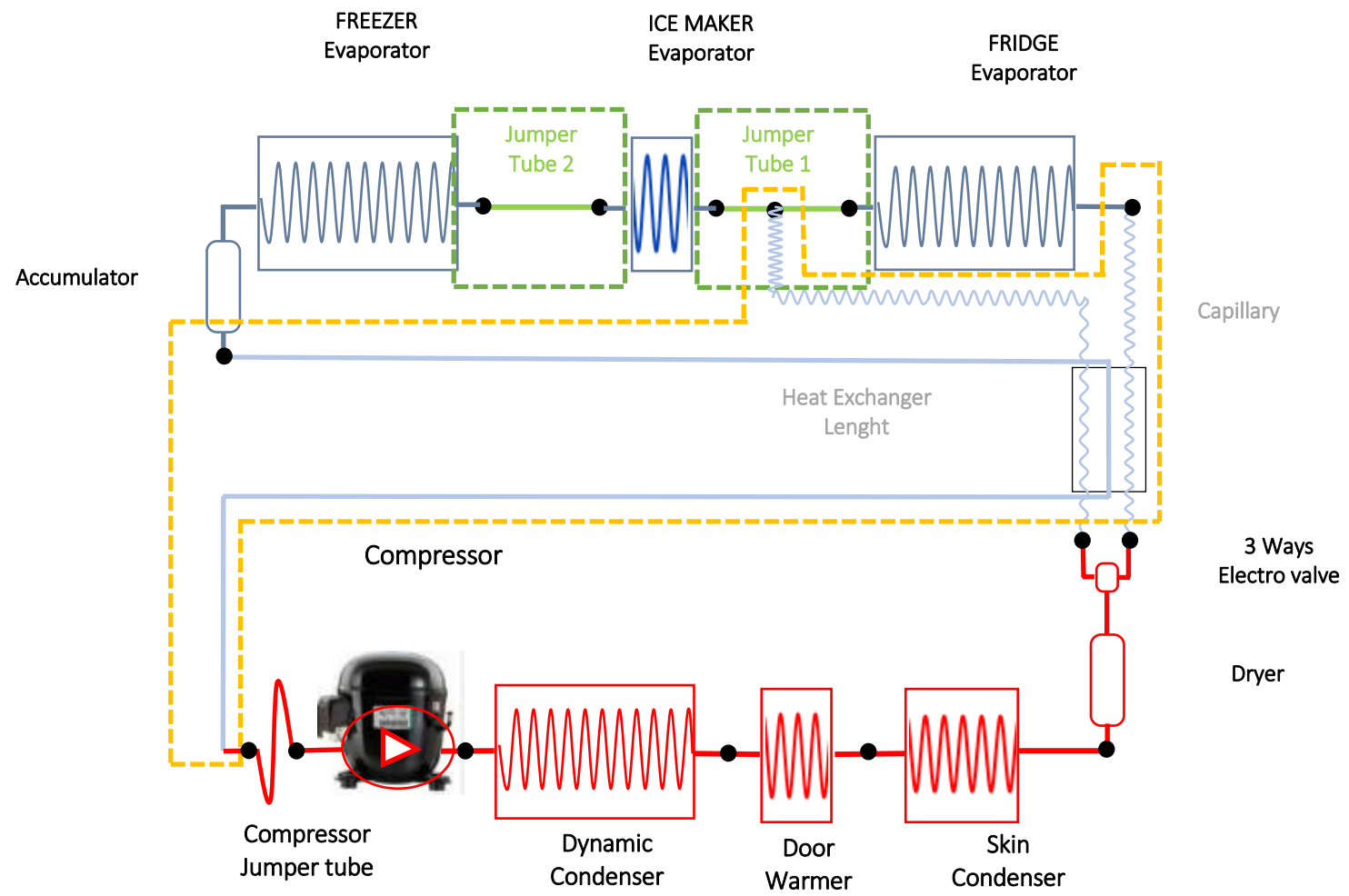


Note. Do not replace the ERF2600 and the NIUx board at the same time. Replace first one and start the appliance before replacing the other. This is due to that the boards are serialized.

6 AIR FLOW SYSTEMS



7 COOLING CIRCUIT AND SUCTION LINE



8 ALARMS

- **Door alarm:** The “**Door open**” icon on the UI indicates when any of the doors are left open, an alarm sounds after five minutes. Turn of the alarm and indication by closing the door or by pressing any key on the UI.
- **High temperature alarm:** Automatically sound alarm to alert user that a compartment’s temperature is beyond acceptable level. “**HI**” indication and sound until the alert is acknowledged.

8.1 Errors



Error	Indication	Errors Verification
Freezer Temperature Sensor	Er t1	Open/Shorted
Freezer Defrost Sensor	Er t2	Open/Shorted
Fridge Temperature Sensor	Er t3	Open/Shorted
Fridge Defrost Sensor	Er t4	Open/Shorted
VCZ Temperature Sensor	Er t5	Open/Shorted
Ice Maker Tray Sensor	Er t6	Open/Shorted
Communication Error	Er CE	UIs to Main board error after a period of operation
Chute Flapper Error	dl SP	Chute Flapper not connected or with error

9 MEASUREMENT TABLE

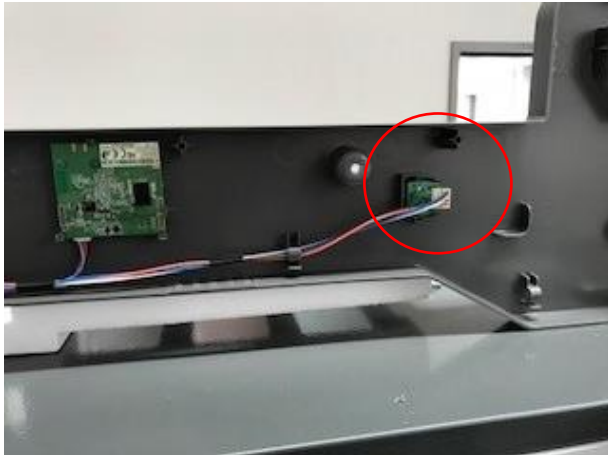
Component	220 V / 60 Hz
Electric cable	Continuity (beep)
Compressor	Approx. 1 W
Damper	Tension 5 DCV / approx. 400 OHM
Line filter	Continuity
Switches (all)	Continuity (beep)
LEDs freezer/refrigerator	Tension 12 DCV
Self-Test Monitor	5 DCV
Trigger motor	12 DCV / Approx. 12 W
Ice Motor	Approx. xx W
Ice maker motor	12 DCV / Approx. 38 W
VCZ Drawer Fan	Black and brown wires: 220000 OHM / 5 DCV Black and red wires: 196000 OHM / 12 DCV Brown and red wires: 4700 OHM / 12 DCV
Condenser fan	Black and red wires: 196000 OHM / 12 DCV Black and yellow wire: 168000 OHM / 5 DCV
Refrigerator evaporator fan	Black and red wires: diodes 1200 mV / 12 DCV Black and grey wires: 742 mV / 8 DCV
Freezer fan	Black and red wires: 35000 OHM Black and white wires: 7000 OHM White and red wires: 41800 OHM
Ice make fan	12 DCV / non-measurable ohmic resistance
PCB	Supply Voltage: 12 DCV Signal: 12 DCV
H&T sensor	Tension 5 DCV

Component	220 V / 60 Hz
Board	Tension ACV / Tension DCV
Main board	Tension ACV / Tension DCV
Electrical network	Continuity (beep)
VCZ drawer resistance	Approx. xxx OHM
Refrigerator defrost resistance	Approx. 63 OHM
Freezer defrost resistance	Approx. xx OHM
Defrost resistance of ice maker	Approx. xx OHM
Cooling defrost resistance	Approx. 63 OHM
Damper resistance	Tension 12 DCV / approx. 143 OHM
Resistance of dispenser	Tension 12 DCV / approx. 76 OHM
Water tube resistance	Tension 30 ACV / approx. 9.4 OHM
Sensors (all)	Confirm ohmic voltage and resistance in the tables
Solenoid ice cube	Approx. ?? W
Thermofuse	Continuity (beep)
Switching Valve	Tension 12 DCV / approx. 42 OHM
Main valve	Approx. 1600 OHM

