

# ComfortStar®

## Ceiling & Floor Type Service Manual



NEO24SC-S

NEO36SC-S

NEO48SC-S

NEO60SC-S

- 1. Features**
- 2. Dimensions**
- 3. Service Space**
- 4. Wiring Diagrams**
- 5. Electric Characteristics**
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- 9. Field Wiring**
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# 1. Features

- 1.1. New design, more modern and elegant appearance.
- 1.2.

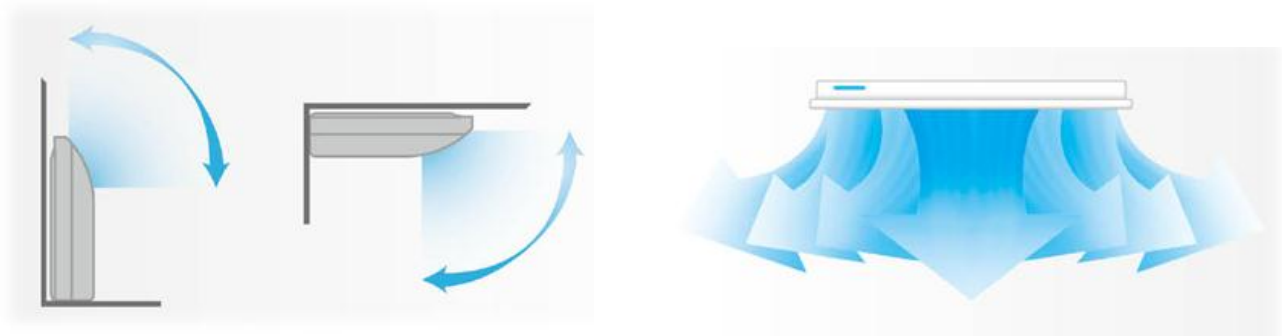


## 1.2. Convenient installation

- The ceiling type can be easily installed into a corner of the ceiling even if the ceiling is very narrow
- It is especially useful when installation of an air conditioner in the center of the ceiling is impossible due to a structure such as one lighting.

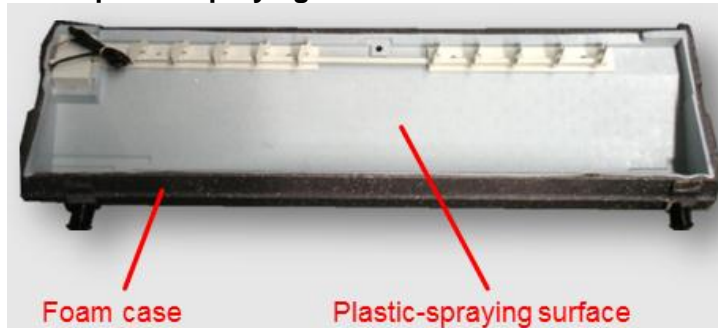
## 1.3. Two direction auto swing (vertical & horizontal) and wide angle air flow,

- Air flow directional control minimizes the air resistance and produces wilder air flow to vertical direction.
- The range of horizontal air discharge is widened which secures wider air flow distribution to provide more comfortable air circulation no matter where the unit is set up



