

TECHNICAL CATALOGUE

MONO SPLIT

RAK-DJ25PHAT
RAK-DJ35PHAT
RAK-DJ50PHAT



RAC-DJ25PHAT
RAC-DJ35PHAT



RAC-DJ50PHAT



HITACHI

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1 SPECIFICATIONS

1.1. WALL TYPE

INDOOR	Unit	RAK-DJ25PHAT	RAK-DJ35PHAT	RAK-DJ50PHAT
Nominal capacity adjustable		no	no	no
Nominal Cooling capacity (min - max)	kW	2.50 (1.00 - 3.20)	3.50 (1.00- 4.00)	5.00 (1.00- 5.50)
Cooling sensible capacity	kW	2.34	2.72	3.54
Nominal Heating capacity (min - max)	kW	3.20 (1.00- 4.50)	4.00 (1.00- 5.00)	5.30 (1.00- 6.50)
Heating capacity (H2)	kW	3.2	4	5.3
Noise level cooling (sound pressure) (SL / L / M / H / SH)	dB(A)	20/24/33/38/40	22/26/36/41/43	24/33/39/45/47
Noise level heating (sound pressure) (SL / L / M / H / SH)	dB(A)	20/23/34/39/41	21/27/36/42/44	24/33/39/45/47
Noise level (sound power)	dB(A)	54	57	61
Air flow cooling mode (SL / L / M / H / SH)	l / Sec	53/56/87/124/161	59/69/111/139/174	63/80/118/172/197
Air flow heating mode (SL / L / M / H / SH)	l / Sec	58/67/121/156/189	63/83/161/181/230	86/128/162/209/235
Fan Motor	W	18	18	38
Dehumidification	l/h	1.4	1.6	2.0
Dimensions (H x W x D)	mm	280 x 780 x 222	280 x 780 x 222	280 x 780 x 222
Weight	kg	8.4	8.4	8.5
Colour		star white *ZYY8001	star white *ZYY8001	star white *ZYY8001
Condensate Drain	mm	φ16	φ16	φ16
Running current (Rated) (C/H)	A	(2.91)1.09 ~ 5.61 / (3.51)1.09 ~ 5.43	(4.53)1.09 ~ 6.35 / (4.29)1.09 ~ 7.83	(6.16)2.17 ~ 9.13 / (5.90)2.17 ~ 11.96
Power supply		220~240V/1Ph/50Hz	220~240V/1Ph/50Hz	220~240V/1Ph/50Hz
Cable section (interconnection)	mm ²	1.50x 3+EARTH/-	1.50x 3+EARTH/-	1.50x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 1/2"
Drain diameter (ext)	mm	φ16	φ16	φ16
Remote control (standard/optional)		RC-AGU1EA0G/ SPX-RCDB	RC-AGU1EA0G/ SPX-RCDB	RC-AGU1EA0G/ SPX-RCDB
Filter				
ACL Filter (standard/optiona/optiona)		Anti Virus Filter / PM2.5 Treatment+Nano Titanium Active Carbon Filter / PM2.5 Treatment+Nano Titanium Wasabi Filter	Anti Virus Filter / PM2.5 Treatment+Nano Titanium Active Carbon Filter / PM2.5 Treatment+Nano Titanium Wasabi Filter	Anti Virus Filter / PM2.5 Treatment+Nano Titanium Active Carbon Filter / PM2.5 Treatment+Nano Titanium Wasabi Filter
ACL part name		RFUAP005/SPX- CFH22AC25/SPX-CFH22PM25	RFUAP005/SPX- CFH22AC25/SPX-CFH22PM25	RFUAP005/SPX- CFH22AC25/SPX-CFH22PM25
Pre-filter(Standard/Optional)		WASHABLE/-	WASHABLE/-	WASHABLE/-

NOTE:

1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard split system, and are based on the EN 14511.

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	27.0 °C	20.0 °C
	WB	19.0 °C	15.0 °C
Outdoor Air Inlet Temperature	dB	35.0 °C	7.0 °C
	WB	24.0 °C	6.0 °C
Piping Length: 5.0 meters; Piping Lift: 0 meter dB: Dry Bulb; WB: Wet Bulb			

2. The Sound Pressure Level is based on the following conditions:

- 0.8 meter beneath indoor height center
- 1 meter from Discharge grille

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

1.2. WALL TYPE

OUTDOOR	Unit	RAC-DJ25PHAT	RAC-DJ35PHAT	RAC-DJ50PHAT
Nominal Cooling capacity (min - max)	kW	2.50 (1.00 - 3.20)	3.50 (1.00- 4.00)	5.00 (1.00- 5.50)
Nominal Heating capacity (min - max)	kW	3.20 (1.00- 4.50)	4.00 (1.00- 5.00)	5.30 (1.00- 6.50)
Nominal cooling power input (min - max)	kW	0.520 (0.250 - 1.290)	0.890 (0.250 - 1.460)	1.415(0.500 - 2.100)
Nominal heating power input (min - max)	kW	0.660(0.250 - 1.250)	0.880(0.250 - 1.700)	1.415(0.500 - 2.750)
EER / COP		4.81/4.85	3.93/4.55	3.53/3.75
TCSPF/HSPF(HOT/MIXED/COLD)		Cooling(7.463/6.727/6.988) Heating(5.455/5.032/4.548)	Cooling(6.519/6.044/6.387) Heating(5.254/4.793/4.278)	Cooling(5.563/5.312/5.608) Heating(4.671/4.181/3.760)
STARS(HOT/MIXED/COLD)		Cooling(5.5/5/5) Heating(3.5/3.5/3)	Cooling(5/4.5/4.5) Heating(3.5/3/2.5)	Cooling(4/3.5/4) Heating(3/2.5/2)
Noise level cooling (sound pressure)	dB(A)	46	48	50
Noise level heating (sound pressure)	dB(A)	47	49	51
Noise level (sound power)	dB(A)	60	61	63
Air flow (Cooling / Heating)	l / Sec	1860/1620	1920/1620	2160/2160
Dimensions (H x W x D)	mm	548×759×288	548×759×288	600×792×299
Weight	kg	31.6	31.6	39.5
Colour (Munsell Code)		Beige (5Y7/2)	Beige (5Y7/2)	Beige (5Y7/2)
Power supply	V/Ph/Hz	220~240V/1Ph/50Hz	220 ~ 240V/1Ph/50Hz	220~240V/1Ph/50Hz
Recommended fuse size	A	15	15	25
Cable section (power)	mm ²	1.50x 2+EARTH	1.50x 2+EARTH	2.50x 2+EARTH
Cable section (Interconnection)	mm ²	1.50x 3+EARTH	1.50x 3+EARTH	1.50x 3+EARTH
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 1/2"
Minimum piping length	m	3	3	3
Maximum piping length / height difference	m	20 / 15	20 / 15	30 / 20
Current quantity of refrigerant / Chargeless	kg	0.870	0.870	1.050
Chargeless length / Additional refrigerant charge	m / g/m	20/-	20/-	30/-
Working range (cooling / heating)	°C	-10°C—46°C/-15°C—24°C	-10°C—46°C/-15°C—24°C	-10°C—46°C/-15°C—24°C
Refrigerant		R32	R32	R32
Condenser Fan		Propeller Fan	Propeller Fan	Propeller Fan
Compressor	Type	ROTARY	ROTARY	ROTARY
	Oil Charge	mL	320±20	320±20
	Oil Type		ACS-68R or equivalent	ACS-68R or equivalent
	Coil resistance	Ω	2.084 at 20°C	2.084 at 20°C
	Quantity		1	1

NOTE:

1. The Sound Pressure Level is based on the following conditions:

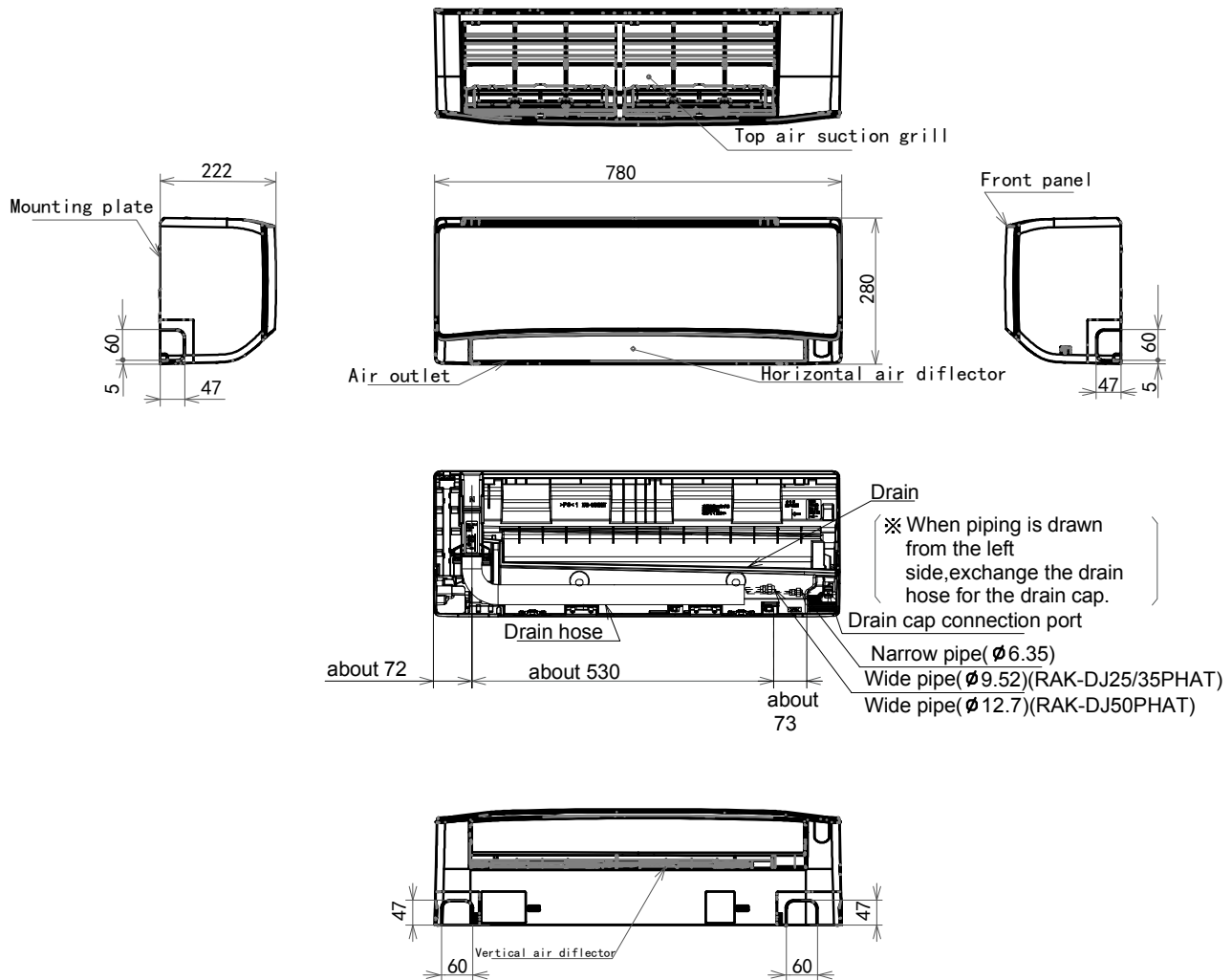
- 1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

