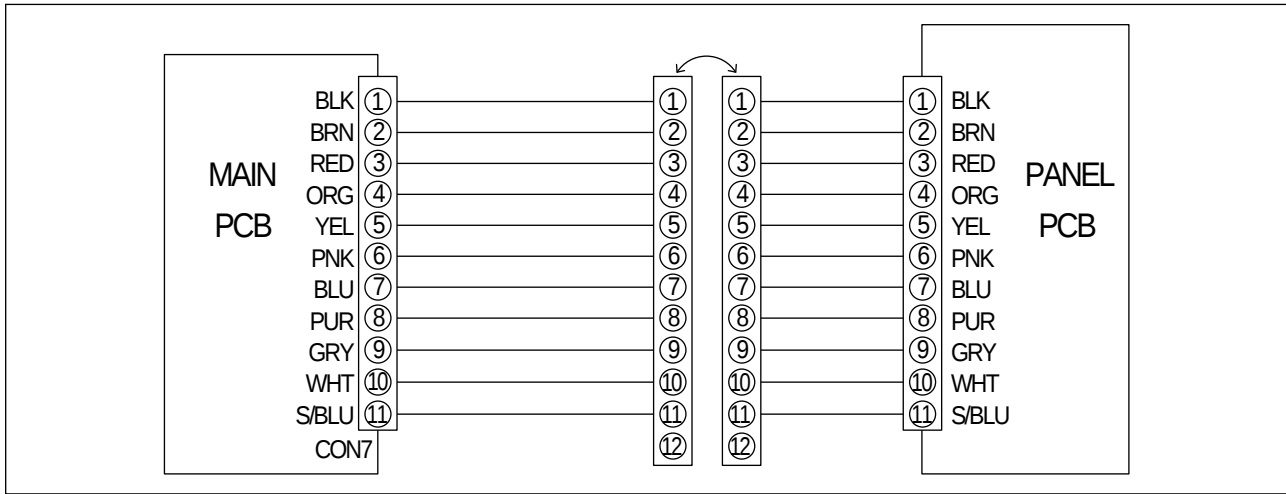
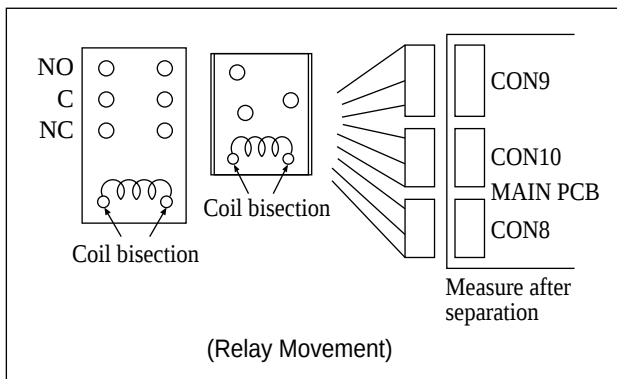


Reference

Reference1 The connection of DOOR-CABI



Reference2 Inspection of Relay



* First separate the housing connected to the main PCB CON C8, 09, 10 and measure the following items.

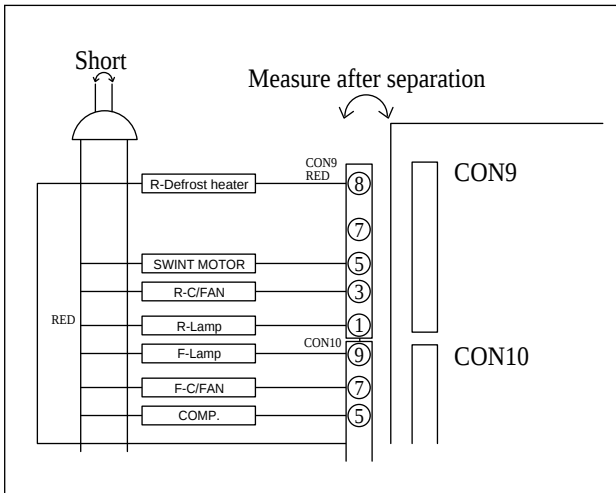
1. Measure the coil bisection of the relay and check whether it works.
2. Measure the apex bisection for open circuit.