## 1.4. Three level fan speed, more humanism design, meets different air-supply requirement.

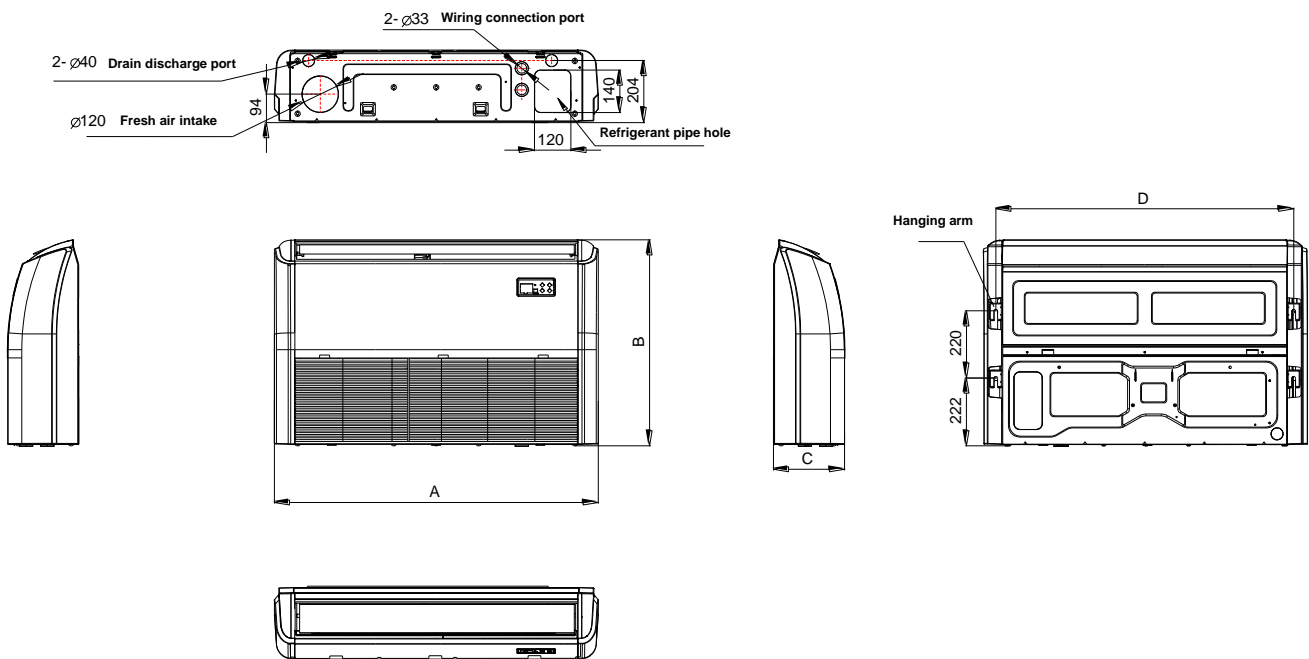
## 1.5. New foam drain pan with plastic-spraying inner surface



## 1.6. Easy operation.

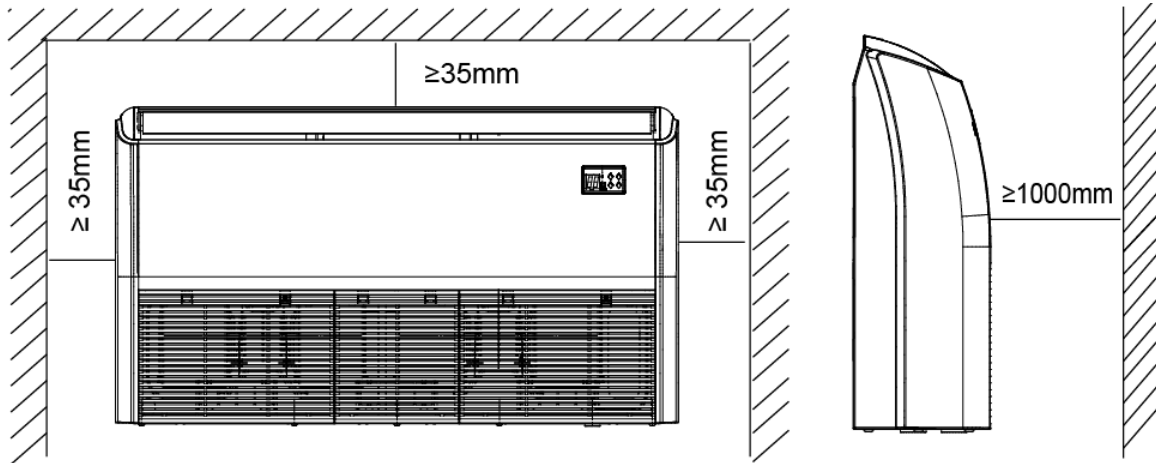
## 1.7. Remote control and optional wired control method.