NOTE: The values shown in the table above may have a variation of $\pm 10\%$

10 SENSORS

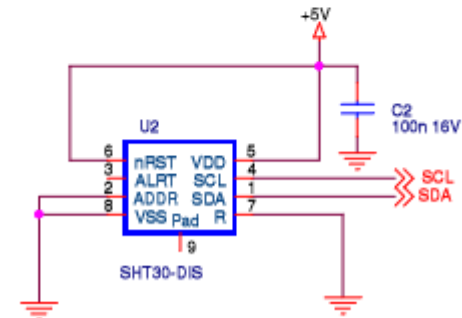
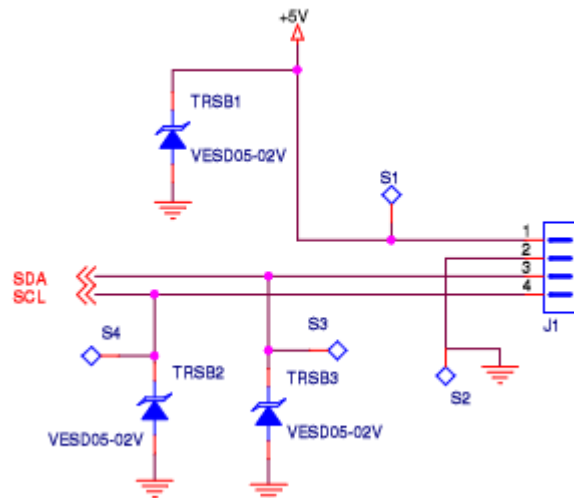
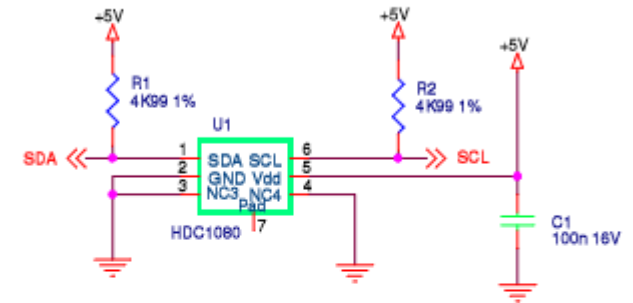
10.1 Humidity and temperature sensor



PCB edge connector:

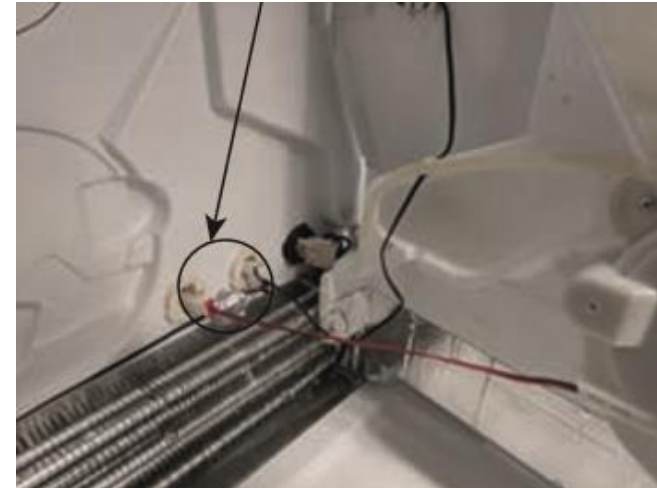
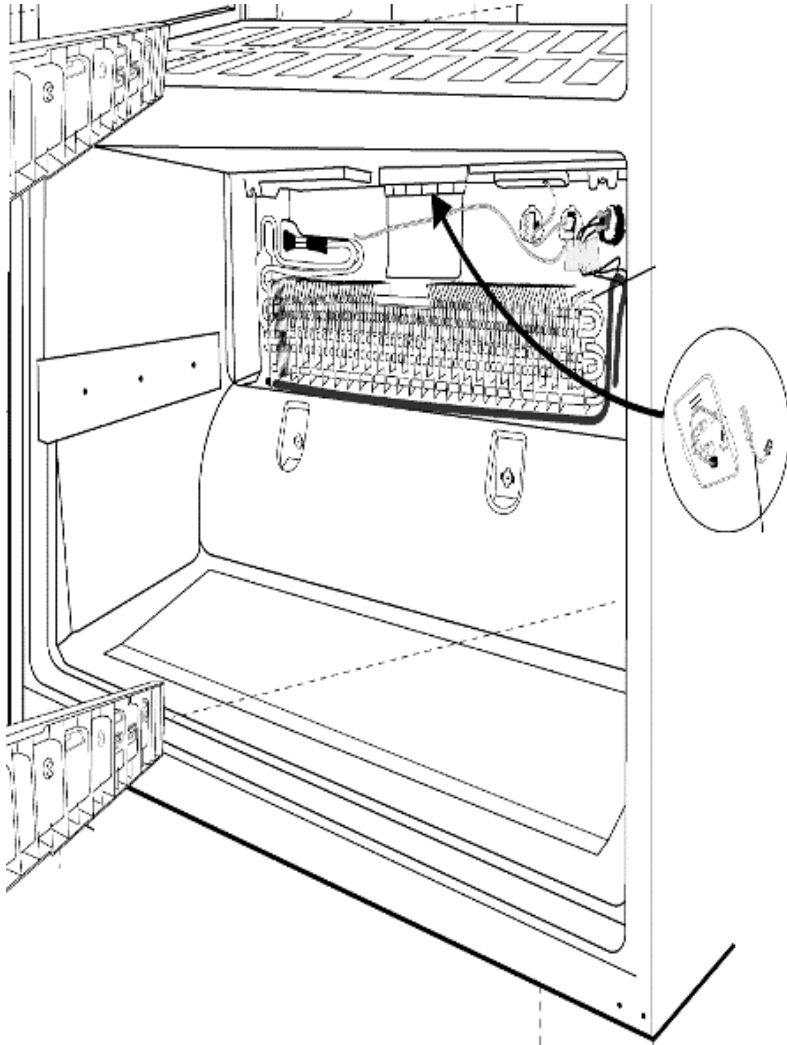
Connection	Name	Signal type
J1:1	+5	DC
J1:2	GND	DC
J1:3	SDA	I2C
J1:4	SCL	I2C

HUMIDITY with TEMPERATURE SENSOR



10.2 Fridge and freezer sensor

Sensors are located on the fridge and freezer evaporator.



Ohms	V's	Temperature
10k		25
27k		4
32.5k		0
47k		-7
72k		-15
85k		-18

10.3 RESISTANCE AND VOLTAGE SENSORS - REFRIGERATOR, FREEZER AND VCZ DRAWER

Temp. (°C.)	R Min (kOhm)	R Max (kOhm)	V Max (Volts)	V Min (Volts)
-40	329,28	342,72	0,31	0,30
-39	281,06	292,53	0,36	0,35
-38	264,79	275,60	0,38	0,37
-37	249,45	259,63	0,41	0,39
-36	234,97	244,56	0,43	0,41
-35	234,93	247,55	0,43	0,41
-34	206,00	216,98	0,48	0,46
-33	194,09	206,67	0,51	0,48
-32	182,86	194,63	0,54	0,51
-31	172,30	183,30	0,57	0,54
-30	171,60	182,40	0,57	0,54
-29	153,01	162,63	0,63	0,60
-28	144,21	153,22	0,66	0,63
-27	135,95	144,38	0,70	0,66
-26	128,18	136,08	0,73	0,70
-25	126,55	134,25	0,74	0,70
-24	114,03	120,96	0,81	0,77
-23	107,59	114,10	0,85	0,81
-22	101,55	107,65	0,89	0,85
-21	95,89	101,61	0,93	0,89
-20	94,25	99,87	0,95	0,90
-19	85,58	90,62	1,02	0,98
-18	80,89	85,64	1,07	1,02
-17	76,50	80,96	1,12	1,07

Temp. (°C.)	R Min (kOhm)	R Max (kOhm)	V Max (Volts)	V Min (Volts)
-16	72,38	76,58	1,17	1,12
-15	70,90	74,98	1,18	1,13
-14	64,89	68,61	1,27	1,21
-13	61,49	64,99	1,32	1,26
-12	58,29	61,59	1,37	1,32
-11	55,29	58,41	1,42	1,37
-10	53,83	56,81	1,45	1,40
-9	49,83	52,61	1,53	1,47
-8	47,35	49,97	1,59	1,53
-7	45,01	47,49	1,64	1,58
-6	42,81	45,15	1,70	1,64
-5	41,20	43,45	1,74	1,68
-4	38,79	40,89	1,81	1,75
-3	36,95	38,94	1,87	1,80
-2	35,22	37,11	1,92	1,86
-1	33,59	35,38	1,98	1,92
0	31,80	33,50	2,04	1,98
1	30,59	32,20	2,09	2,03
2	29,21	30,74	2,15	2,09
3	27,91	29,36	2,20	2,14
4	26,68	28,06	2,26	2,20
5	24,76	26,03	2,35	2,29
6	24,41	25,65	2,37	2,31
7	23,36	24,55	2,43	2,36

Temp. (°C.)	R Min (kOhm)	R Max (kOhm)	V Max (Volts)	V Min (Volts)
8	22,37	23,50	2,48	2,42
9	21,43	22,50	2,53	2,47
10	20,54	21,55	2,59	2,53
11	19,69	20,67	2,64	2,58
12	18,89	19,82	2,69	2,63
13	18,13	19,02	2,74	2,68
14	17,42	18,26	2,79	2,73
15	16,74	17,55	2,84	2,78
16	16,11	16,88	2,89	2,83
17	15,51	16,25	2,93	2,88
18	14,94	15,65	2,98	2,92
19	14,42	15,10	3,02	2,97
20	12,21	12,77	3,22	3,16
25	9,78	10,22	3,46	3,41
30	7,88	8,23	3,68	3,64
35	6,39	6,67	3,87	3,84