Apex category	The voltage of coil bisection	Judging the apex bisection
Apex 3	DC 12V(Operation)	C:NO SHORT
		C:NC OPEN
	DC 05V(Standstill)	C:NO OPEN
		C:NC SHORT
Apex 2	DC 12V(Operation)	SHORT
	DC 0V(Standstill)	OPEN

Note) C Æ Common, NO Æ Normal open, NC Æ Normal close

3. When it operates as above, it is normal and when it does not operate, report the corresponding relay.

Reference3 Check for malfunctioning of the subordinate



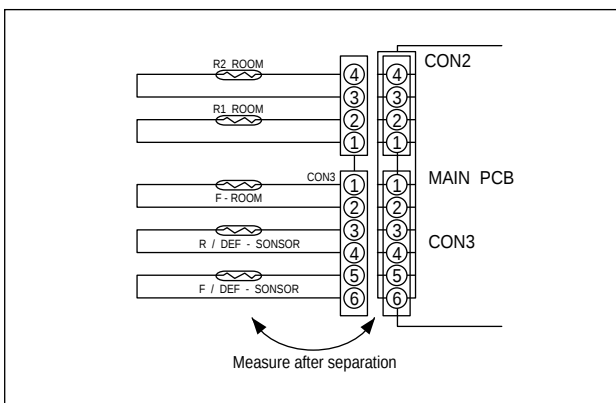
Note) The compressor is impossible to measure resistance by the running and starting condenser.

* Cut off the power code, separate the housing from the main PCB CON 08, 09, 10 and measure the following.

1. Measure resistance between the terminals and check for malfunctioning of L / W.

Subordinate	Measurement terminal	Evaluation of measurement result
R Defrost heater	CON9 ⑨ & CON10 ③	
F Defrost heater	CON8 ③ & CON10 ③	0W or • W(defect)
Comp	CON8 ⑤ & CON10 ⑤	Impossible to measure 0W indicator
Swing motor	CON8 ① & CON9 ⑤	0W or • W(defect)
R-Circulation fan	CON8 ① & CON9 ③	
F-Circulation fan	CON8 ① & CON10 ⑦	
R-Lamp	CON8 ① & CON9 ①	
F-Lamp	CON8 ① & CON10 ⑨	

Reference4 Inspection of the sensor



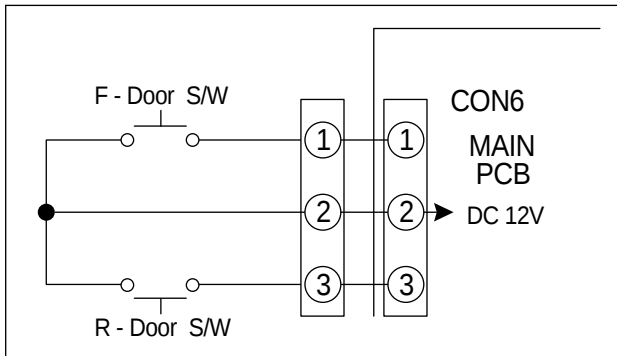
* Separate the housing connected to main PCB CON2 and CON3.

* Resistance value lowers while temperature rises, because it is a NTC type sensor.

1. R1 sensor measures resistance of CON2 between ①~②.
2. R2 sensor measures resistance of CON2 between ③~④.
3. Freezer sensor measures resistance of CON3 between ①~②.

4. R-defrost sensor measures resistance of CON3 between ③~④.
5. F-defrost sensor measures resistance CON3 between ⑤~⑥.
6. The measurement value above is calculated by comparing the present temperature of the sensor and the temperature table in specification found in the manual.