## 2. Dimensions



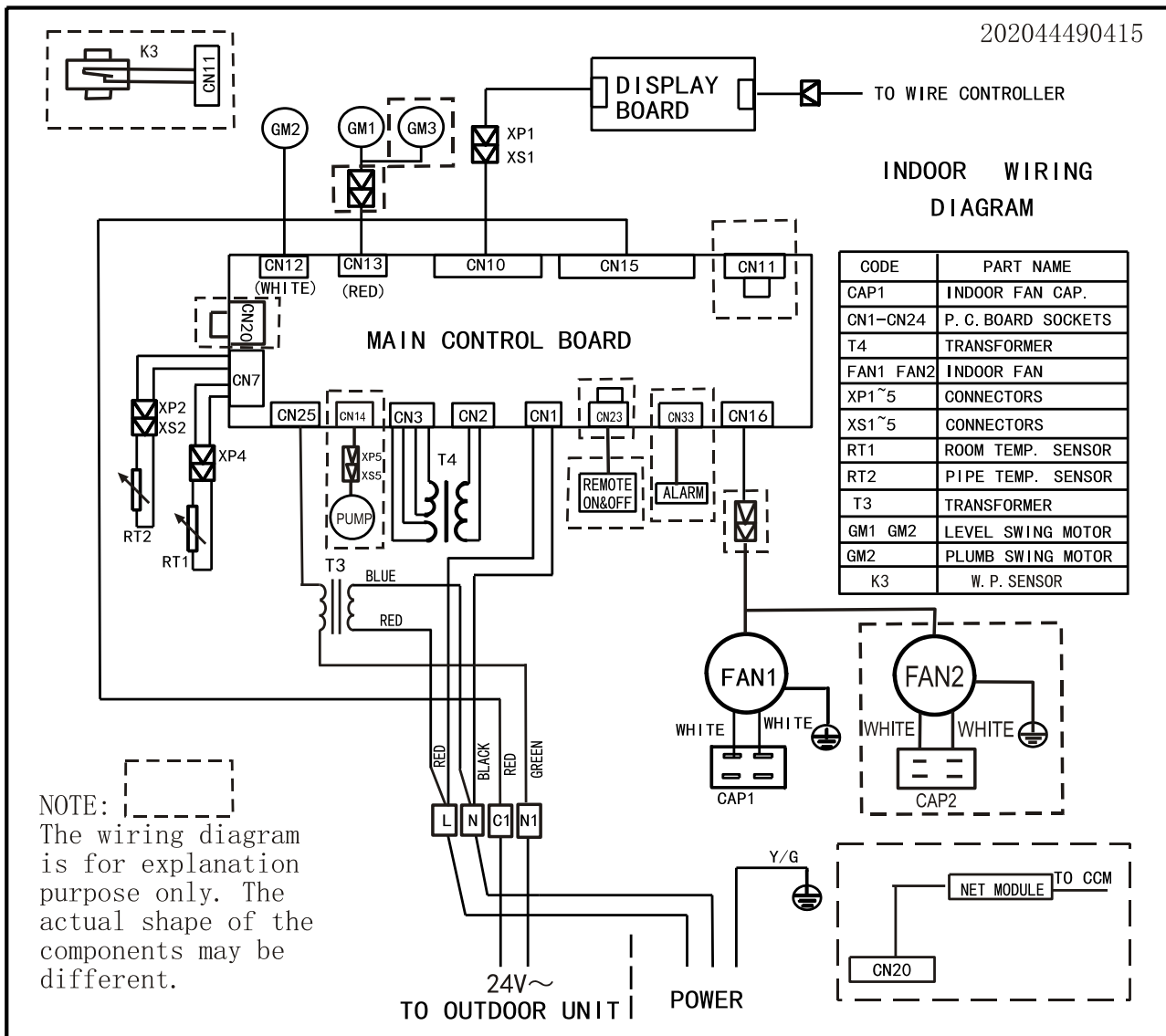
Capacity (Btu/h)	A	B	C	D
24K	990	660	203	505
30K, 36K	1285	675	235	1200
48K, 60K	1650	675	235	1565

### 3. Service Space



### 4. Wiring Diagrams

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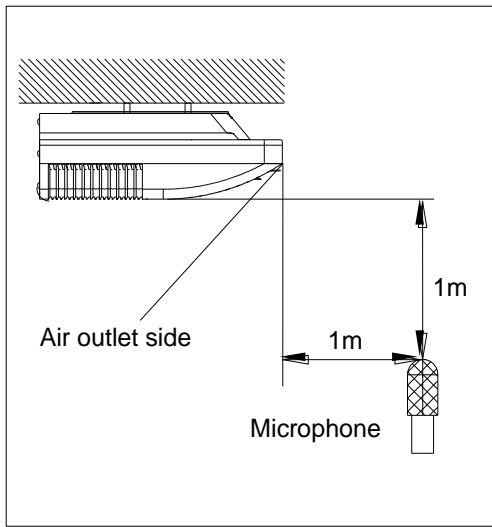