10.4 ICE MAKER Temperature SENSOR RESISTANCE AND VOLTAGE CONVERSION

Temp (°C)	Resistance (k Ω)		
	Max	Typ	Min
-50	161.6	154.6	147.9
-49	152.5	146.0	139.7
-48	144.0	137.9	132.0
-47	136.0	130.3	124.9
-46	128.5	123.2	118.1
-45	121.5	116.5	111.8
-44	114.9	110.3	105.9
-43	108.7	104.4	100.3
-42	102.9	98.93	95.06
-41	97.52	93.76	90.15
-40	92.42	88.91	85.52
-39	87.52	84.24	81.07
-38	82.91	79.85	76.89
-37	78.58	75.72	72.95
-36	74.52	71.84	69.25
-35	70.69	68.19	65.76
-34	67.09	64.84	62.48
-33	63.71	61.51	59.39
-32	60.51	58.46	56.47
-31	57.51	55.58	53.72
-30	54.67	52.87	51.12
-29	51.95	50.26	48.62
-28	49.38	47.80	46.26
-27	46.96	45.48	44.04
-26	44.67	43.28	41.94
-25	42.51	41.21	39.95
-24	40.48	39.26	38.07
-23	38.55	37.41	36.30
-22	36.73	35.66	34.62
-21	35.01	34.01	33.03
-20	33.39	32.44	31.52
-19	31.82	30.93	30.07
-18	30.34	29.51	28.70
-17	28.93	28.16	27.40
-16	27.61	26.88	26.16
-15	26.35	25.66	25.00
-14	25.16	24.52	23.89
-13	24.03	23.43	22.84
-12	22.96	22.39	21.84
-11	21.94	21.41	20.89

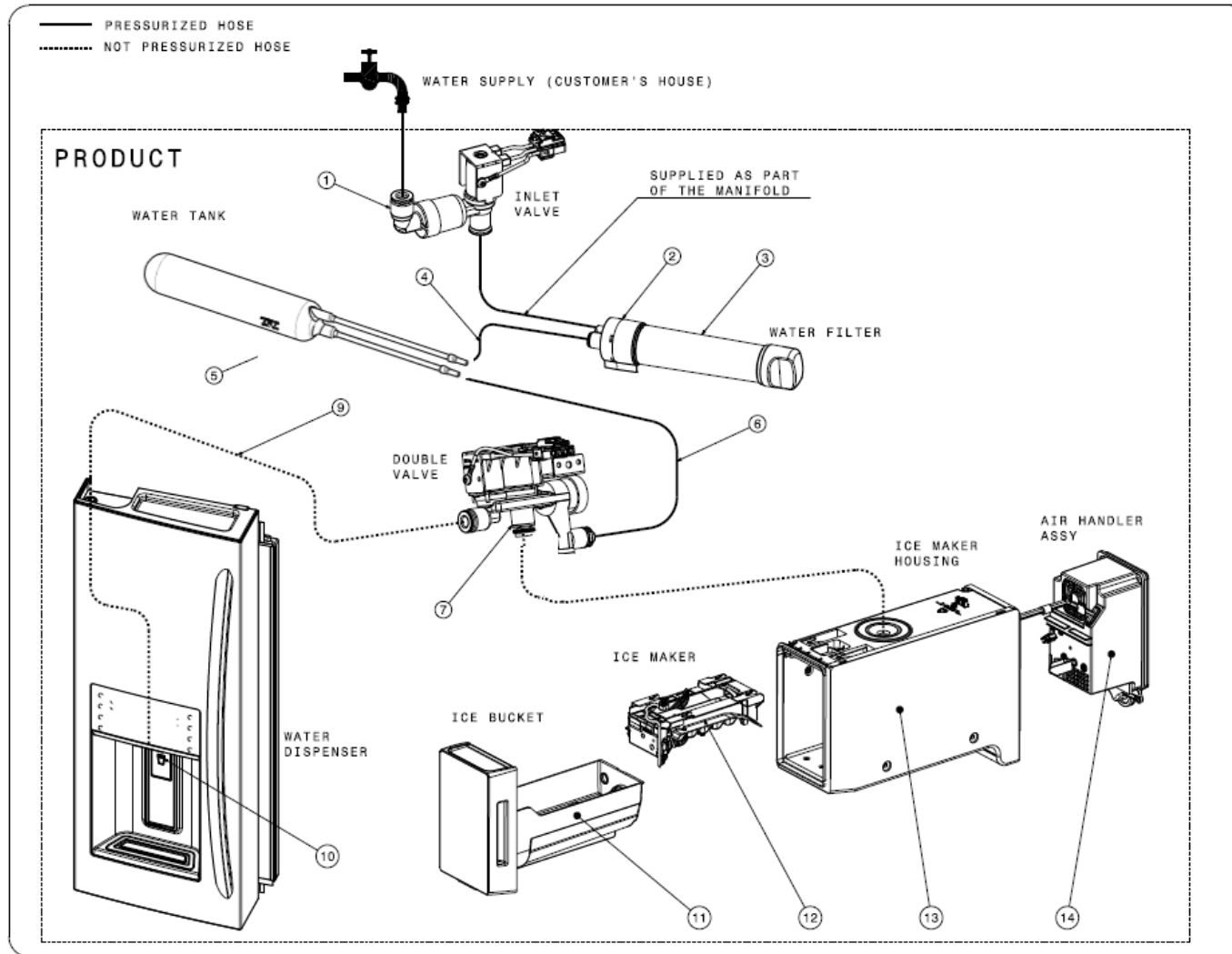
-10	20.98	20.48	19.99
-9	20.06	19.59	19.13
-8	19.18	18.74	18.31
-7	18.34	17.93	17.53
-6	17.55	17.16	16.78
-5	16.80	16.43	16.08
-4	16.08	15.74	15.41
-3	15.40	15.08	14.77
-2	14.76	14.46	14.16
-1	14.14	13.86	13.58
0	13.56	13.29	13.03
1	12.99	12.74	12.50
2	12.46	12.22	11.99
3	11.94	11.73	11.51
4	11.46	11.25	11.05
5	10.99	10.80	10.61
6	10.55	10.37	10.19
7	10.13	9.960	9.793
8	9.728	9.569	9.412
9	9.345	9.169	9.049
10	8.979	8.840	8.702
11	8.626	8.496	8.366
12	8.289	8.167	8.045
13	7.967	7.853	7.739
14	7.660	7.553	7.447
15	7.367	7.267	7.167
16	7.087	6.993	6.900
17	6.819	6.731	6.644
18	6.563	6.481	6.400
19	6.319	6.242	6.166
20	6.085	6.013	5.942
21	5.859	5.793	5.726
22	5.643	5.581	5.519
23	5.437	5.379	5.321
24	5.239	5.185	5.132
25	5.050	5.000	4.950
26	4.871	4.821	4.771
27	4.700	4.650	4.601
28	4.536	4.486	4.437
29	4.379	4.329	4.280
30	4.228	4.179	4.130

31	4.082	4.033	3.984
32	3.942	3.894	3.845
33	3.808	3.760	3.711
34	3.679	3.631	3.583
35	3.556	3.508	3.461
36	3.437	3.390	3.343
37	3.323	3.276	3.229
38	3.213	3.167	3.121
39	3.108	3.062	3.017
40	3.007	2.961	2.916
41	2.908	2.864	2.819
42	2.814	2.770	2.726
43	2.723	2.679	2.636
44	2.636	2.593	2.550
45	2.552	2.509	2.467
46	2.471	2.429	2.387
47	2.393	2.352	2.311
48	2.318	2.277	2.237
49	2.246	2.206	2.166
50	2.177	2.137	2.098

10.5 Ice maker DEFROST sensor resistance and tension conversion

Temperature (°C)	R(T)/R25	(Ohms)	$\Delta R/R$ (%)	α (%/K)	ΔT (K)	Rmin (Ohms)	Rmax (Ohms)
-40	33.427	334274	4.92	-6.63	0.74	317833	350716
-35	24.132	241323	4.73	-6.41	0.74	229899	252747
-30	17.613	176133	4.56	-6.19	0.74	168107	184158
-25	12.990	129900	4.39	-5.99	0.73	124202	135598
-20	9.676	96761	4.22	-5.79	0.73	92675	100848
-15	7.276	72765	4.07	-5.61	0.73	69806	75723
-10	5.522	55218	3.92	-5.43	0.72	53056	57380
-5	4.227	42268	3.77	-5.26	0.72	40674	43861
0	3.262	32624	3.63	-5.10	0.71	31440	33808
5	2.538	25381	3.49	-4.94	0.71	24494	26268
10	1.990	19897	3.36	-4.80	0.70	19227	20566
15	1.571	15711	3.24	-4.65	0.70	15202	16220
20	1.249	12493	3.12	-4.52	0.69	12103	12882
25	1.000	10000	3.00	-4.39	0.68	9700	10300
30	0.806	8056	3.11	-4.26	0.73	7805	8307
35	0.653	6530	3.22	-4.14	0.78	6319	6740
40	0.532	5324	3.33	-4.03	0.83	5147	5501
45	0.437	4365	3.43	-3.92	0.88	4215	4515
50	0.360	3599	3.53	-3.81	0.93	3472	3726
55	0.298	2982	3.63	-3.71	0.98	2874	3091
60	0.248	2484	3.72	-3.61	1.03	2391	2576
65	0.208	2079	3.81	-3.51	1.09	1999	2158
70	0.175	1748	3.90	-3.42	1.14	1679	1816
75	0.148	1476	3.99	-3.34	1.20	1417	1535
80	0.125	1252	4.07	-3.25	1.25	1201	1303
85	0.107	1066	4.15	-3.17	1.31	1022	1110
90	0.091	912	4.23	-3.09	1.37	873	950
95	0.078	782	4.31	-3.02	1.43	749	816
100	0.067	674	4.38	-2.94	1.49	645	704
105	0.058	583	4.46	-2.87	1.55	557	609