2 DIMENSIONAL DATA

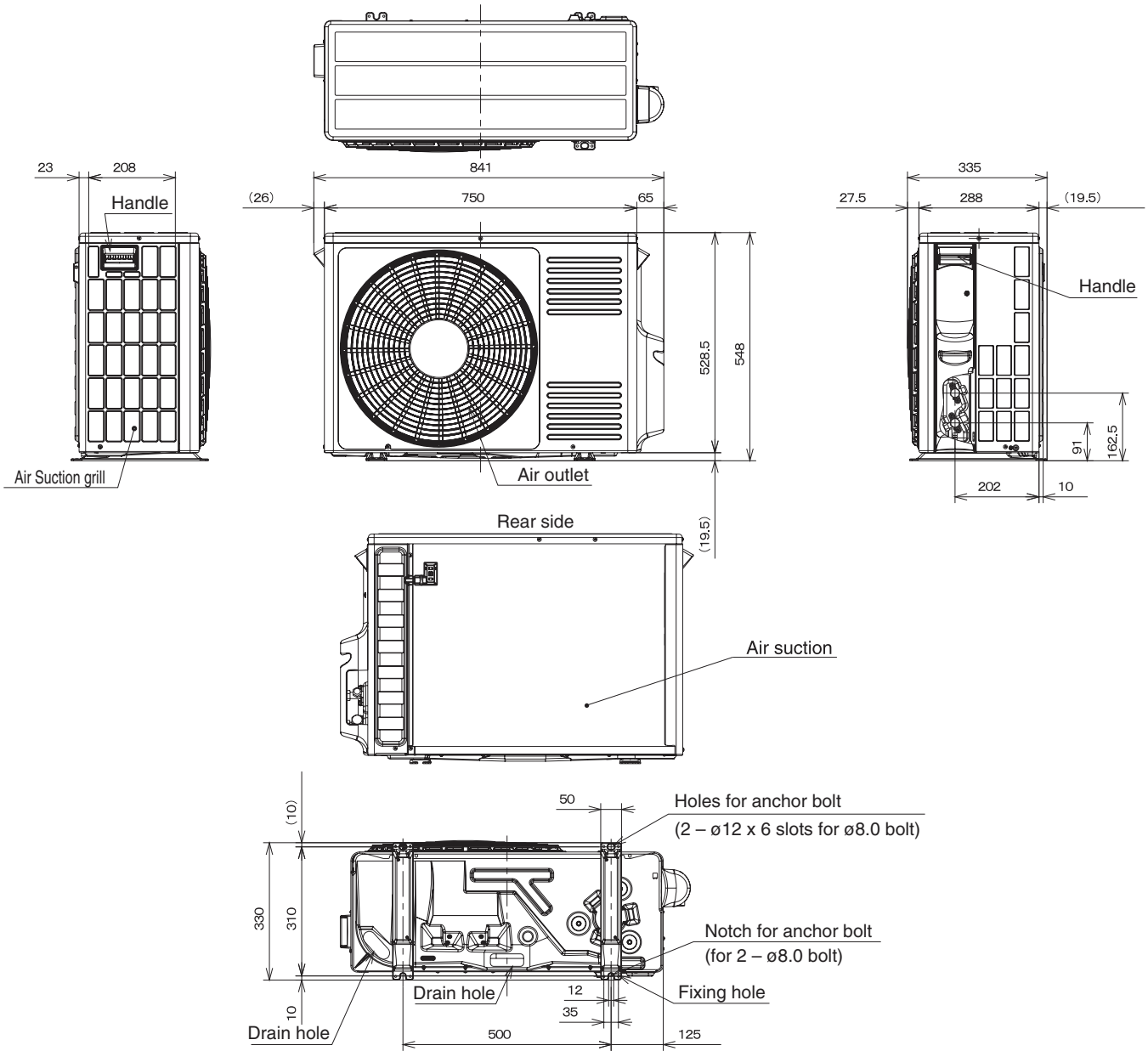
2.1. WALL TYPE: RAK-DJ25PHAT,RAK-DJ35PHAT,RAK-DJ50PHAT

Unit: mm



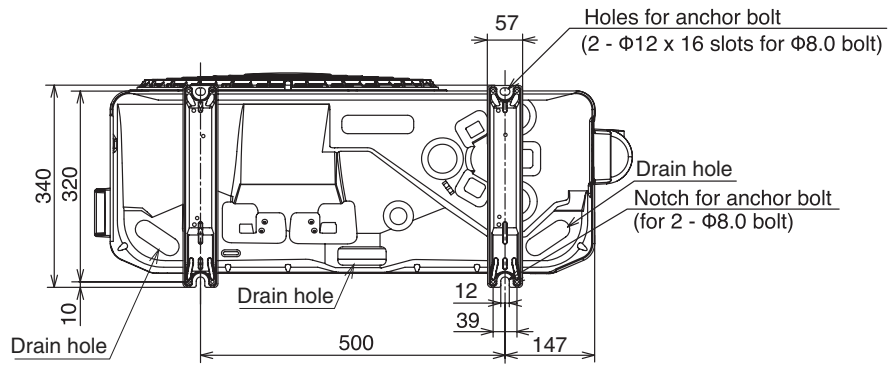
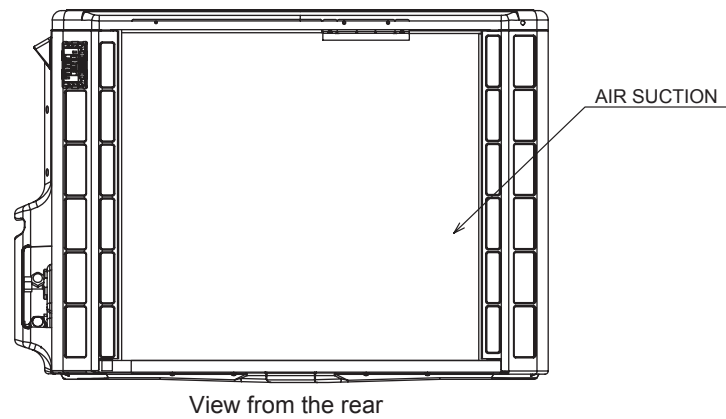
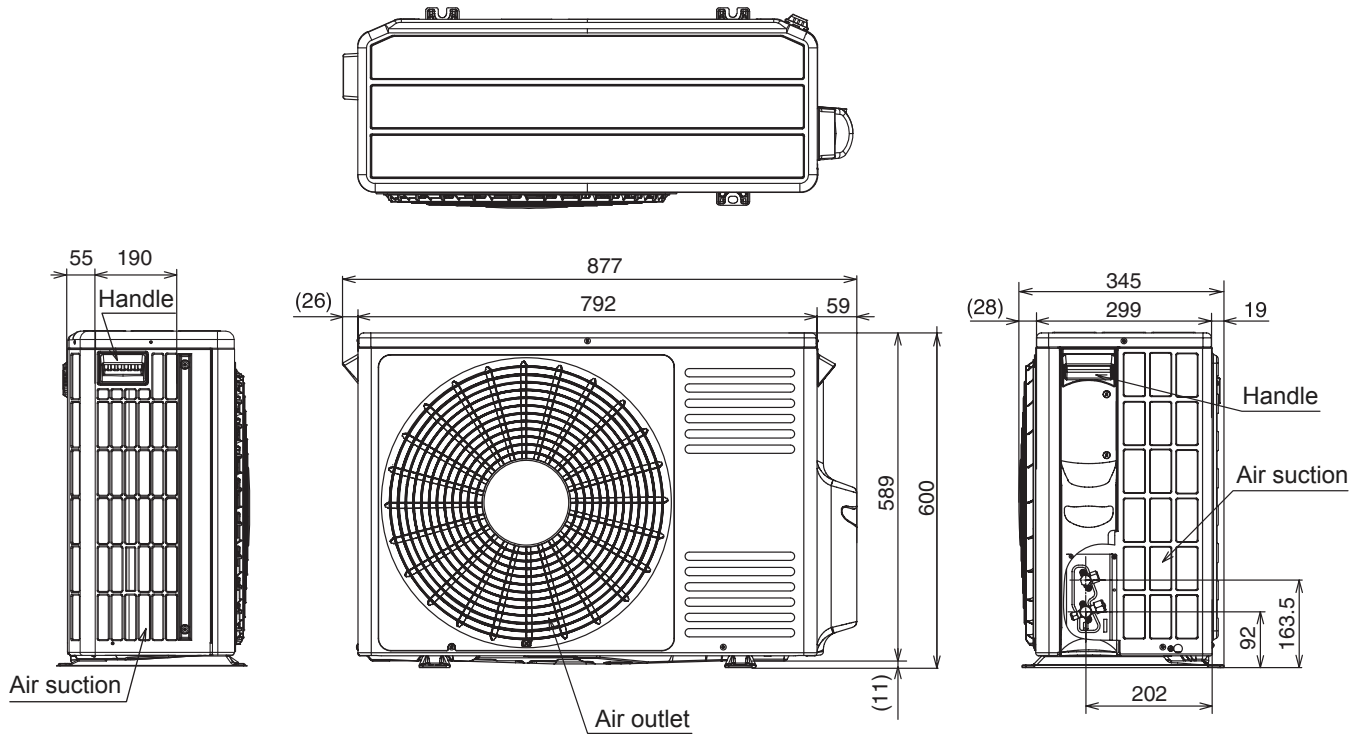
2.2. WALL TYPE: RAC-DJ25PHAT,RAC-DJ35PHAT

Unit: mm



2.3. WALL TYPE: RAC-DJ50PHAT

Unit : mm



3 CAPACITIES TABLE

3.1. CAPACITY CHARACTERISTIC CURVES

The following charts show the characteristics of outdoor unit capacity, which corresponds with the operating ambient temperature of outdoor unit.

Conditions:

① Pipe length / height difference : 5m / 0m

③ Compressor at rated inverter frequency

② Indoor fan speed at High mode

④ Capacity loss due to white frost and defrost operation is not included.

3.1.1. RAK-DJ25PHAT/RAC-DJ25PHAT

COOLING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																				
EWB	EDB	-10			21			27			32			35			40			43		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
12.0	18	2464	2169	368	2313	2397	362	2141	2213	426	2050	2131	478	1975	2037	499	1850	1920	536	1775	1827	556
14.0	20	2464	2169	368	2486	2397	362	2313	2236	431	2200	2131	484	2125	2061	504	1975	1920	541	1900	1850	567
16.0	22	2464	2308	373	2658	2397	367	2461	2236	436	2350	2131	489	2275	2061	515	2125	1920	551	2050	1850	572
18.0	25	2642	2475	379	2830	2605	371	2609	2420	441	2500	2318	494	2400	2225	515	2250	2084	556	2150	1991	577
19.0	27	2731	2558	385	2929	2743	376	2707	2536	446	2600	2435	499	2500	2342	520	2350	2201	556	2250	2108	577
22.0	30	3028	2531	385	3248	2720	376	3002	2513	446	2875	2412	504	2775	2318	525	2500	2248	577	2325	2201	608
24.0	32	3236	2531	391	3470	2720	381	3199	2513	451	3075	2412	504	2950	2318	530	2600	2295	593	2375	2272	629

HEATING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																							
EDB	-15	-10			-7			-5			0			7			10			15					
°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
16	1801		753	2359		891	2686		984	2747		948	2912		845	3163		729	3500		816	4034		963	
18	1817		744	2375		882	2706		970	2771		931	2937		827	3182		695	3517		779	4063		922	
20	1833		735	2391		873	2726		956	2794		914	2963		808	3200		660	3535		743	4093		881	
22	1849		726	2407		864	2746		942	2817		896	2989		789	3218		625	3552		706	4123		840	
24	1865		717	2423		856	2766		928	2840		879	3014		771	3237		591	3570		670	4152		799	

EWB : Evaporator Wet Bulb temperature (°C)

EDB : Evaporator Dry Bulb temperature (°C)

(°CDB) : Outdoor Unit Inlet Air Dry Bulb Temperature (°C)

TC : Total Capacity (W)

SHC : Sensible Heating Capacity (W)

PI : Power Input

3.1.2. RAK-DJ35PHAT/RAC-DJ35PHAT

COOLING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																				
EWB	EDB	-10			21			27			32			35			40			43		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
12.0	18	2567	1872	468	2601	2234	497	2408	2062	586	2870	2472	819	2765	2363	854	2590	2227	917	2485	2119	952
14.0	20	2567	1872	468	2795	2234	497	2601	2083	593	3080	2472	828	2975	2390	863	2765	2227	926	2660	2146	970
16.0	22	2567	1992	475	2989	2234	504	2767	2083	600	3290	2472	837	3185	2390	881	2975	2227	943	2870	2146	979
18.0	25	2753	2136	483	3183	2427	510	2933	2255	607	3500	2689	846	3360	2580	881	3150	2417	952	3010	2309	988
19.0	27	2846	2208	490	3293	2556	517	3044	2362	614	3640	2825	854	3500	2716	890	3290	2553	952	3150	2444	988
22.0	30	3155	2184	490	3653	2534	517	3376	2341	614	4025	2798	863	3885	2689	899	3500	2607	988	3255	2553	1041
24.0	32	3371	2184	497	3902	2534	524	3598	2341	621	4305	2798	863	4130	2689	908	3640	2662	1015	3325	2635	1077