## 5. Electric Characteristics

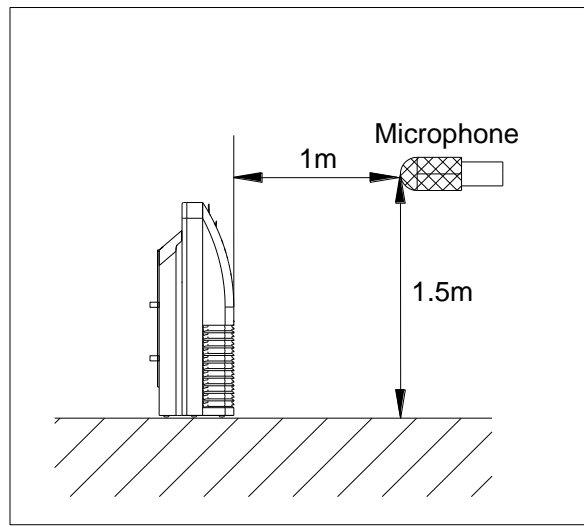
Model	Indoor Units				Power Supply
	Hz	Voltage	Min.	Max.	MFA
All models	60	220-230V	198V	242V	16

MFA: Max. Fuse Amps. (A)

## 6. Sound Levels










**Ceiling**



**Floor**

Model	Noise level dB(A)		
	H	M	L
36	53	50	46
48	52	49	45
60	56	52	48

## 7. Accessories

Remote controller & Its holder	1. Remote controller		1
	2. Remote controller holder		1
	3. Mounting screw (ST2.9x10-C-H)		2
	4. Alkaline dry batteries (AM4)		2
Others	5. Owner's manual		1
	6. Installation manual		1
	7. Remote controller manual		1