11 WATER SUPPLY



Specifications

Fluid		Water
Fluid temperature		5 ° C to 50 ° C
Operating pressure		20 - 120 PSI
Flow rate (20 - 1200 PSI) (per 6 sec)	Primary valve	100 - 600 CC
Coil body colour	Ivory	
Coil insulation class minimum	A	
Rated voltage/frequency	AC 220V 50/60Hz	
Power rating	All coils	20W
Operating voltage	Must open under 150 PSI pressure drop at 85% of rated voltage.	
Quick connect fitting with release to accept tube O.D.		
Max tube insert force	1. Water inlet	1/4" tube (6.5 mm)
44 N for 1/4" OD tube		
53 N for 5/16" OD tube	2. Water outlet	5/16" tube (8.0 mm)
Min pull out force without using quick connect release		
111 N for both tubes		
Duty cycle	All solenoids	2S On 8S off
Leakage		20-150 PSI not leak
Wire colour	Neutral	Light blue
	Main valve	Brown
	Ground	Green/yellow
Wire rating	AWG	18
	Voltage	600 VAC
	Temperature	150 ° C
Locking collar colour	White	
Ohmic resistance OHM	1600 ± 10%	
Valve body material	PP (JI320)	

Main water valve

Filter manifold tube



Inlet tube

Main water valve

Tube guide

Cable tie

Main dispenser valve:

- Pressure: 20 - 120 psi -> 1,37 - 8,27 bar
- Resistance: 220V

Water container 0.7 litre



Disconnect the tubes on the main water valve.

Note: Tubes may contain water.

1. Remove the screws mounting the main water valve.
2. Disconnect the wire connector of the valve.

Note: MDR4 has an additional double valve inside the fresh food compartment.

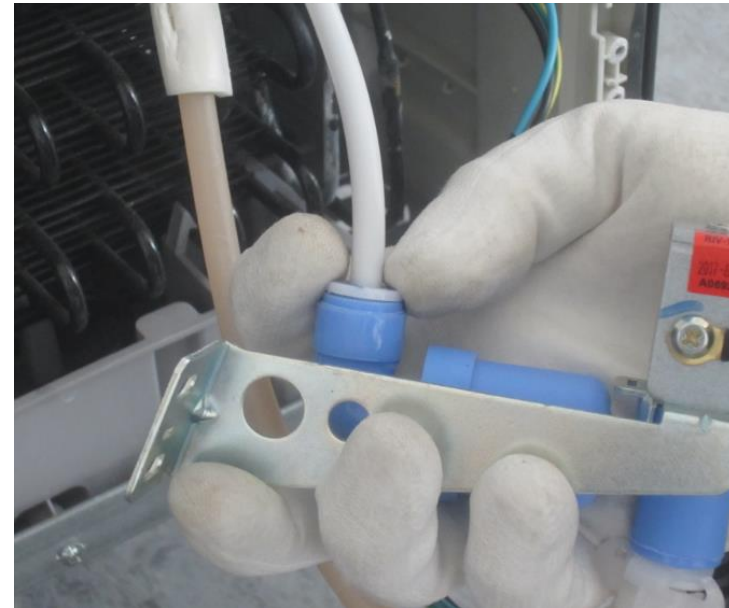


Inlet tube:

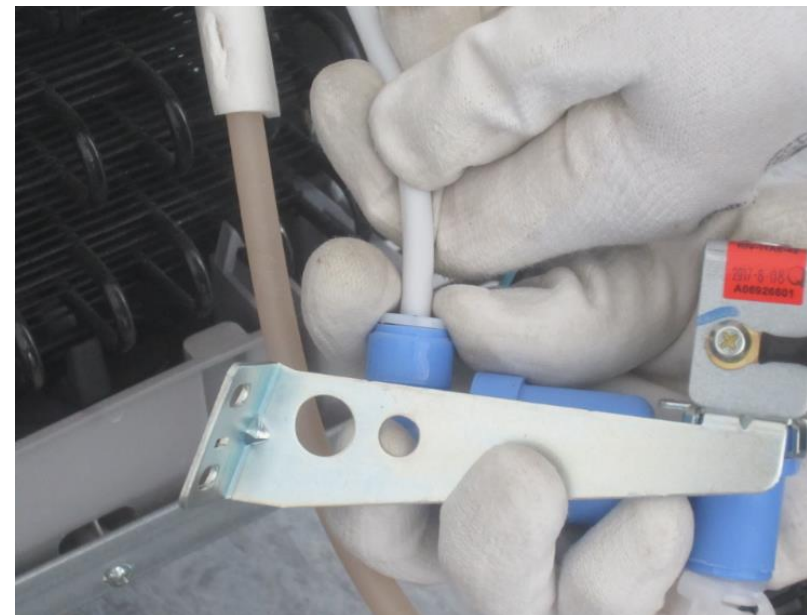
3. Remove the black locking clip



4. Hold the valve and press down the white release collar on both sides.



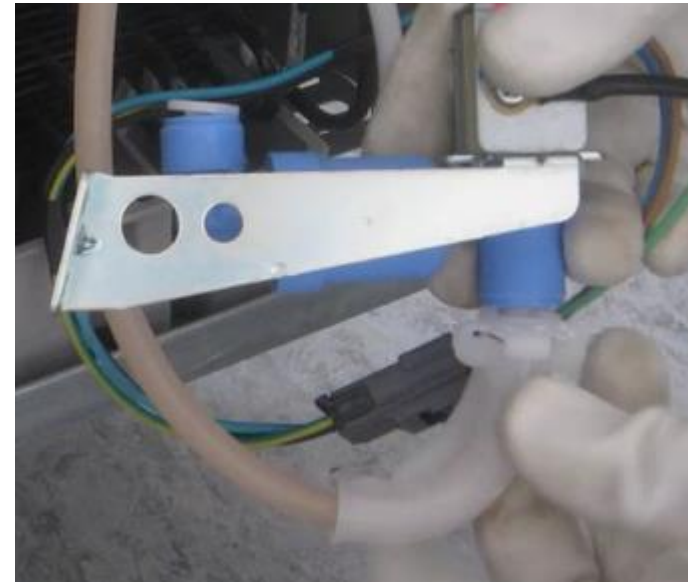
5. Gently pull out the tube while at the same time pressing down the release collar on both sides.



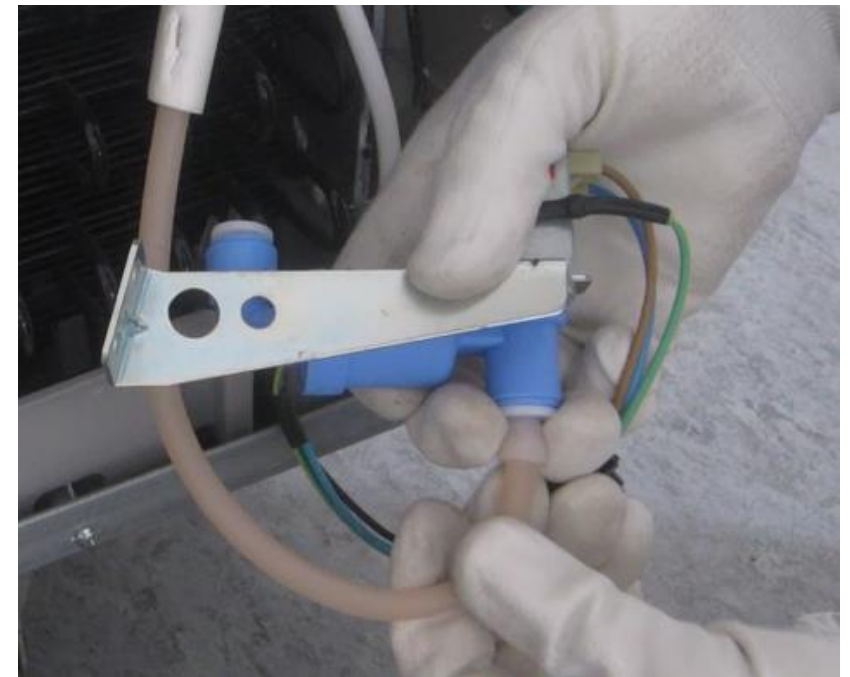
Reverse the actions to assemble.