HEATING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																						
EDB	-15	-10			-7			-5			0			7			10			15				
°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
16	2391		1051	3132		1170	3566		1254	3613		1214	3744		1096	3954		966	4400		1043	5111		1172
18	2411		1040	3152		1159	3591		1236	3642		1192	3776		1073	3977		923	4422		997	5148		1121
20	2431		1029	3172		1148	3616		1219	3671		1171	3808		1050	4000		880	4444		951	5185		1070
22	2451		1018	3192		1137	3641		1202	3700		1149	3840		1026	4023		837	4466		906	5222		1019
24	2471		1007	3212		1126	3667		1184	3729		1127	3872		1003	4046		794	4488		860	5259		968

3.1.3. RAK-DJ50PHAT/RAC-DJ50PHAT

COOLING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																				
EWB	EDB	-10			21			27			32			35			40			43		
°C	°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
12.0	18	3228	2148	655	4282	3356	911	3963	3097	1074	4100	3223	1302	3950	3081	1358	3700	2904	1457	3550	2762	1514
14.0	20	3228	2148	655	4601	3356	911	4282	3130	1087	4400	3223	1316	4250	3116	1373	3950	2904	1472	3800	2798	1542
16.0	22	3228	2286	665	4920	3356	923	4556	3130	1099	4700	3223	1330	4550	3116	1401	4250	2904	1500	4100	2798	1557
18.0	25	3461	2451	676	5239	3646	935	4829	3388	1112	5000	3506	1344	4800	3364	1401	4500	3152	1514	4300	3010	1571
19.0	27	3578	2534	686	5421	3840	947	5011	3549	1124	5200	3683	1358	5000	3541	1415	4700	3329	1514	4500	3187	1571
22.0	30	3967	2506	686	6013	3807	947	5558	3517	1124	5750	3648	1373	5550	3506	1429	5000	3400	1571	4650	3329	1656
24.0	32	4239	2506	696	6423	3807	959	5922	3517	1137	6150	3648	1373	5900	3506	1443	5200	3470	1613	4750	3435	1712

HEATING [50Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																						
EDB	-15	-10			-7			-5			0			7			10			15				
°C	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
16	3937		1713	4306		1729	4514		1758	4607		1729	4856		1631	5239		1545	5463		1562	5793		1594
18	3964		1697	4333		1712	4548		1731	4645		1696	4898		1595	5270		1480	5492		1493	5842		1517
20	3990		1680	4359		1696	4581		1705	4684		1664	4941		1560	5300		1415	5522		1424	5891		1440
22	4017		1663	4386		1679	4614		1679	4722		1631	4983		1525	5330		1350	5551		1355	5940		1363
24	4043		1647	4412		1662	4648		1652	4761		1598	5025		1489	5361		1285	5580		1287	5989		1286

EWB : Evaporator Wet Bulb temperature (°C)
 EDB : Evaporator Dry Bulb temperature (°C)
 (°CDB) : Outdoor Unit Inlet Air Dry Bulb Temperature (°C)

TC : Total Capacity (W)
 SHC : Sensible Heating Capacity (W)
 PI : Power Input

3.2. CORRECTION FACTORS ACCORDING TO PIPING LENGTH

Correction Factor for **Cooling Capacity** according to Piping Length

The cooling capacity should be corrected according to the following formula:

$$CCA = CC \times F$$

- CCA: Actual Corrected Cooling Capacity (kcal/h)
- CC: Cooling Capacity in the Performance Table (kcal/h)
- F: Correction Factor Based on the Equivalent Piping Length

Correction Factor for **Heating Capacity** according to Piping Length

The heating capacity should be corrected according to the following formula:

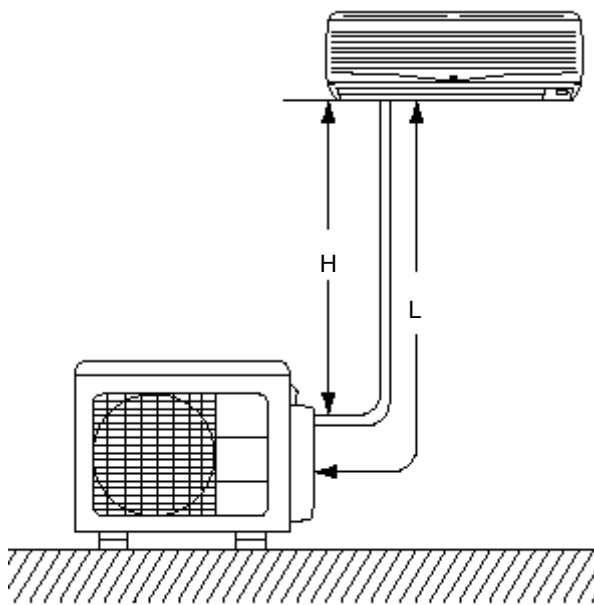
$$HCA = HC \times F$$

- HCA: Actual Corrected Heating Capacity (kcal/h)
- HC: Heating Capacity in the Performance Table (kcal/h)
- F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

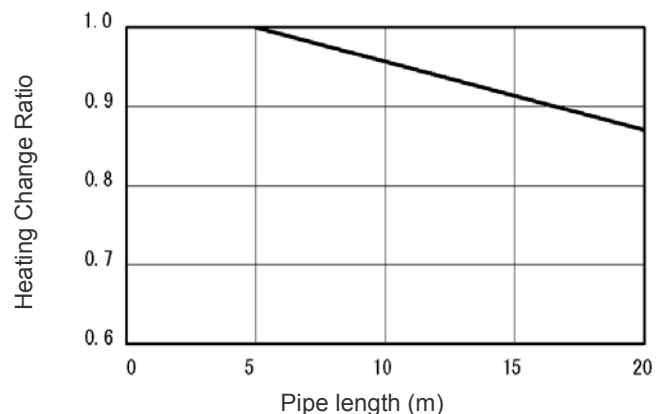
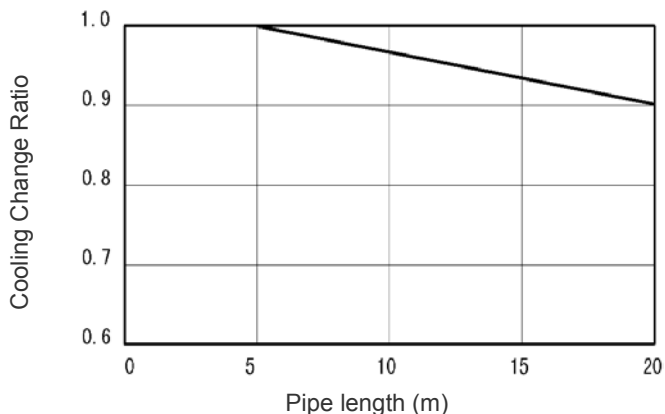
Equivalent Piping Length for:

- One 90° Elbow is 0.5m.
- One 180° Curve is 1.5m.

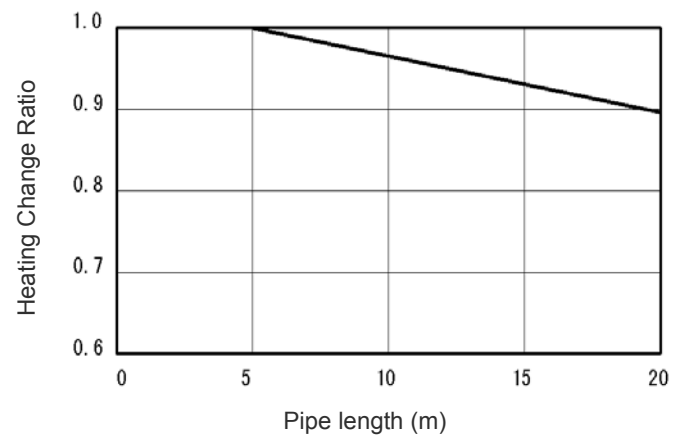
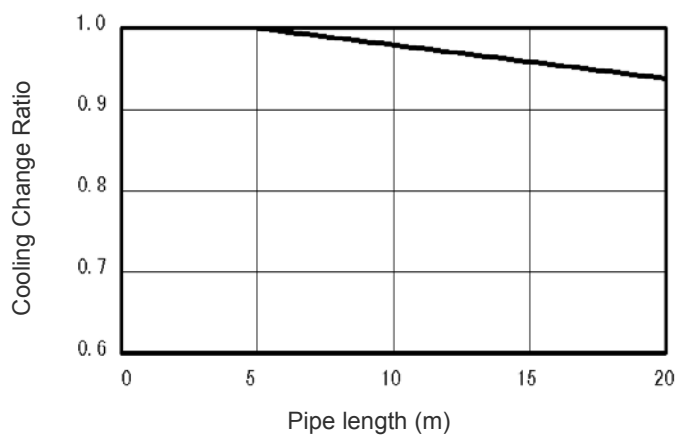


- H: Vertical Distance Between Indoor Unit and Outdoor Units in Meters
- L: Actual One-Way Piping Length Between Indoor Unit and Outdoor Unit in Meters
- EL: Equivalent Total Distance Between Indoor Unit and Outdoor Unit in Meters (Equivalent One-Way Piping Length)

Models : RAK-DJ25PHAT/RAC-DJ25PHAT, RAK-DJ35PHAT/RAC-DJ35PHAT



Models : RAK-DJ50PHAT/RAC-DJ50PHAT



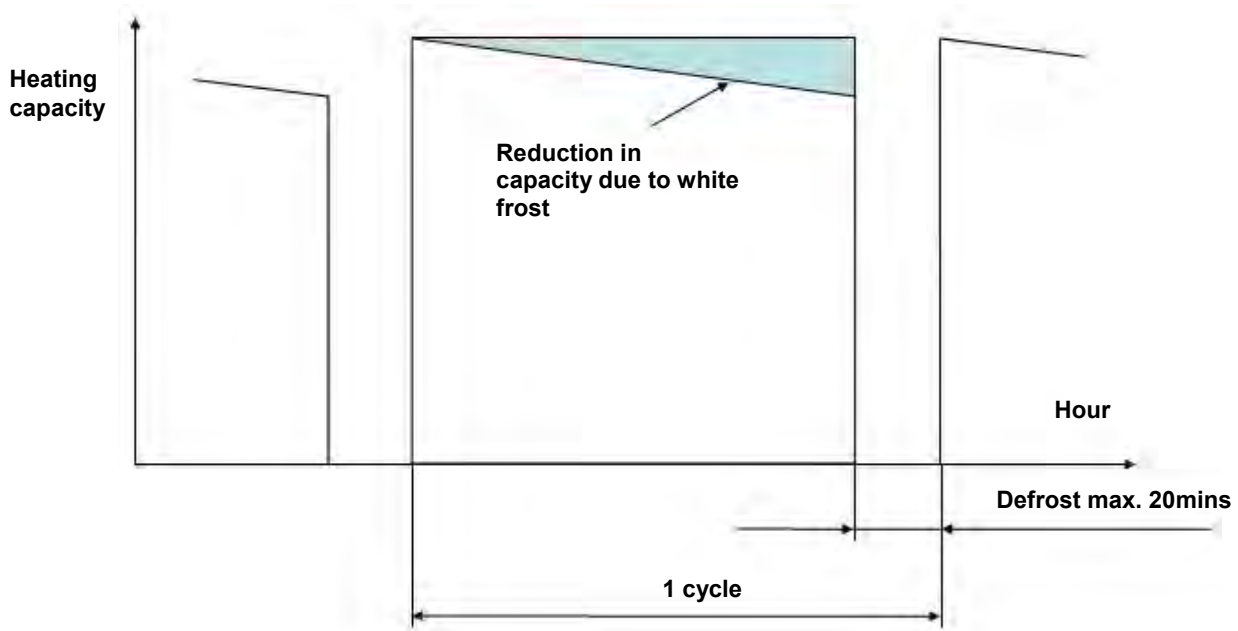
3.3. CORRECTION FACTORS ACCORDING TO DEFROSTING OPERATION

The heating capacity in the preceding paragraph, excludes the condition of the frost or the defrosting operation period. In consideration of the frost or the defrosting operation, the heating capacity is corrected by the equation below.