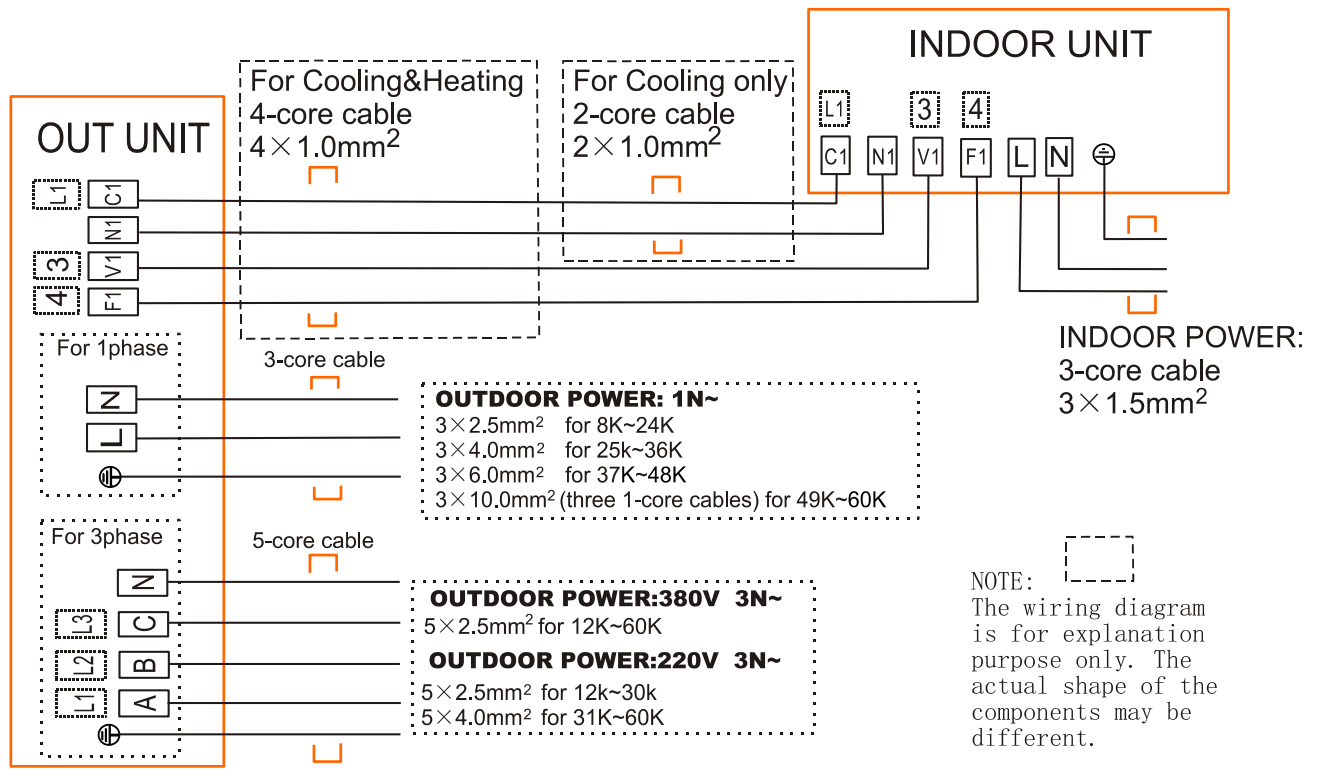
## 8. The Specification of Power

Type (Cooling only)		36000	48000-60000	36000-60000	
Power	Indoor unit	Phase	1- Phase	1- Phase	1- Phase
		Frequency and Voltage	220-230V~, 60Hz	220-230V~, 60Hz	220-230V~, 60Hz
	Outdoor unit	Phase	3- Phase	3- Phase	3- Phase
		Frequency and Voltage	220-230V~, 60Hz	220-230V~, 60Hz	380-420V~, 60Hz
Indoor Circuit Breaker/ Fuse (A)		20/16	20/16	20/16	
Outdoor Circuit Breaker/ Fuse (A)		40/25	45/35	25/20	
Indoor Unit Power Wiring (mm <sup>2</sup> )		3x1.5	3x1.5	3x1.5	
Outdoor Unit Power Wiring(mm <sup>2</sup> )		5x4.0	5x4.0	5x2.5	
Indoor/Outdoor Connecting Wiring (mm <sup>2</sup> )		Weak Electric Signal	2x1.0	2x1.0	2x1.0



## 9. Field Wiring

### Air Condition Link-Circuit



## 10. Troubleshooting

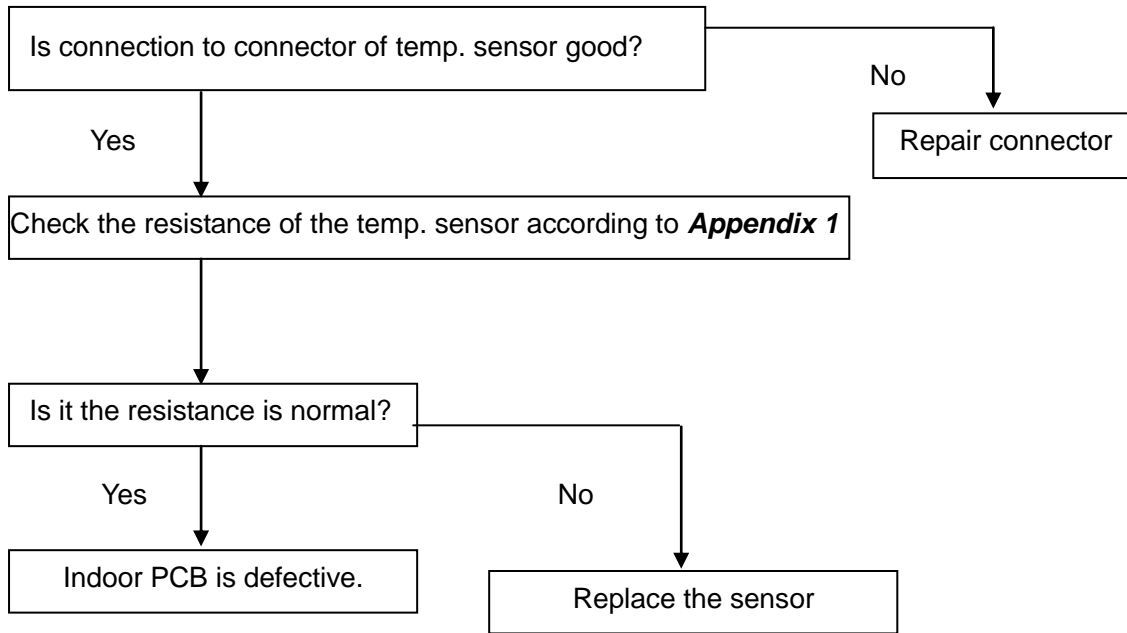
### 10.1. Self-diagnosis

No	Operation	Timer	Def/Fan	Alarm	Digital LED Display	Malfunction or protection
1	X	☆	X	X	E2	Indoor temperature sensor is abnormal
2	☆	X	X	X	E3	Evaporator temperature sensor is abnormal
4	☆	☆	X	X	E7	EEPROM malfunction
5	X	X	X	☆	E8	Full-water malfunction
O (on) X(off) ☆(flash at 5Hz)						