Filter manifold tube

1. Remove the plastic zip ties and unclip the tube guide



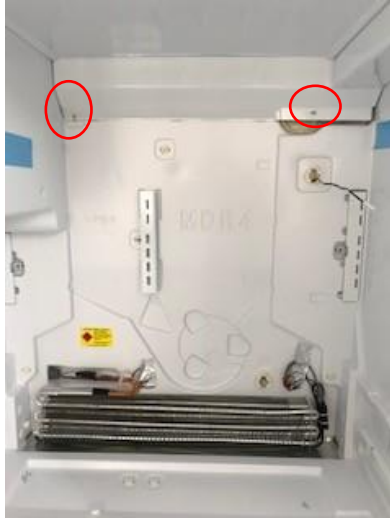
2. Hold the valve and press down the white release collar on both sides.
3. Gently pull out the tube while at the same time pressing down the release collar on both sides.



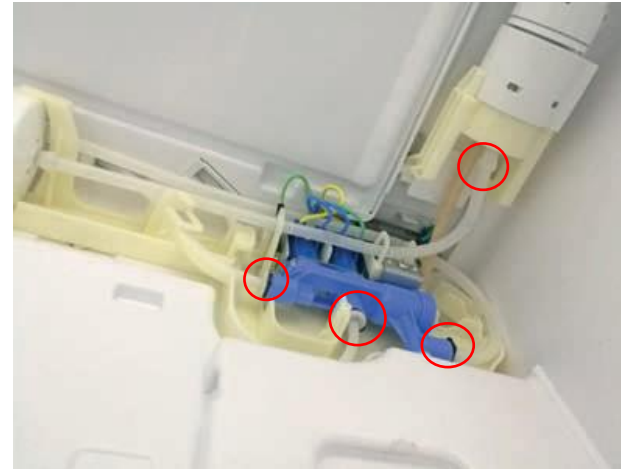
Reverse the actions to assemble.

11.1 Water tank and main dispenser valve

1. Unfasten the two screws on the cover of the water dispenser



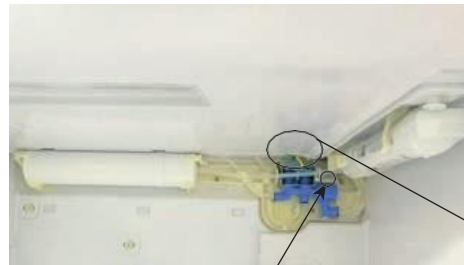
Remove tubes as described in **Inlet tube**



2. Carefully remove the tubings secondary water valve and water filter – follow the same process as detailed in chapter **Inlet tube**

3. Remove the screw mounting the secondary water valve.
4. Disconnect the wire connector and detach the secondary water valve.
5. To remove the water tank, gently bend the lower arm of the bracket outwards and the push the tank down. The tank will pop out.

Note: Other tank in production, see Water supply overview image.



Remove screw

Disconnect wire



Push tank down. Bend lower arm

11.2 Dispenser unit

1. Remove top cover to reach the waterhose
2. Pull out waterhose approx. 10 cm



3. Insert thin plastic tool to clip out the electronic board or use a suction cup.
4. Disconnect the wire connector.



5. Remove the cover of the waterhose
6. Remove the light diffusor



7. Unfasten the two screws

11.3 Dispenser pedal

- 1. Use a suction cup to pull out the dispenser pedal

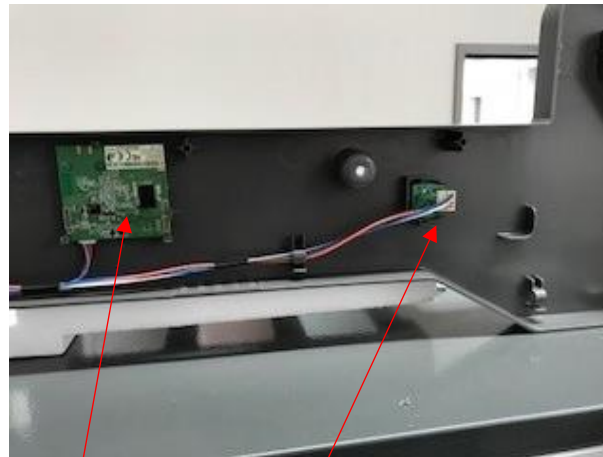


12 REMOVAL & REPLACEMENT OF PARTS

12.1 Top panel

Remove the five screws on the top panel to access:

- Auger motor safety switch
- Waterhose
- Safety switch auger motor
- Reed switch internal light
- NIUx board
- H&T sensor



NIUx

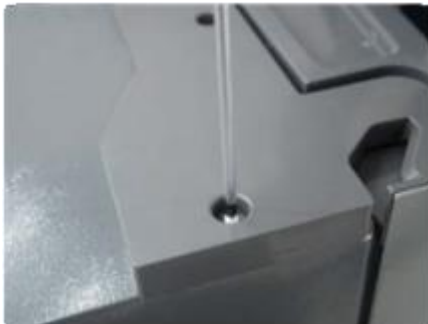
H&T sensor



Waterhose switch

Auger motor safety switch

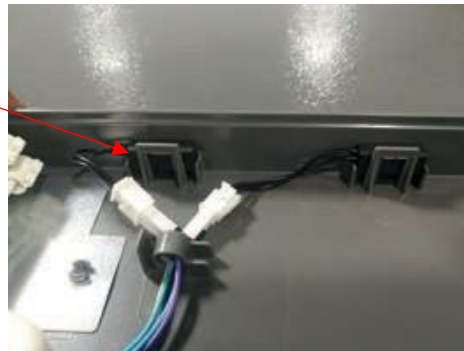
Light reed switch



Remove the Light reed switch:

Disconnect the wire connector of the switches

Open the snaps to remove the switches.



Remove the Auger safety switch:

Disconnect the wire connector



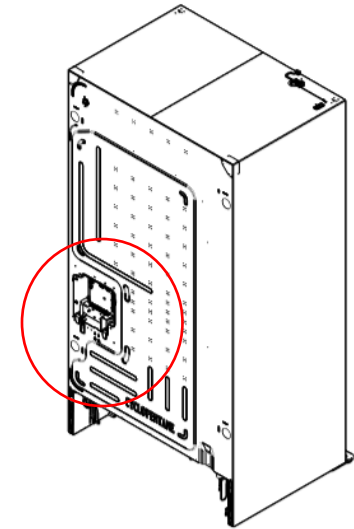
Release the snap and push out



12.2 ERF2600 Access

1. Disconnect power and place the refrigerator in a position to access rear side.
2. Remove the five screws on the rear panel cover and remove the cover.
3. Mark and disconnect all wires and release snaps to detach the boards.

For more information and Loads layout, see document 599 83 20-19 ERF2600.



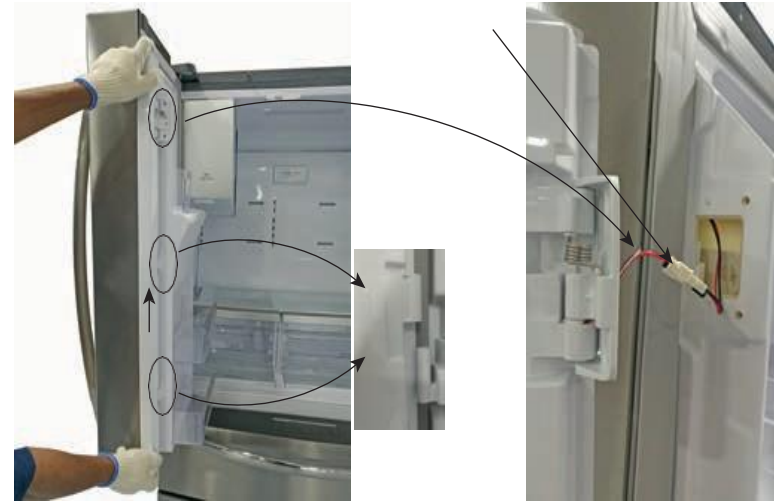
Note: Do not replace the ERF2600 and the NIUx board at the same time. Replace first one and start the appliance before replacing the other. This is due to that the boards are serialized.

12.3 Flipper mullion

1. Disconnect power.
2. Remove the screws on the flipper mullion hinge.



3. Hold the flipper mullion and push it upward.
4. Disconnect the wire connector of the flipper mullion



12.4 Humidity control

1. Disconnect power.
2. Release snap and remove the humidity control cover and detach the humidity control.



12.5 Filters

Air filter:

Hold the air filter assembly and pull it out.



Air filter

Water filter:

1. Pull the water filter housing towards the front of the cabinet to release the tab, the filter housing drops to reveal the filter.
2. Hold the water filter and rotate counter-clockwise to remove the water filter.