Corrected heating capacity = Defrost Correction factor x unit capacity

OUTDOOR TEMPERATURE (°CDB)	-15	-10	-5	0	7	10	15
Correction factor (humidity rate 85% RH)	0.80	0.80	0.80	0.80	1.0	1.0	1.0

Correction Factor

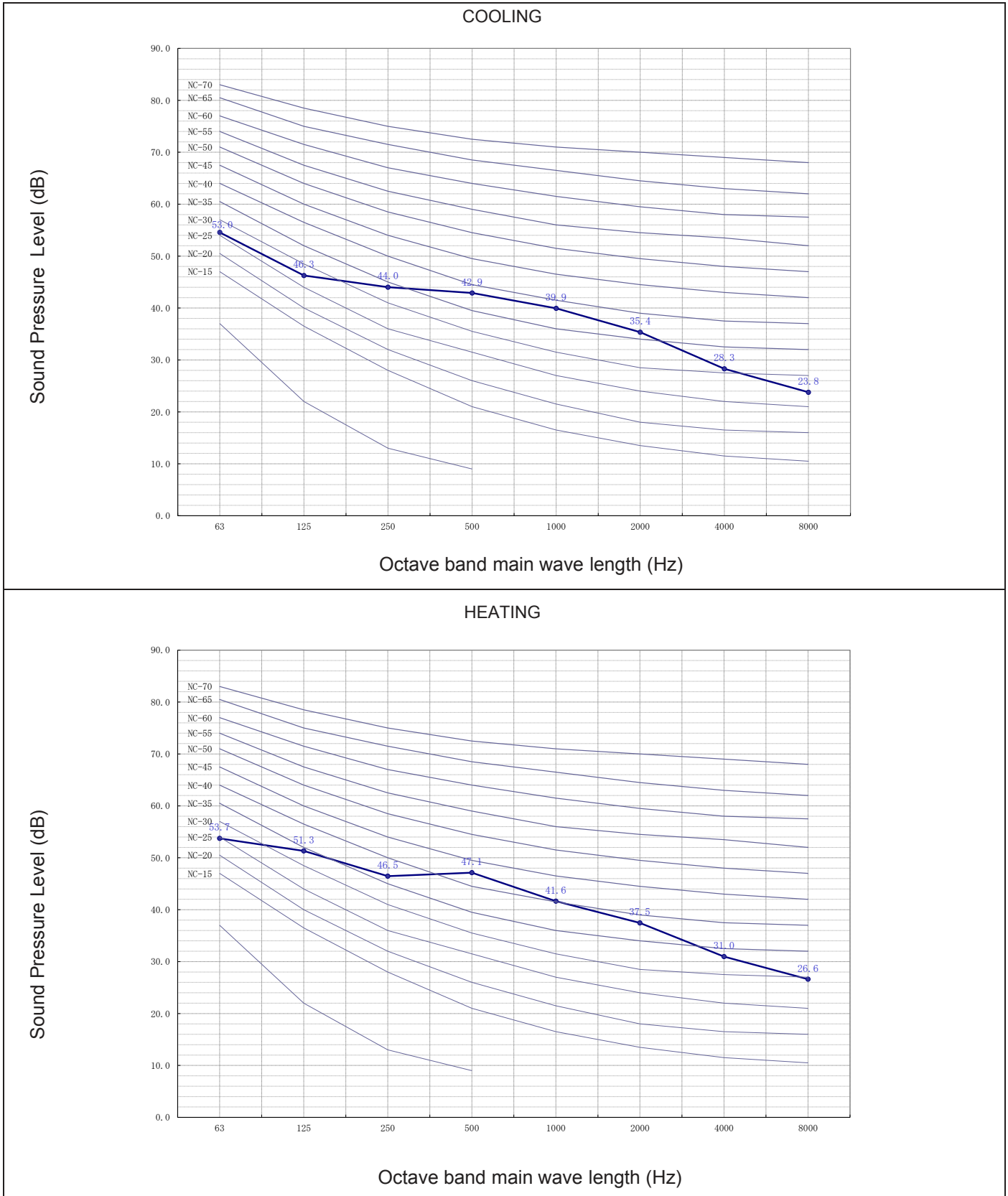


NOTE:

The correction factor is not valid for special conditions such as snowfall or operation in a transitional period.

4 SOUND DATA

4.1. RAC-DJ25PHAT

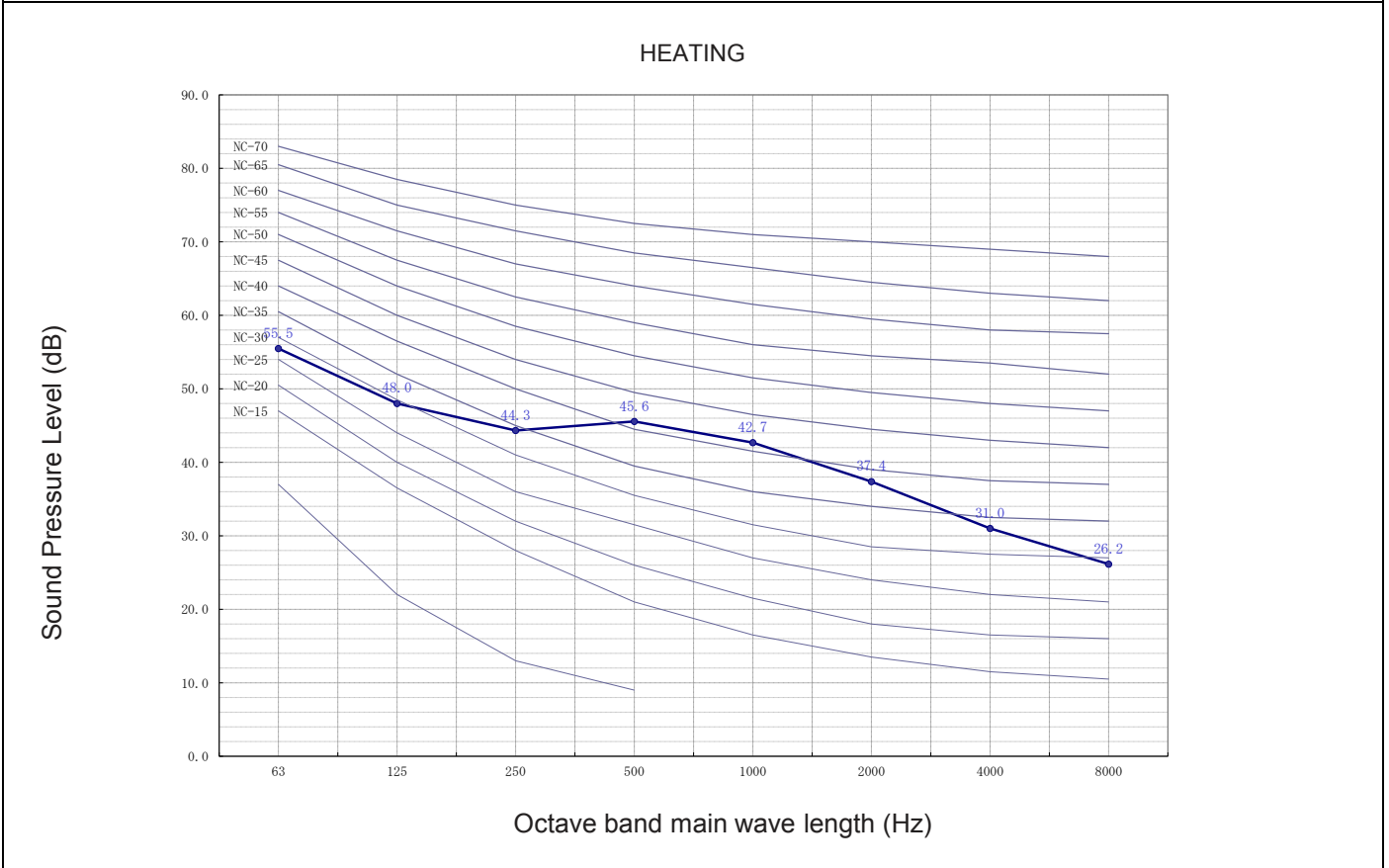
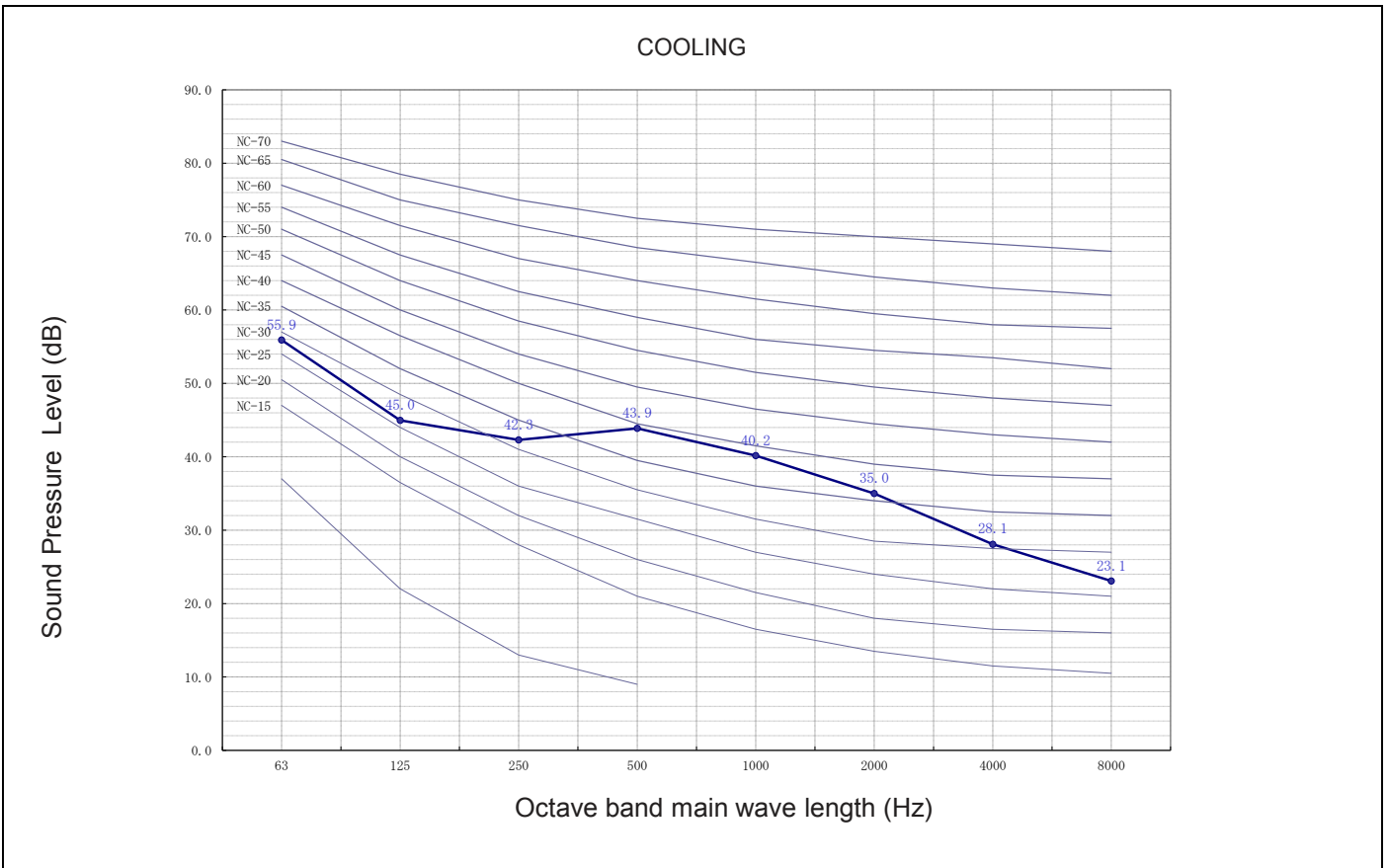


The Sound Pressure Level is based on the following conditions:

1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

4.2. RAC-DJ35PHAT

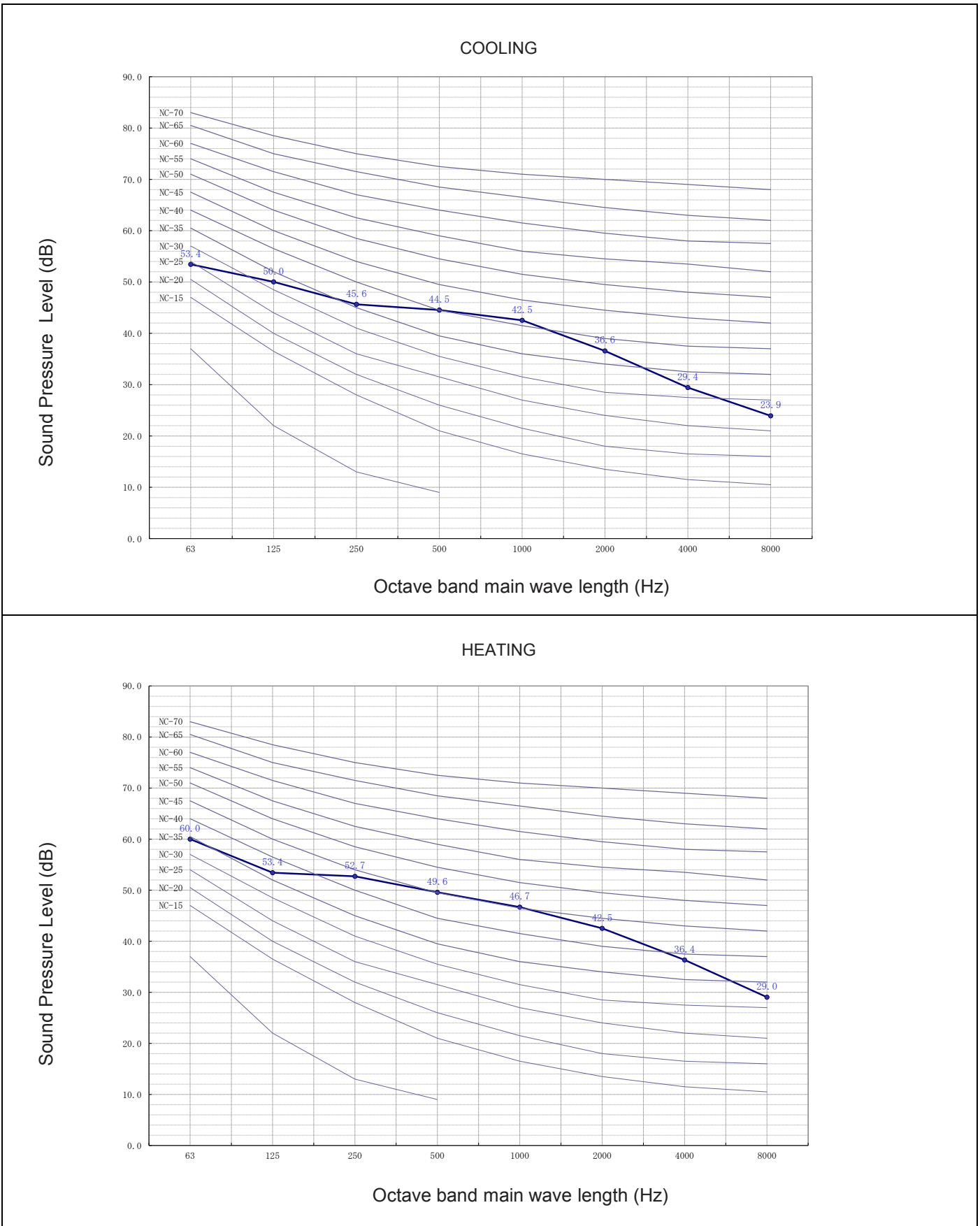


The Sound Pressure Level is based on the following conditions:

1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

4.3. RAC-DJ50PHAT



The Sound Pressure Level is based on the following conditions:

1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

5 WORKING RANGE

5.1. POWER SUPPLY

Working Voltage	195V ~ 264V
Voltage Imbalance	Within a 3% Deviation from Each Voltage at the Main Terminal of Outdoor Unit
Starting Voltage	Higher than 85% of the Rated Voltage

5.2. WORKING RANGE

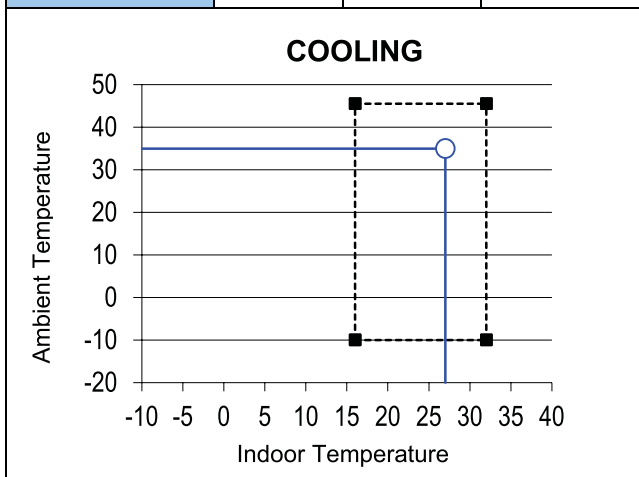
Applicable models:

RAC-DJ25PHAT
RAC-DJ35PHAT
RAC-DJ50PHAT

The temperature range is indicated in the following table.

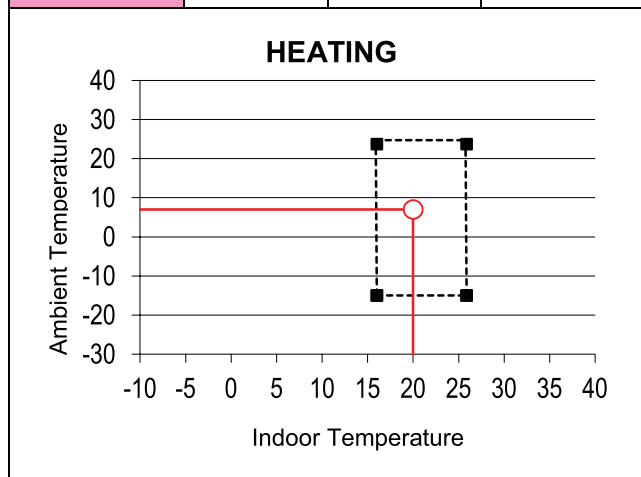
Cooling

working range	min (°C)	max (°C)	rated (°C)
outdoor	-10	46	35
indoor	16	32	27



Heating

working range	min (°C)	max (°C)	rated (°C)
outdoor	-15	24	7
indoor	16	26	20



6 ELECTRICAL DATA

6.1. INDOOR UNIT

Model	Unit Main Power		Applicable Current		Indoor Fan Motor	
	VOL, PH, Hz	Fuse Rating (A)	Max Current	RNC	RNC	IPT
RAK-DJ25PHAT	220-240,1, 50	3.15	5.33	(C) 2.91 (H) 3.51	(C)0.04 (H)0.06	(C)11.8 (H)16.2
RAK-DJ35PHAT	220-240,1, 50	3.15	7.15	(C) 4.53 (H) 4.29	(C)0.05 (H)0.09	(C)14.1 (H)22.9
RAK-DJ50PAHT	220-240,1, 50	3.15	11.00	(C) 6.16 (H) 5.90	(C)0.06 (H)0.09	(C)19.4(H)26.1

VOL: Rated Unit Power Supply Voltage (V)

Hz: Frequency (Hz)

STC: Starting Current (A)

RNC: Running Current (A)

PH: Phase (ϕ)

IPT: Input (W)

6.2. OUTDOOR UNIT

Model	Unit Main Power				Compressor Motor				
	VOL, PH, Hz	Fuse Rating (A)	Min (V)	Max (V)	Locked Rotor Ampere (A)	Cooling Operation		Heating Operation	
						RNC	IPT	RNC	IPT
RAC-DJ25PHAT	220-240,1, 50	15	198	264	-	2.91	520	3.51	660
RAC-DJ35PHAT	220-240,1, 50	15	198	264	-	4.53	890	4.29	880
RAC-DJ50PHAT	220-240,1, 50	25	198	264	-	6.16	1415	5.90	1415

VOL: Rated Unit Power Supply Voltage (V)

HZ: Frequency (Hz)

STC: Starting Current (A)

RNC: Running Current (A)

PH: Phase (ϕ)

IPT: Input (W)

NOTE:

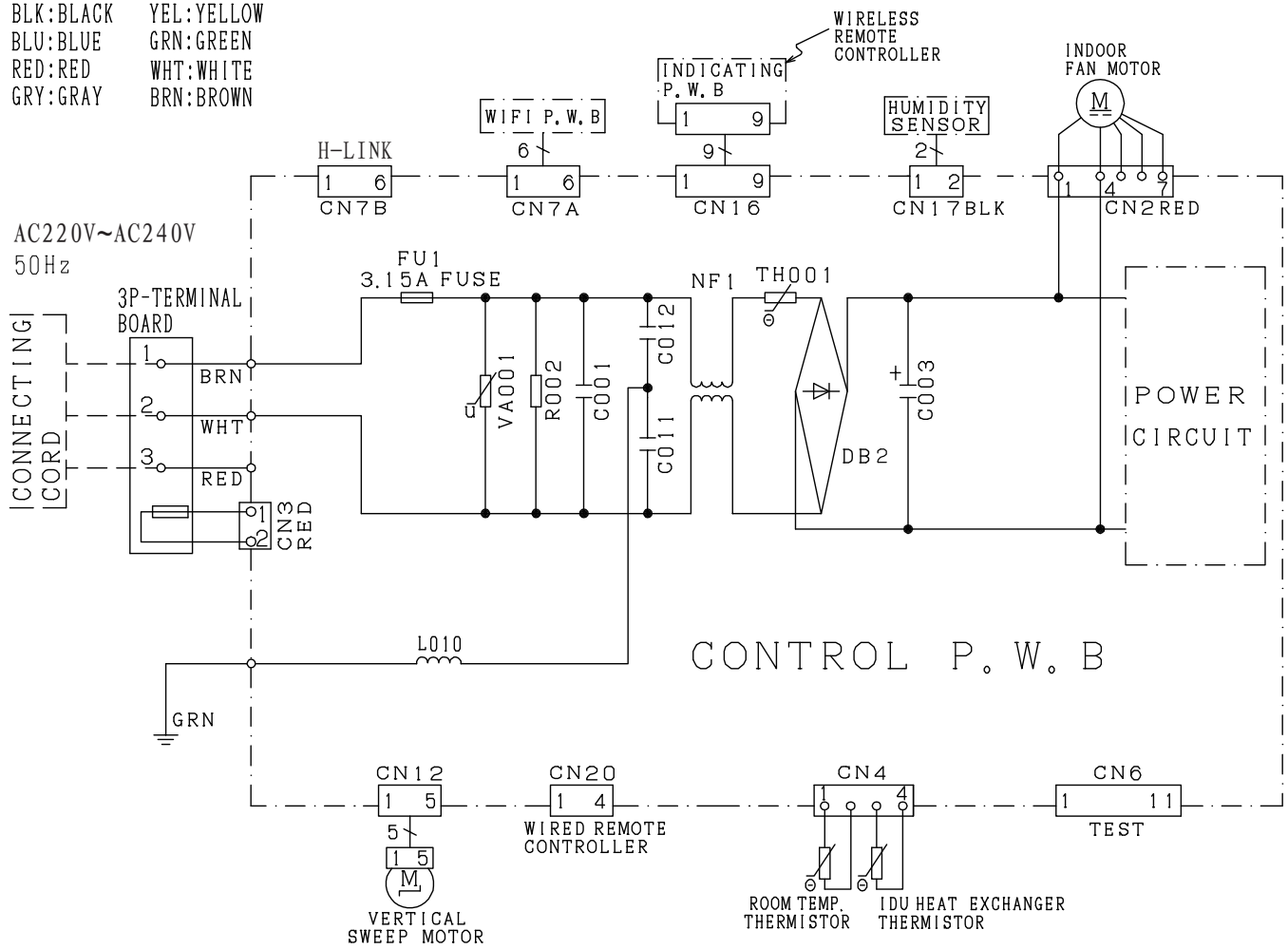
1. The above compressor data is based on 100% capacity combination of indoor units at the rated operating frequency
2. This data is based on the same conditions as the nominal heating and cooling capacities.
3. The compressor started by an inverter, resulting in extremely low starting current.

7 WIRING DIAGRAM

7.1. RAK-DJ25/35/50PHAT

WIRING DIAGRAM

BLK:BLACK YEL:YELLOW
 BLU:BLUE GRN:GREEN
 RED:RED WHT:WHITE
 GRY:GRAY BRN:BROWN



CAUTION! HIGH VOLTAGE	TURN OFF THE POWER SOURCE DURING THE SERVICE WORK.
--------------------------	---

※ SOME MODELS NOT NEED TO INSTALL WIFI P.W.B.