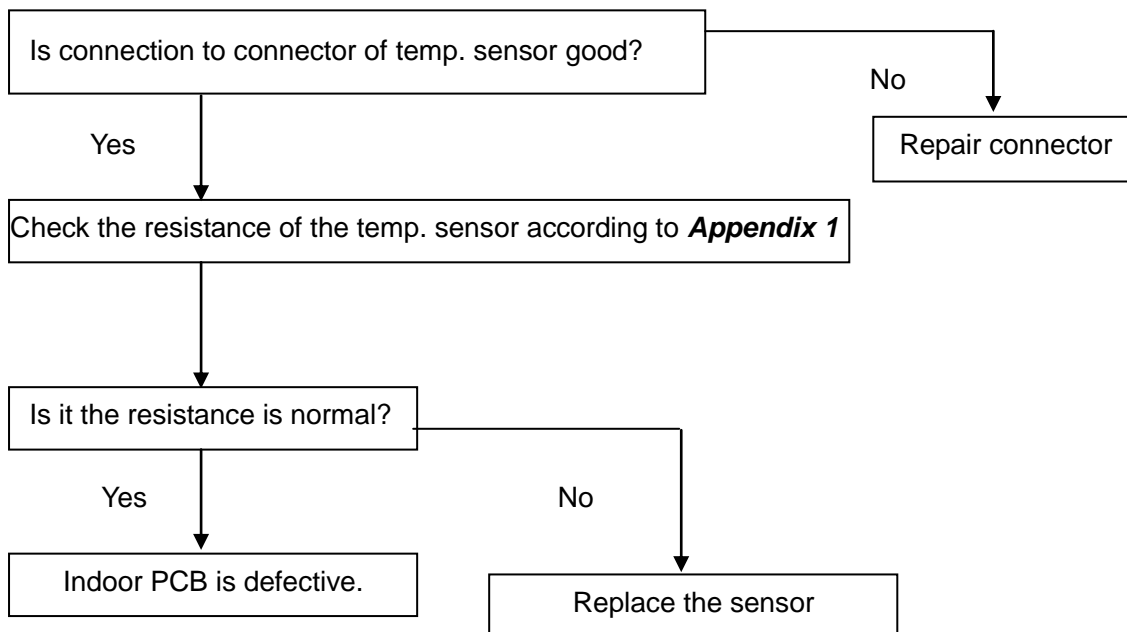
## 10.2. Solving steps for typical malfunction

### (1) For indoor unit

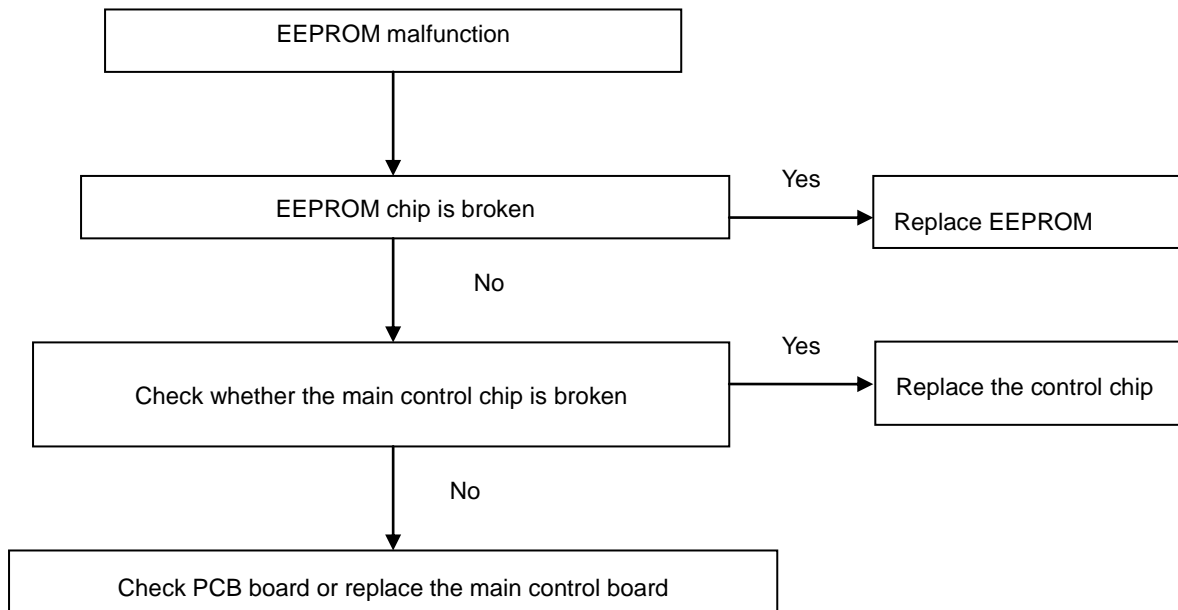
#### a. Indoor room temperature T1 and sensor evaporator temperature sensor T2 is abnormal