Water filter

12.6 Ice bucket

1. Hold the ice bucket assembly and pull it out.



12.7 Ice maker air handler & evaporator

Ice maker:

1. Hold the ice bucket assembly and pull it out
2. Remove the screw and detach the wiring cover.
3. Disconnect the wire connector of the ice maker.
4. Hold the ice maker and pull it out.

Note: The ice maker fill tube is not replaceable.



Air handler:

1. Remove the ice maker.
2. On the side of the ice maker, remove the screw cap with a plastic putty knife
3. Remove the two screws mounting the flip shelf.
4. Take the shelf out.



5. Remove the screw mounting the ice maker housing.
6. Hold the ice maker housing and pull out.



7. Remove four screws mounting air handler.
8. Pull out the defrost thermister and disconnect the wire.



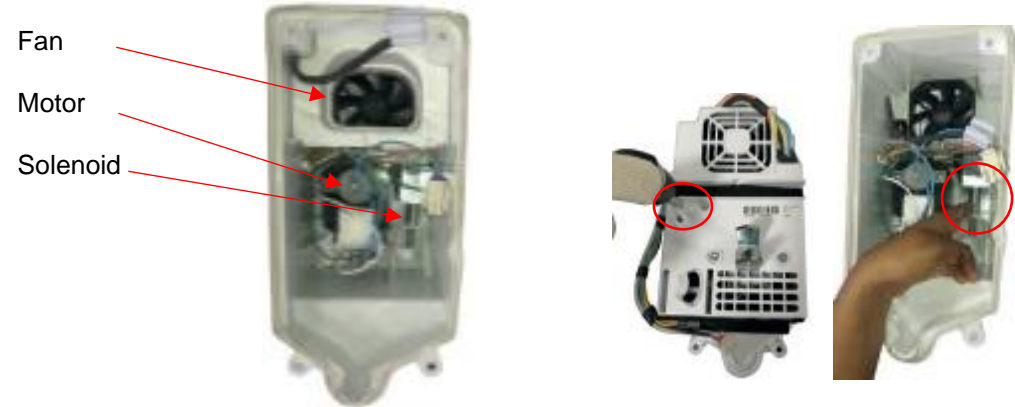
Evaporator:

1. Remove ice maker.
2. Remove air handler.
3. Pull out defrost heater fuse.
4. Cut the welding on inlet and outlet tubes of evaporator.
5. Release snaps and remove the evaporator.



12.8 Auger Motor, Refrigerator Ice Maker Fan & Cube Crush Solenoid

1. Remove ice maker.
2. Remove air handler.
3. Pull out thermal cover on top of the fan assembly.
4. Pull out the fan assembly and disconnect the wire.
5. Remove the two screws mounting the crush solenoid.
6. Pull out the crush solenoid.



7. Disconnect all wires connected to the crush solenoid.
8. Unscrew the auger drive bar.
 - a. Note that it has left-hand threads (turn right to loosen). Hold auger drive bar and rotate clockwise to remove.
9. Remove the foam gasket that covers the top screw.

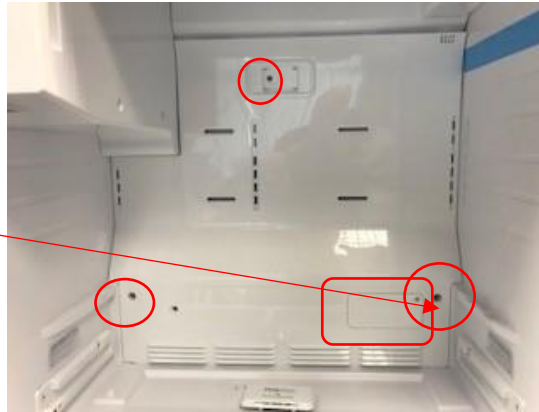


10. Remove the three screws.
11. Disconnect the wires connected to the motor.
12. Detach the motor.



12.9 Fridge evaporator, evaporator fan, air duct, defrost thermister

1. Disconnect power.
2. Remove the flip-shelf, shelves, crisper drawers, crisper support and air filter.
3. Remove the connector window cover and disconnect all the connectors.
4. Remove the three screws to unfasten the cover of the fridge evaporator
5. Remove the NTC sensor.
6. Pull the cover from the top to release the tabs
 - a. **Be sure to grasp the cover right above the air filter location. The back of the air ducting is adhesive backed foam tape. If the cover is pulled from either the right or left, the tape will collapse and attach itself to the air duct causing an air restriction.**
7. Disconnect the wire connector of the fan motor.
8. Remove the sensor on the air duct.



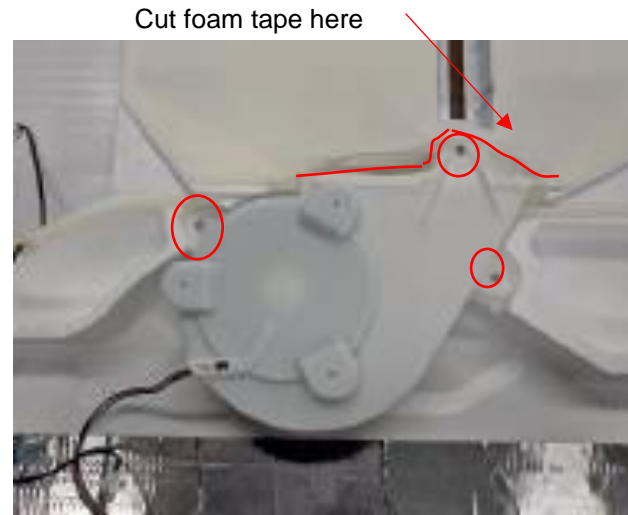
Adhesive backed foam tape – make sure to grasp the cover from the top, above the air filter location



Fridge evaporator fan:

1. Remove the three screws.
2. Cut the foam tape with a knife.
3. Do not cut more than necessary to remove the fan.
4. Take the fan motor out.
5. Remove the fan housing
6. Separate the housing by releasing the tabs, and detach the fan motor by removing the three screws.

After a fan replacement, use an adhesive tape to hold the original tape in position.



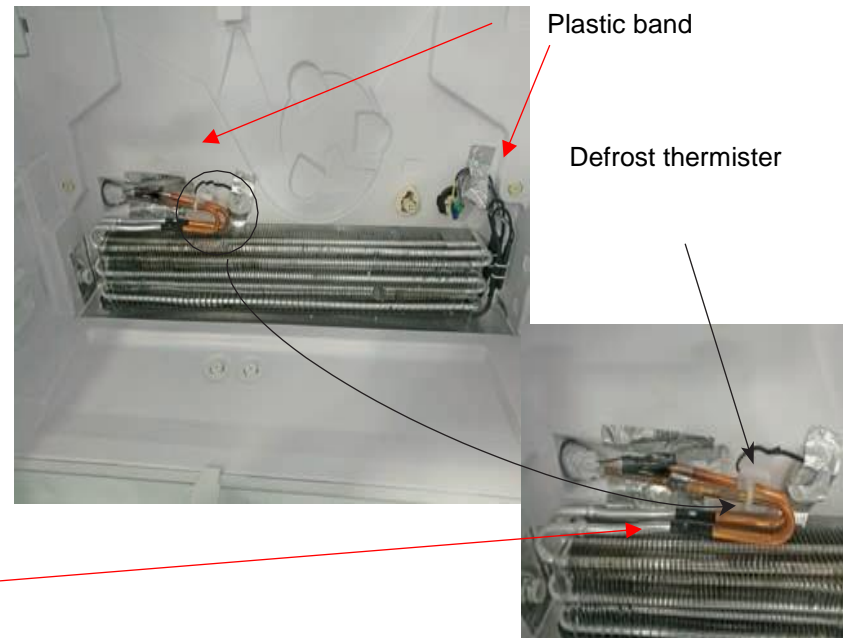
Release the snap and remove the screws



The defrost thermister is located on the upper side of the evaporator, on the copper tube leading to the evaporator inlet.

1. Cut the plastic band attached to the thermister/heater thermal cutoff.
2. Disconnect the wires and detach the thermister/ heater thermal cutoff.

Note: Do not break the welding of the evaporator if removing the defrost thermister.

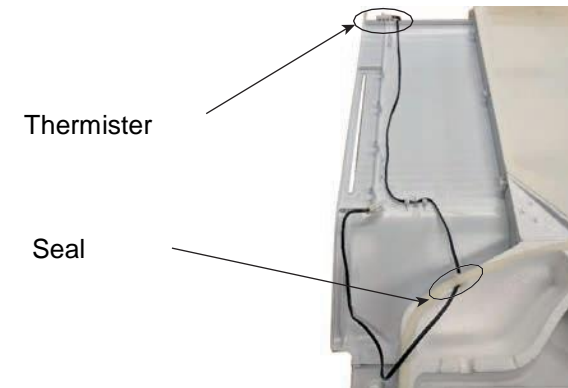


Fridge evaporator:

1. Separate the defrost thermister from the evaporator.
2. Cut the welding on inlet and outlet tubes and remove the evaporator

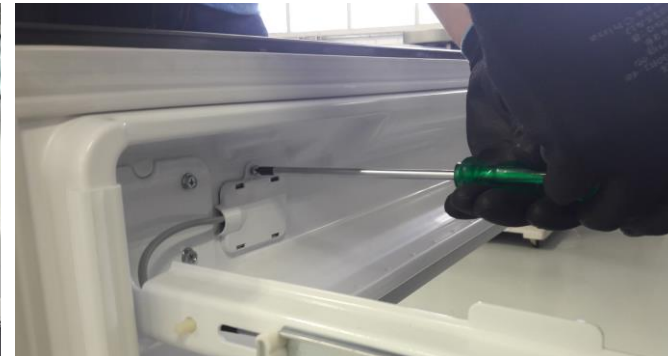
The refrigerator thermister is clipped into the top of the rear panel.