Reference5 Checking the Door S/W



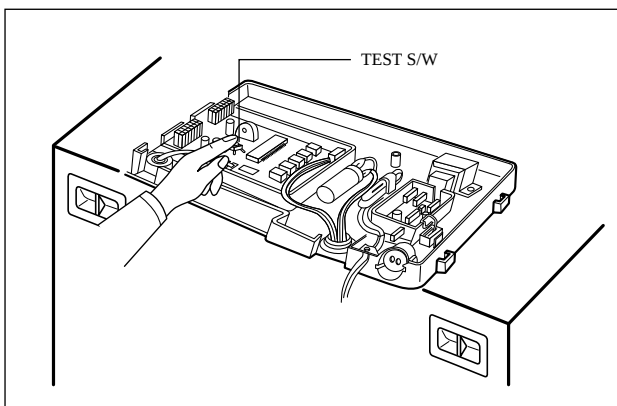
(Refrigerator Bulb)

1. Open the door and check if the freezer bulb turns on.
2. Press the Door S/W and check if the freezer bulb turns off.
3. Close the door of freezer and repeat 1 and 2 for refrigerator.
4. If there is a problem, check bulb and door S/W.
5. Check wire connection.

(Micom signal)

1. Check if CON6 ① and ③ is 0V DC after closing the F·R doors.
2. Check if CON6 ① is 12V DC when opening F door.
Check if CON6 ③ is 12V DC when opening R door.
3. If there is problem, check door S/W and wire connection.

Reference6 Forced starting & forced defrosting



(Forced starting)

* This function is used to turn on the comp and fan immediately regardless of the temperature of freezer.

1. Press the button on the PCB after removing the main PCB cover from the upper part of refrigerator.
2. Buzzer will sound to indicate the forced starting.

(Forced defrosting)

* This function is used to turn on the defrosting regardless of defrost time.

1. Press the button twice during forced starting. Then, defrosting is performed.
2. If the button is press 3 times during R-defrosting, F-defrosting is also performed at the same time.
3. If the button is pressed 4 times during R-f defrosting, test mode is released.

Reference7

Sensor resistance and voltage conversion table for temperature

(Sensor pressure voltage 10KW– Voltage converted by the F-reference)

* Voltage conversion table depends on H/W structure of MICOM port input voltage.

Sensor Short : Micom 0V.

Sensor Open : Micom 5V.

* Sensor partial pressure resistance 10KW

TEMP.	Resistance KW± 1%	Voltage(V)	TEMP.	Resistance KW± 1%	Voltage(V)	TEMP.	Resistance KW± 1%	Voltage(V)
– 35	68.648	4.364	– 13	22.832	3.477	9	9.016	2.37
– 34	65.011	4.333	– 12	21.814	3.428	10	8.673	2.322
– 33	61.595	4.301	– 11	20.848	3.379	11	8.345	2.274
– 32	58.384	4.268	– 10	19.932	3.329	12	8.032	2.227
– 31	55.366	4.235	– 9	19.062	3.279	13	7.732	2.18
– 30	52.526	4.2	– 8	18.237	3.229	14	7.446	2.134
– 29	49.854	4.164	– 7	17.453	3.178	15	7.172	2.088
– 28	47.337	4.127	– 6	16.709	3.127	16	6.910	2.043
– 27	44.967	4.09	– 5	16.001	3.076	17	6.659	1.998
– 26	42.733	4.051	– 4	15.328	3.025	18	6.420	1.954
– 25	40.626	4.012	– 3	14.688	2.974	19	6.190	1.911
– 24	38.640	3.972	– 2	14.080	2.923	20	5.970	1.869
– 23	36.765	3.93	– 1	14.501	2.872	21	5.759	1.786
– 22	34.995	3.888	0	12.949	2.821	22	5.557	1.786
– 21	33.323	3.845	1	12.424	2.77	23	5.363	1.745
– 20	31.743	3.802	2	11.924	2.719	24	5.178	1.705
– 19	30.250	3.757	3	11.447	2.668	25	5.000	1.666
– 18	28.838	3.712	4	10.993	2.618	26	4.829	1.628
– 17	27.502	3.666	5	10.559	2.567	27	4.665	1.59
– 16	26.237	3.62	6	10.146	2.518	28	4.508	1.553
– 15	25.040	3.573	7	9.752	2.468	29	4.357	1.517
– 14	23.906	3.525	8	9.375	2.419	30	4.212	1.481