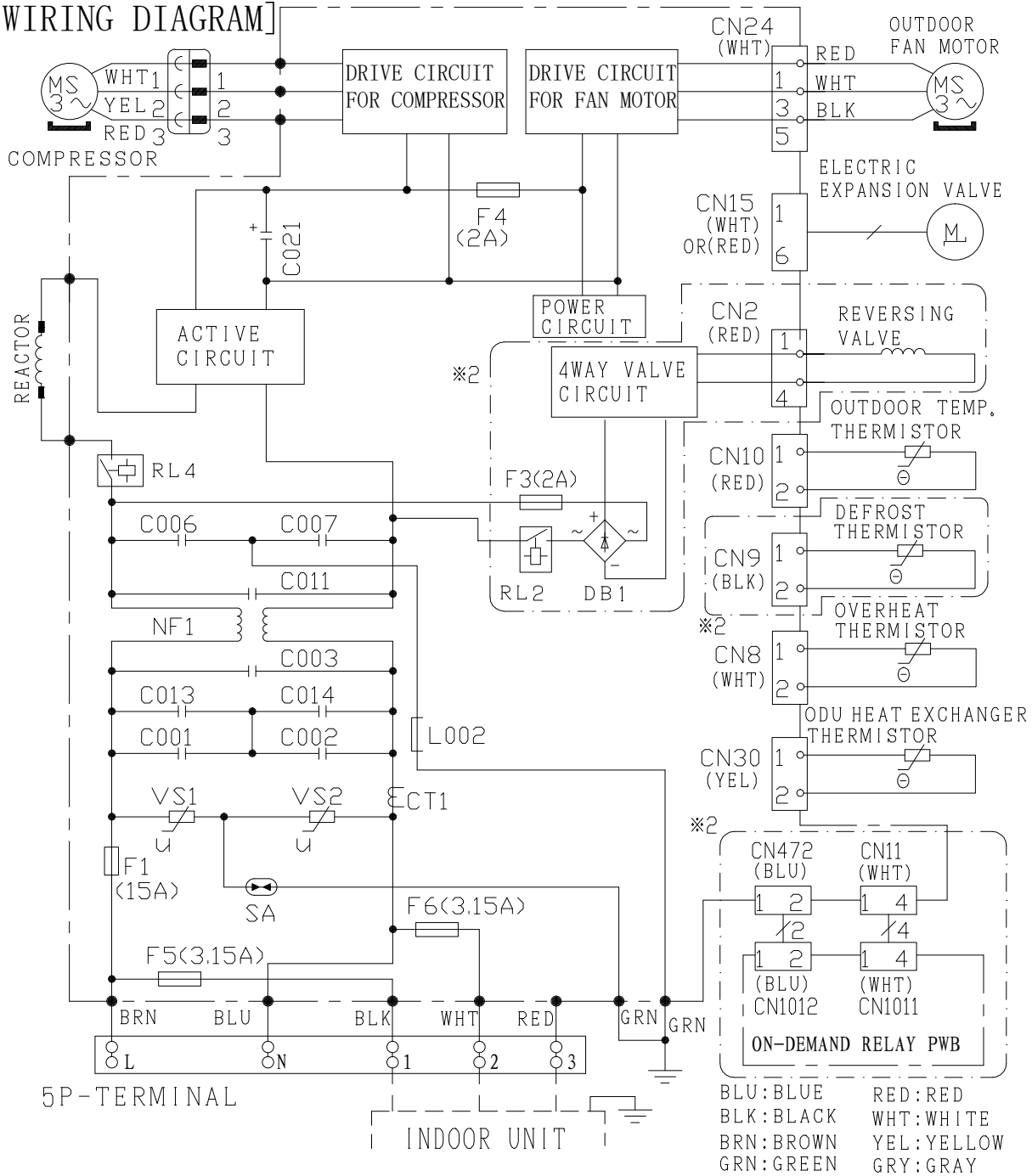
7.2. RAC-DJ25/35PHAT

⚠ ⚡ DANGER (DC350V)
 CUT THE POWER SOURCE AND WAIT MORE THAN 10 MINUTES BEFORE SERVICING WORK.
 MEASURE DC VOLTAGE (※1) AND CONFIRMED THAT IT IS MUST BE LESS THAN 10V.

LED(※1) INDICATION DURING COMPRESSOR OPERATE	
LD301	OPERATION STATUS
LIT	NORMAL
BLINK REPEATINGLY WITH 2 SECONDS LIT - 0.3 SECONDS OFF	OVERLOAD (NORMAL)

※1 DC VOLTAGE VALIDATION, LED POSITION AND FAN OPERATION REFER TO THE SERVICE MANUAL.

[WIRING DIAGRAM]



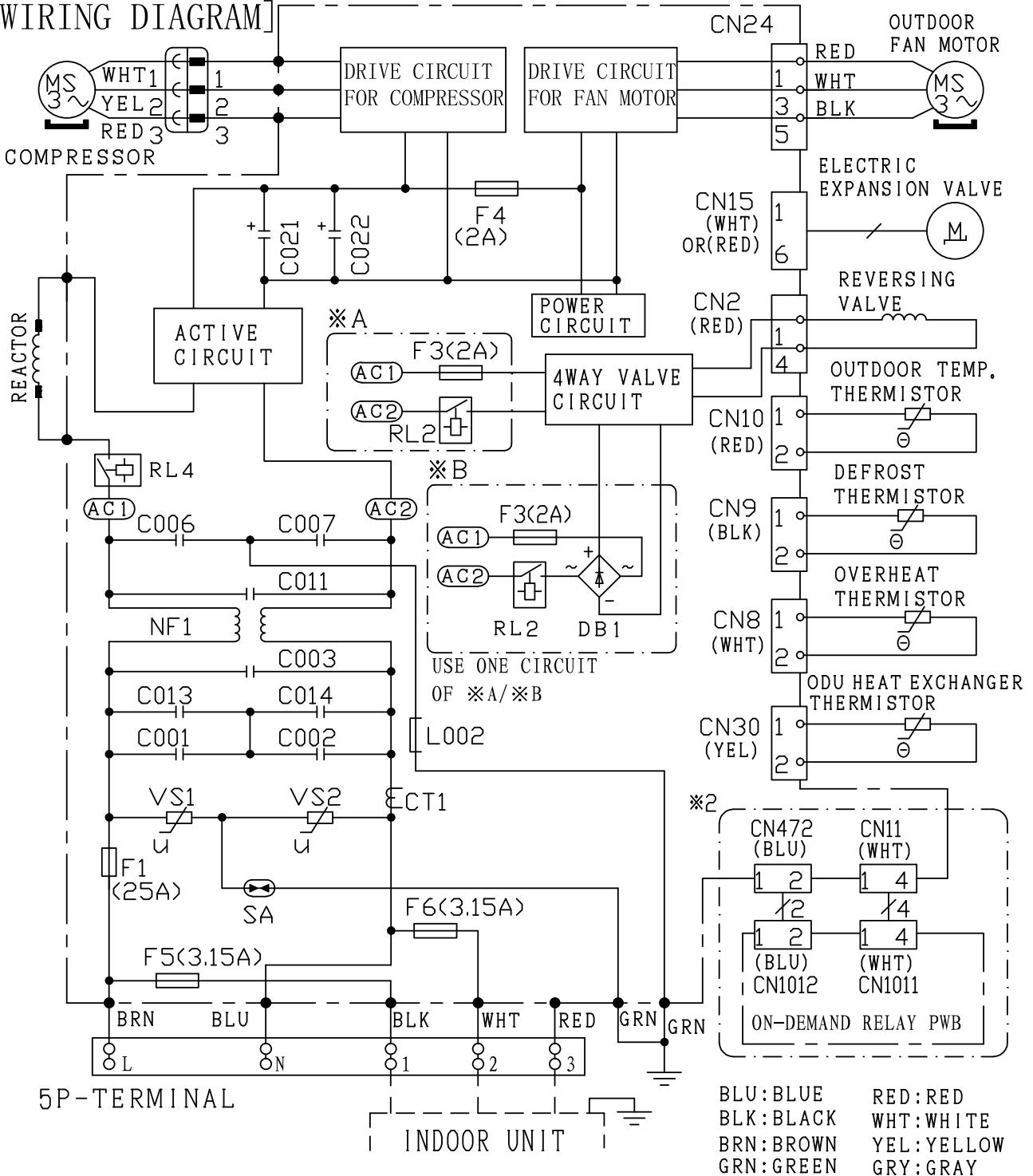
7.2. RAC-DJ50PHAT

⚠ ⚡ DANGER (DC350V)
 CUT THE POWER SOURCE AND WAIT MORE THAN 10 MINUTES BEFORE SERVICING WORK.
 MEASURE DC VOLTAGE(※1) AND CONFIRMED THAT IT IS MUST BE LESS THAN 10V.

LED(※1) INDICATION DURING COMPRESSOR OPERATE	
LD301	OPERATION STATUS
LIT	NORMAL
BLINK REPEATINGLY WITH 2 SECONDS LIT - 0.3 SECONDS OFF	OVERLOAD (NORMAL)

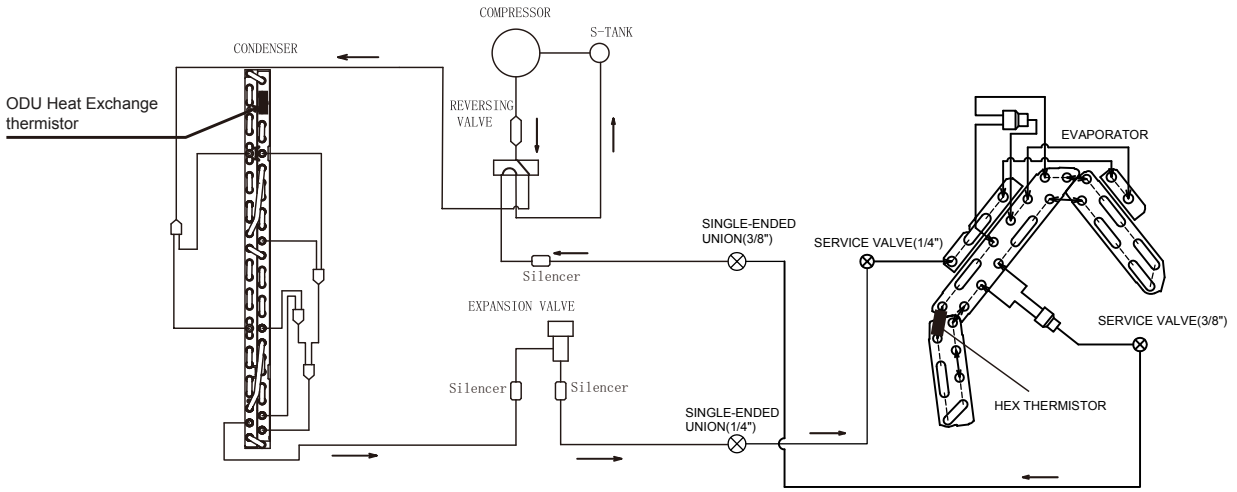
※1 DC VOLTAGE VALIDATION, LED POSITION AND FAN OPERATION REFER TO THE SERVICE MANUAL.