1. Detach the thermister from the clip and cut the seal at the bottom to remove the thermister.



12.10 Replace VCZ wiring and remove the drawer door

1. Disconnect power and open the VCZ drawer.
2. Open the drawer and remove the inner plastic bin.
3. Remove the connector cover placed in the inner liner of the door.



4. Disconnect the connector.

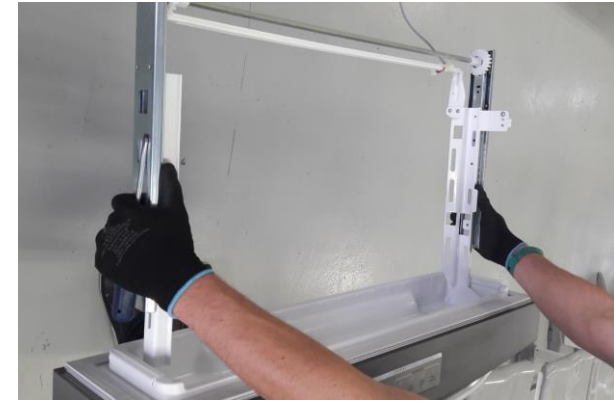


Follow steps 1 to 7 to remove the door.

5. Remove the cable ties from the metal bracket



6. Push both left snaps and pull the slides to release the door, repeat on the right side.



7. Remove the door and place it in a clean place to avoid scratches.

8. Remove the 3 screws on the plastic slide support.



9. Pull the plastic slide support to access the harness

10. Remove 2 screws from the plastic part that holds the wiring in position.



11. Cut the cabinet wiring, keeping approx. 4 to 6 cm length.



12. Connect the wires.

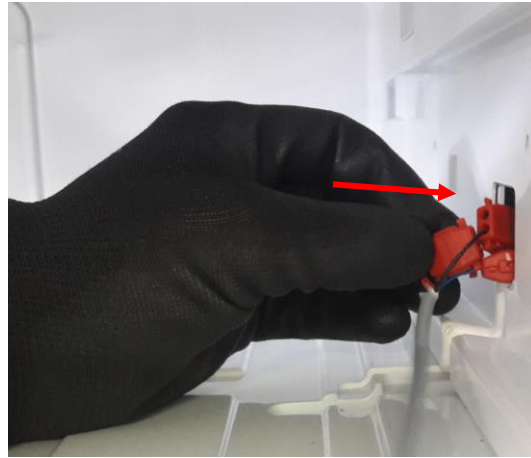


13. Crimp the connection.



14. Follow steps 12 and 13 for all wires.

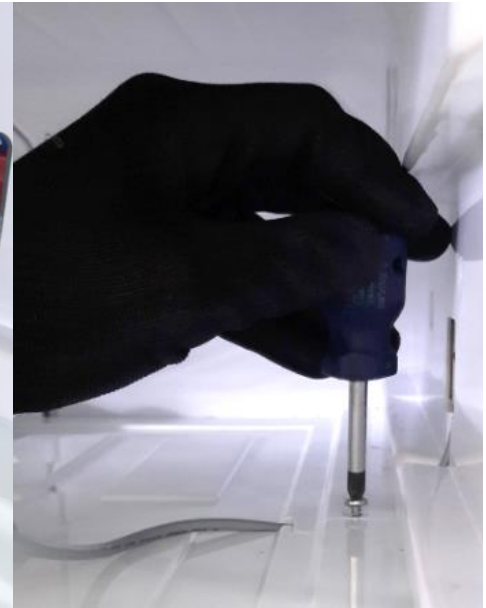
15. Push in all connections into the housing.



16. Fit the wiring in the slot.



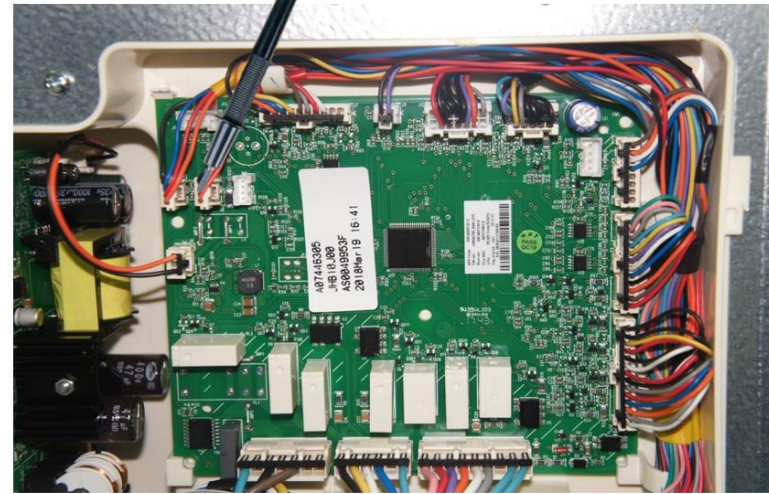
17. Assemble the plastic part that holds the wiring.



18. Check all wires to the main PCB using Continuity Test (Connector J15).



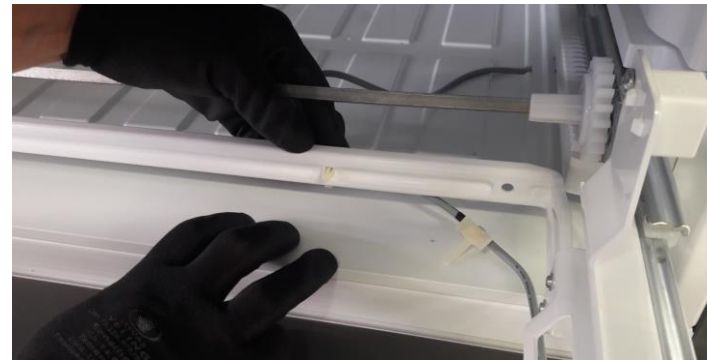
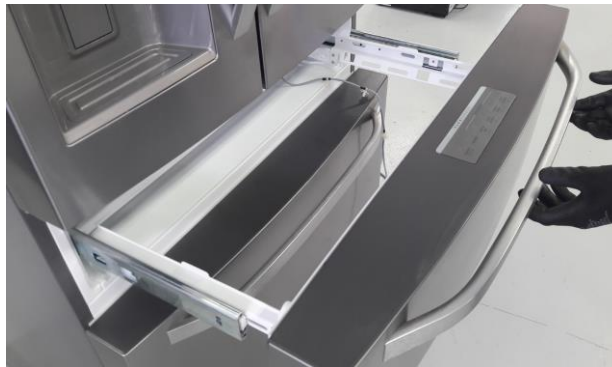
Connector J14 may be connected to J15 and J16 since these are jumpers of connector J14.



19. Fit the door in the plastic brackets and ensure that the slides are well fitted in the bracket.

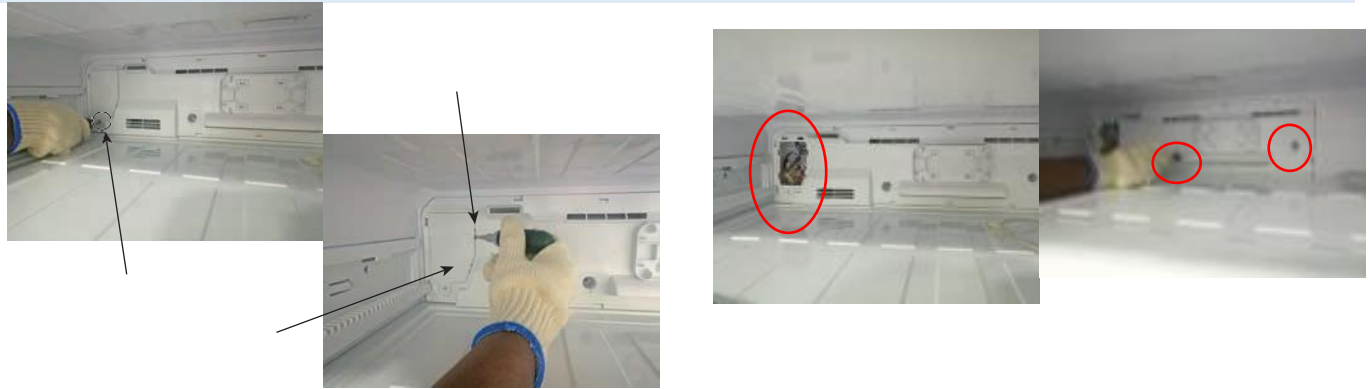
Be careful not to damage the wiring!