#### b. Condenser temperature sensor T3 is abnormal



**c. EEPROM malfunction**



**Appendix 1** Temperature Sensor Resistance Value Table (°C--K)

°C	K Ohm	°C	K Ohm	°C	K Ohm	°C	K Ohm
-20	115.266	20	12.6431	60	2.35774	100	0.62973
-19	108.146	21	12.0561	61	2.27249	101	0.61148
-18	101.517	22	11.5000	62	2.19073	102	0.59386
-17	96.3423	23	10.9731	63	2.11241	103	0.57683
-16	89.5865	24	10.4736	64	2.03732	104	0.56038
-15	84.2190	25	10.0000	65	1.96532	105	0.54448
-14	79.3110	26	9.55074	66	1.89627	106	0.52912
-13	74.5360	27	9.12445	67	1.83003	107	0.51426
-12	70.1698	28	8.71983	68	1.76647	108	0.49989
-11	66.0898	29	8.33566	69	1.70547	109	0.48600
-10	62.2756	30	7.97078	70	1.64691	110	0.47256
-9	58.7079	31	7.62411	71	1.59068	111	0.45957
-8	56.3694	32	7.29464	72	1.53668	112	0.44699
-7	52.2438	33	6.98142	73	1.48481	113	0.43482
-6	49.3161	34	6.68355	74	1.43498	114	0.42304
-5	46.5725	35	6.40021	75	1.38703	115	0.41164
-4	44.0000	36	6.13059	76	1.34105	116	0.40060
-3	41.5878	37	5.87359	77	1.29078	117	0.38991
-2	39.8239	38	5.62961	78	1.25423	118	0.37956
-1	37.1988	39	5.39689	79	1.21330	119	0.36954
0	35.2024	40	5.17519	80	1.17393	120	0.35982
1	33.3269	41	4.96392	81	1.13604	121	0.35042
2	31.5635	42	4.76253	82	1.09958	122	0.3413
3	29.9058	43	4.57050	83	1.06448	123	0.33246
4	28.3459	44	4.38736	84	1.03069	124	0.32390
5	26.8778	45	4.21263	85	0.99815	125	0.31559
6	25.4954	46	4.04589	86	0.96681	126	0.30754
7	24.1932	47	3.88673	87	0.93662	127	0.29974
8	22.5662	48	3.73476	88	0.90753	128	0.29216
9	21.8094	49	3.58962	89	0.87950	129	0.28482
10	20.7184	50	3.45097	90	0.85248	130	0.27770
11	19.6891	51	3.31847	91	0.82643	131	0.27078
12	18.7177	52	3.19183	92	0.80132	132	0.26408
13	17.8005	53	3.07075	93	0.77709	133	0.25757
14	16.9341	54	2.95896	94	0.75373	134	0.25125
15	16.1156	55	2.84421	95	0.73119	135	0.24512
16	15.3418	56	2.73823	96	0.70944	136	0.23916
17	14.6181	57	2.63682	97	0.68844	137	0.23338
18	13.9180	58	2.53973	98	0.66818	138	0.22776
19	13.2631	59	2.44677	99	0.64862	139	0.22231