[WIRING DIAGRAM]

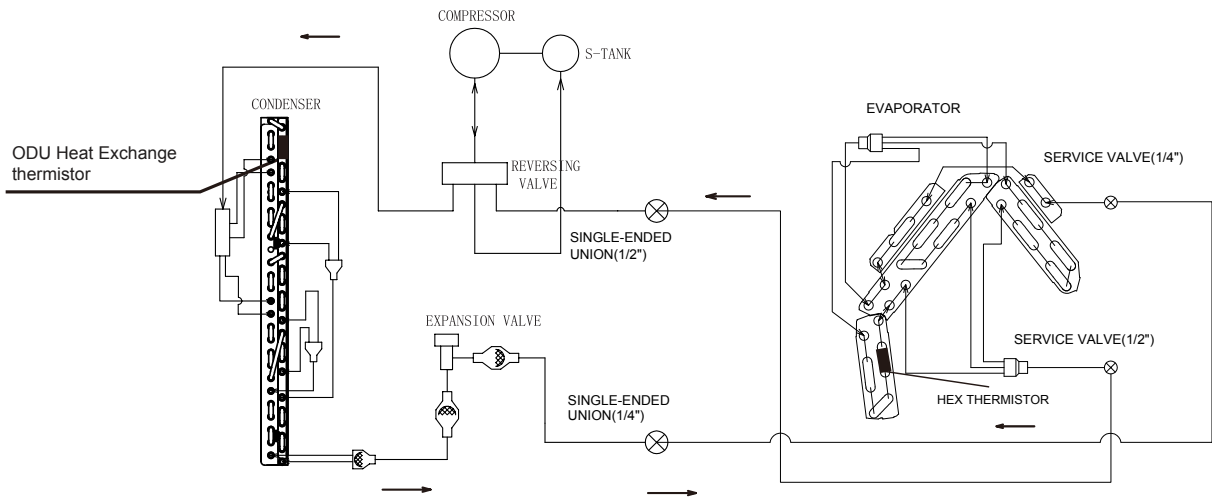


8 REFRIGERANT CYCLE

8.1. WALL TYPE: RAK-DJ25PHAT/RAC-DJ25PHAT, RAK-DJ35PHAT/RAC-DJ35PHAT

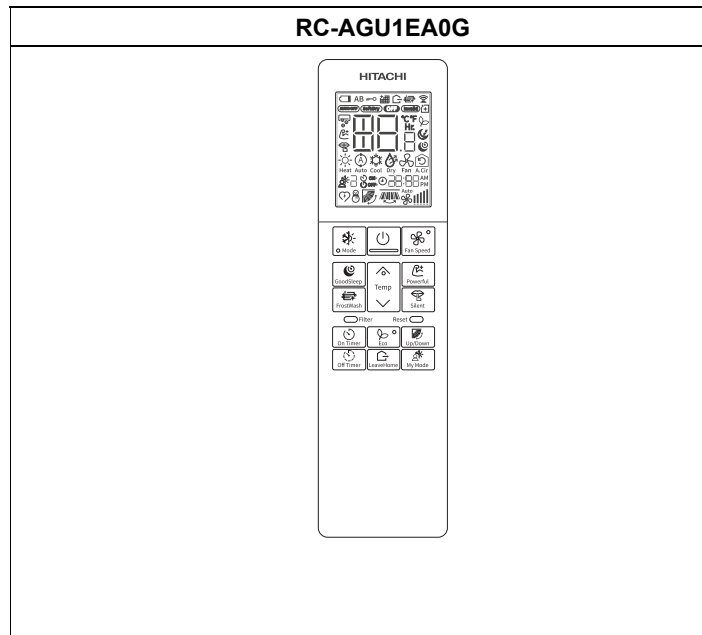









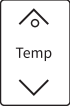











8.2. WALL TYPE: RAK-DJ50PHAT/RAC-DJ50PHAT



9 CONTROL AND FUNCTION

9.1. RC-AGU1EA0G



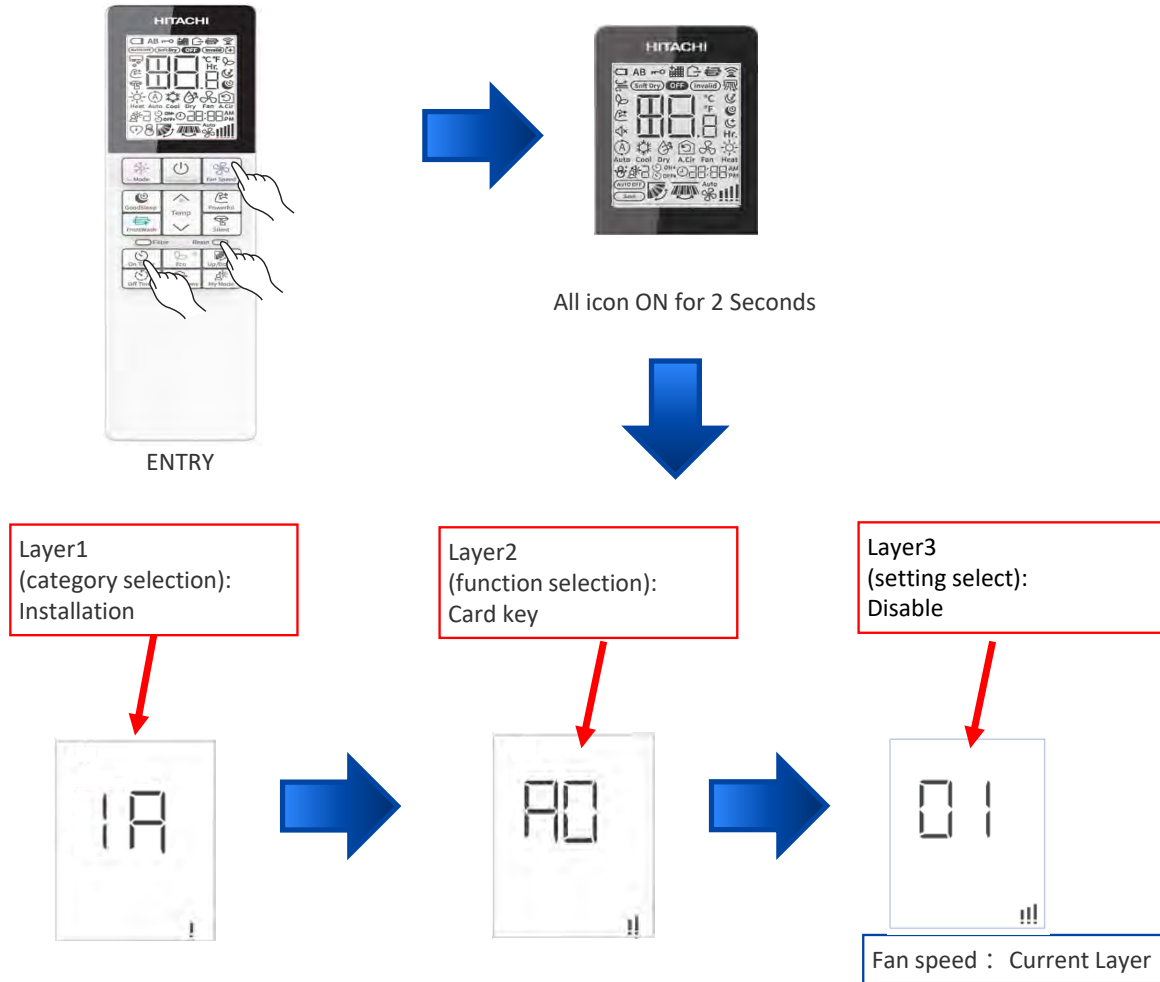
BUTTONS	FUNCTION
	Mode Selector Button Use this button to select the operation mode. Every time you press this button the mode will change from  (Heat) →  (Auto) →  (Cool) →  (Dry) →  (Fan) cyclically.
	GoodSleep Button the unit shifts the room temperature and reduces the fan speed.
	Temperature Button Room temperature setting. Value will change quicker when keep pressing.
	FrostWash Button The dust and dirt adhering to indoor heat exchanger which is the cause of the smell.
	Fan Speed Button Select the fan speed.
	On/Off Button Press this button to start operation. Press it again to stop operation.
	Powerful Button The air conditioner performs at maximum power.
	Silent Button The fan speed changes to the silent fan speed
	On Timer Button Select the turn ON time.
	Off Timer Button Select the turn OFF time.
	Eco Button Use this button to set the Eco mode.
	LeaveHome Button Prevent the room temperature from falling too much by setting temperature 10°C~16°C when no one is at home.
	Up/Down Button Control the angle of the horizontal air deflector.
	My Mode Button Use this mode for personalized comfortable settings. The My Mode can be set by using the remote controller. Up to 3 programs can be set.

For more information, please refer to the operation manual.

9.2. How to set up from Service setting mode

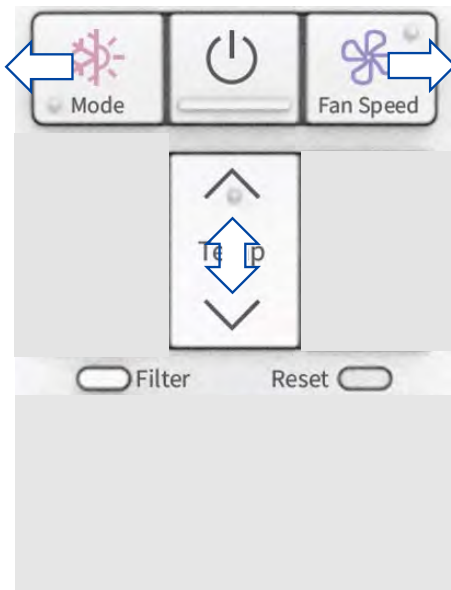
The Service function, which was set by DIP-SW setting or double pressing of the HHRC in the current model. it will be done by HHRC in GRAC as shown as below.

[On timer] + [Fan speed] + [Reset]
 (Press three Key for 5 seconds to avoid access by User)



※ If you don't do anything for 30 seconds, you will be out of the service setting mode.

9.3. How to operate the HHRC method

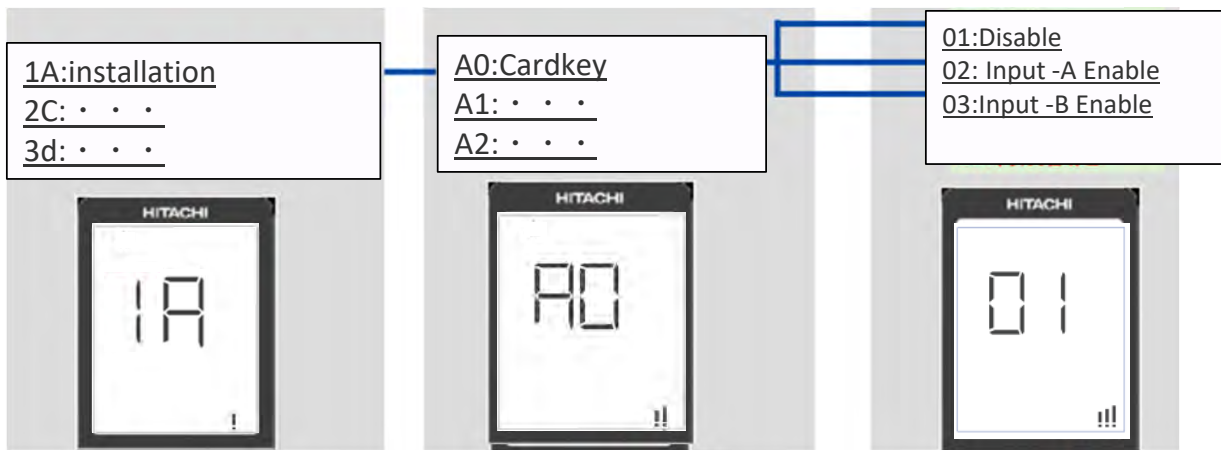


Temp Δ ∇ : Selection (in the same layer)
 Mode : move to previous layer
 Fan Speed : Move to next layer
 ON/OFF : Decision/Send (at layer 3)
 : Current setting check(at layer 2)
 Filter: category initialization(at layer 1)
 Filter + ON/OFF: all category initialization(at layer 1)
 ※ To exit from this setting mode, you need to either not operate the HHRC panel for 30 seconds or press and hold the UP/Down key for 5 seconds.