20. Assemble all cable ties. Ensure that the wiring is not pinched.



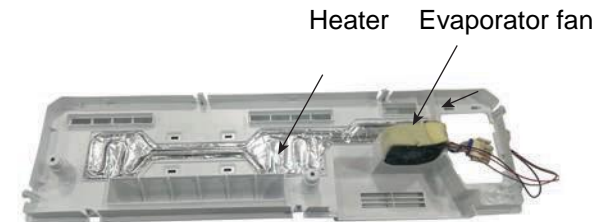
12.11 VCZ air duct, evaporator fan & VCZ heater

1. Disconnect power and open the VCZ drawer.
2. Remove the drawer.
3. Remove the screw and remove the cover.
4. Disconnect the wires connector of the air duct.
5. Remove the two screws mounting the air duct.
6. Hold the air duct and pull it out.



Evaporator fan and heater

1. Remove air duct.
2. Hold and pull out the cover of the air duct.
3. Detach the heater and evaporator fan.



12.12 VCZ damper

1. Disconnect power and open the VCZ drawer.
2. Remove the drawer.
3. Remove air duct. See section Refrigerator Drawer Air Duct.
4. Disconnect the wire connector of the damper.
5. Hold and detach the damper.



12.13 Freezer Drawer

1. Disconnect power and open the freezer drawer.
2. Remove the baskets.
3. Release the snaps on the slide on both sides and pull the slide assembly out.



12.14 Freezer air duct, evaporator fan, defrost thermister & evaporator assembly

Air duct

1. Disconnect power and open the freezer drawer.
2. Remove the baskets and drawer.
3. Remove the four screws mounting the air duct.
4. Hold the air duct and pull slightly out.
5. Disconnect the fan wire connector and remove the tape.
6. Carefully pull the air duct out from the freezer.



Evaporator fan

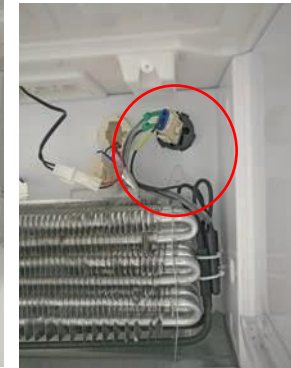
1. Remove the air duct.
2. Remove the four screws mounting the fan.

Note: The speed of the motor is controlled by the program. When the workload is high, the speed of the fan goes high. When the user selects Quick Chill mode in the settings, the speed of motor is higher than normal.



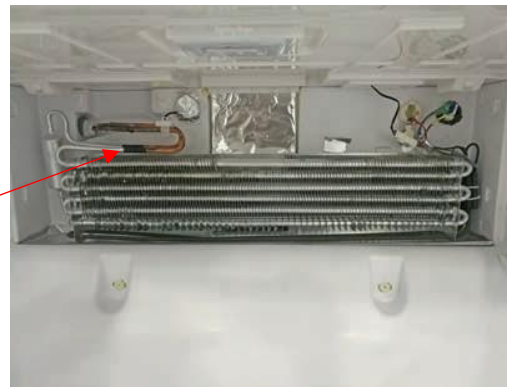
The **defrost thermister** is located on the upper side of the evaporator, on the copper tube leading to the evaporator inlet.

1. Remove the air duct.
2. Cut the plastic band which holds the thermistor
3. Disconnect the wire connector and take the defrost thermister out.



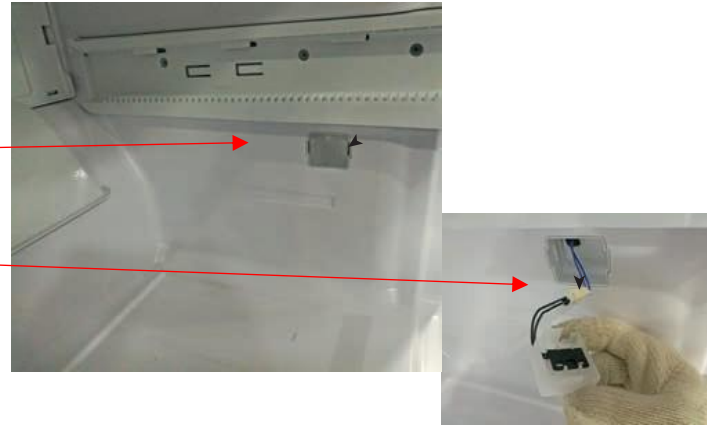
The evaporator has a defrost heater assembly attached on it. The defrost heater assembly consists of the defrost heater, defrost thermister, and a thermal cutoff. Replace the entire evaporator assembly, if any of the components fail.

- 13 Remove the air duct.
- 14 Separate the defrost thermister and defrost heater with thermal cutoff from the evaporator.
- 15 Cut the welding on inlet and outlet tubes
- 16 Remove the evaporator.



16.1 Freezer Light Sensor

1. Disconnect power and open the freezer drawer.
2. Remove the baskets.
3. Remove the freezer drawer
4. Remove the air duct.
5. Release the snap and remove the light sensor.
6. Disconnect the wire connector and remove the light sensor.



16.2 Freezer light assembly

Freezer light assembly is located below the VCZ drawer.

1. Disconnect power and open the VCZ drawer.
2. Release the snap and remove the light cover.
3. Release the snap and remove the light assembly.
4. Disconnect the wire connector and remove the light assembly.



16.3 Refrigerator light assembly

One light is located on the ceiling and four on the side walls.

1. Disconnect power.
2. Remove the refrigerator shelves.
3. Open the snaps of the lamp cover using a plastic putty knife as shown in and detach the cover.
4. Open the snaps of the LED light and take out the light assembly.
5. Disconnect the wire connector and detach the LED light.



16.4 VCZ light sensor/light assembly

1. Disconnect power and open the VCZ drawer.
2. Remove the drawer.
3. Remove air duct. See section Refrigerator Drawer Air Duct.
4. Release snap and remove the light sensor. See Figure 46.
5. Disconnect the wire connector and remove the light sensor.



Light sensor



Light assembly

1. Release snap and remove the light cover.
2. Release snap and remove the light assembly.
3. Disconnect the wire connector and remove the light assembly.



16.5 Compressor area – inverter, compressor & condenser fan

1. Disconnect power and place the refrigerator in a position to access rear side.
2. Remove all screws mounting the rear panel.

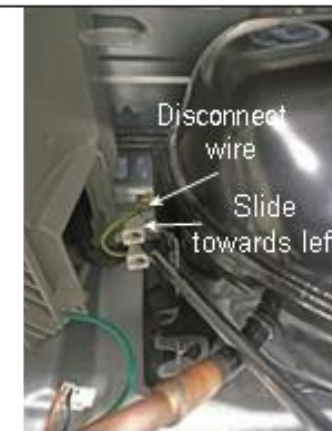
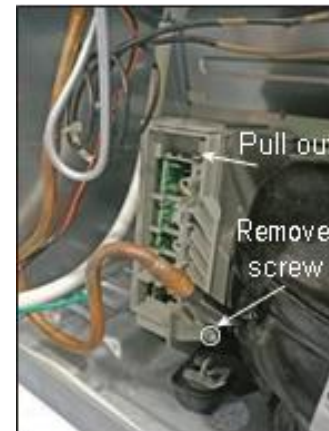


Inverter

1. Remove the screw mounting the inverter cover and remove the inverter cover.
2. Mark and disconnect the wires connected to the inverter.

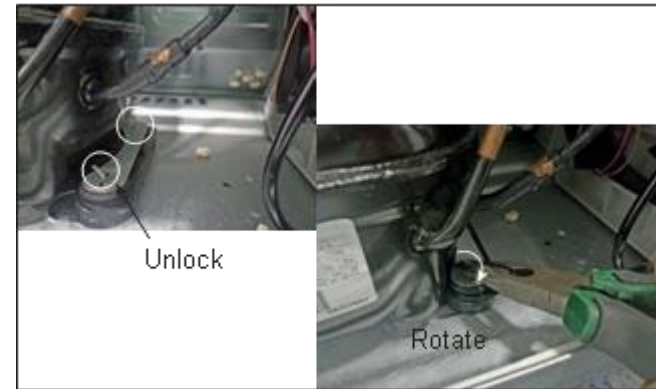


3. Remove the screw mounting the inverter and pull the inverter cover out.
4. Mark and disconnect the wires connected to the compressor.
5. Slide the wire connector of the compressor towards left and remove it.



Compressor

1. Remove inverter.
2. Unlock the compressor base on all four sides; rotate the lock to bring it into open position.



3. Cut the welding on inlet and outlet tubes.
4. Remove the compressor.

Note: If the compressor fails to start after replacement, replace the inverter.



Condenser Fan

1. Mark and disconnect the wires connected to the fan assembly. .
2. Release snaps and pull the fan assembly out.