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Setting select)



9.4. Service setting item used for HHRC

Category	Function	Display on LCD Temperature 7 segment Layer Wise			Value setting meaning at Layer-3
		1	2	3	
Installation	Card Key	1A	A0	01	1 - Card Key Input - Disable
				02	2 - Contact A Enable
				03	3 - Contact B Enable
				04-99	4-99 : Reserved
	Heating/Cooling only mode select - (Operation Mode Lock)	1A	A1	01	1 - Normal Mode
				02	2 -Cooling Lock (Cool,Dry,A.circulator,Fan mode available)
				03	3 - Heating Lock (Heat and Fan mode available)
				04-99	4-99 : Reserved
	Auto restart switchover(Standard)	1A	A2	01	auto restart changeover disable
				02	auto restart by previous mode
				03-99	3-99 : Reserved
Cycle Operation	Defrost selection Function	3d	E0	01	01 - Standard Region
				02	02- Cold Region
				03-99	Reserved
	Set temperature shift adjustment (Cooling)	3d	E1	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
				12-99	Reserved
	Set temperature shift adjustment (Heating)	3d	E2	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
				12-99	Reserved
	Indoor fan air speed when cooling thermostat is off	3d	E3	01	01 : standard
				02	02 : Cold Region
				03-99	Reserved
	Selection of indoor fan control during heating thermo-off	3d	E4	01	01 : Fan Control at the Time of Heating Thermo- Off "Pattern 1"
				02	02 : Fan Control at the Time of Heating Thermo- Off "Pattern 2"
				03	03 : Fan Control at the Time of Heating Thermo- Off "Pattern 3"
04-99				Reserved	
Run on Timer	Run on Timer	5F	L0	01	Disable
				02	1 hour
				03	2 hour
				04	3 hour
				05	4 hour
				06	5 hour
				07	6 hour
				08	7 hour
				09	8 hour
				10	9 hour
				11	10 hour
				12	11hour
				13	12 hour
				14-99	Reserved

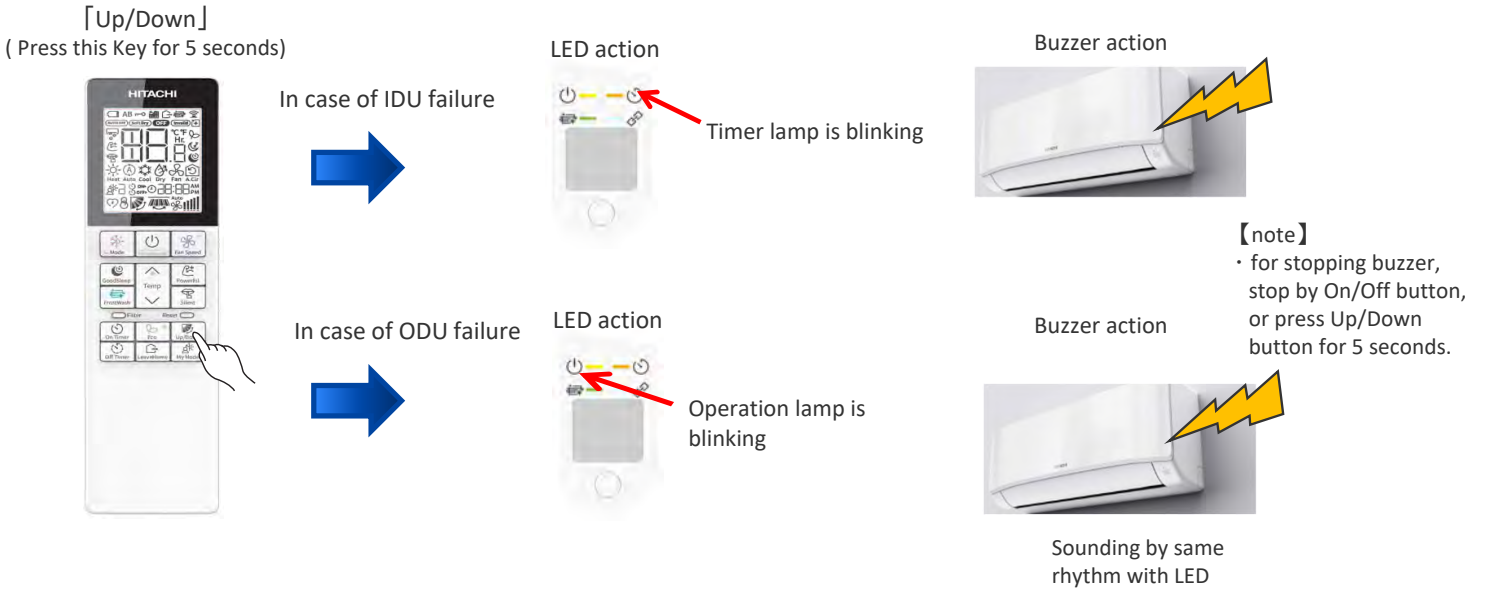
9.4. Service setting item used for HHRC

HHRC	Temperature Resolution change - 0.5°C→ 1°C	6H	P0	01	1 -0.5 °C Resolution 2-1 °C Resolution
	Fan Speed key sequence (Weaker to stronger ,	6H	P1	01	1 - Default (Auto-Silent-Low-Med-Hi-H2) 2- Reverse (Hi2-Hi-Med-Lo-Silent-Auto)
	Operation Mode : Auto	6H	P2	2	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Cool	6H	P3	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Dry	6H	P4	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Fan	6H	P5	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Heat	6H	P6	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Auto Fan speed : Enable / Disable	6H	P8	02	1 -Disable Selection on HHRC by Fan key 2 - Enable Selection on HHRC by Fan Key
	Fan Speed tapping control	6H	P9	01	1- Normal (Auto,Silent, Low,Med,Hi,H2) Selection on HHRC by Fan key 2- (Auto,Silent,Lo,Med,Hi) Selection on HHRC by Fan key
	RTC and Timer setting Format change: 12 Hr Format / 24 HR Format (Only for RTC based models)	6H	PA	02	1 - 12 Hr Format with AM/PM for RTC and Timer ON, Timer OFF 2 - 24 Hr Format for RTC and Timer ON , Timer OFF
Cooling Lower limit setting	6H	PC	16	(Lower set temp. start from 16 °C)	
			17	(Lower set temp. start from 17 °C)	
			18	(Lower set temp. start from 18 °C)	
			19	(Lower set temp. start from 19 °C)	
			20	(Lower set temp. start from 20 °C)	
			21	(Lower set temp. start from 21 °C)	
			22	(Lower set temp. start from 22 °C)	
			23	(Lower set temp. start from 23 °C)	
			24	(Lower set temp. start from 24 °C)	
			25	(Lower set temp. start from 25 °C)	
			26	(Lower set temp. start from 26 °C)	
			27	(Lower set temp. start from 27 °C)	
			28	(Lower set temp. start from 28 °C)	
			29	(Lower set temp. start from 29 °C)	
Heating Upper limit setting	6H	Pd	32	(Upper set temp. start from 32 °C)	
			31	(Upper set temp. start from 31 °C)	
			30	(Upper set temp. start from 30 °C)	
			29	(Upper set temp. start from 29 °C)	
			28	(Upper set temp. start from 28 °C)	
			27	(Upper set temp. start from 27 °C)	
			26	(Upper set temp. start from 26 °C)	
			25	(Upper set temp. start from 25 °C)	
			24	(Upper set temp. start from 24 °C)	
			23	(Upper set temp. start from 23 °C)	
			22	(Upper set temp. start from 22 °C)	
			21	(Upper set temp. start from 21 °C)	
			20	(Upper set temp. start from 20 °C)	
			19	(Upper set temp. start from 19 °C)	
Diagnosis	Failure Indication(latest to last 5 times)	7J	t0	01	1: Failure Display History 1 (Latest of last Five)
				02	2: Failure Display History 2
				03	3: Failure Display History 3
				04	4: Failure Display History 4
				05	5: Failure Display History 5 (5 th Error)
	Failure Diagnosis Start	7J	t1	01	1 : Failure Diagnosis Start
				02-99	Reserved
	Failure Memory Erase	7J	t2	01	1:Failure Memory Erase
				02-99	Reserved
	Humidity Sensor failure diagnosis	7J	t3	01	1:Humidity ensor failure diagnosis request
02-99				Reserved	

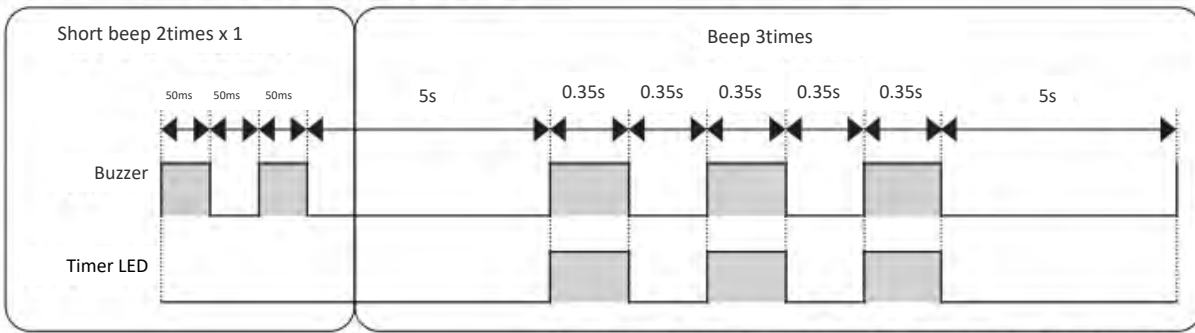
9.5. Buzzer sounding for showing error contents

【Up/Down】
 (Press this Key for 5 seconds)

When IDU or ODU has failed, and the Timer lamp is blinking. Service engineer can know error contents from the buzzer through phone.

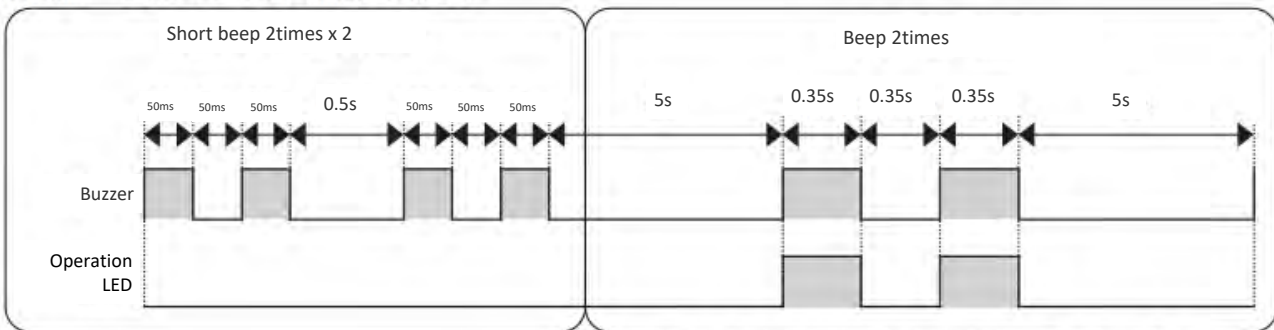


<IDU error example: timer LED will blink 3 times(interface defective(IDU) >



After "Short 2times x 1 beep", "3 times beep" will be repeated.

<ODU error example: operation LED will blink 2 times(peak current cut) >

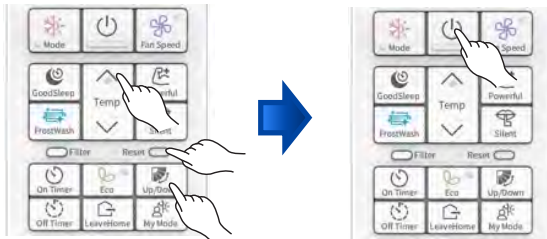


After "Short 2times x 2 beep", "2 times beep" will be repeated.


9.6. OTHER SETTING

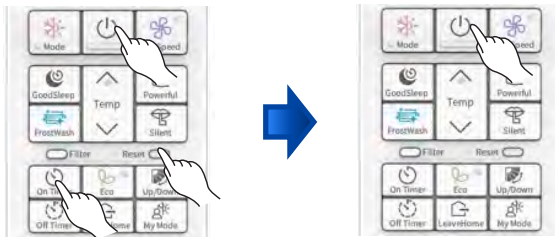
▪ ID SELECTION

1. Press “Up/Down swing button” and “set. Temp. up button” and “reset button”, and release “reset button”.
2. Select from A or B by pressing “set.temp. button”.
3. Press “On/Off button” toward IDU.
(EEPROM in HHRC will keep the A or B information.)



▪ DISPLAY MODE


1. Press “On Timer button” and “On/Off button” and “reset button”, and release “reset button”.
2. Fan speed icon() on LCD will blink.
3. Press “On/Off button” toward IDU.







9.7. ERROR CODE INFORMATION

9.7.1. HOW TO DISPLAY ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “  ” (Temperature) button of the remote control and select the “7J” option.

3. Press “  ” (Fan Speed) button of the remote control, then Press “  ” (Temperature) button select the “t0” option.

4. Press “  ” (Fan Speed) button of the remote control, then Press “  ” (Temperature) button select the “01” option.

5. Press “  ” (On/Off) button of the remote control, the fault information will be seen.

Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
Display self-diagnosis memory(※)	Display History 1 (Latest(newest) of last Five)	7J	t0	01
	Display History 2			02
	Display History 3			03
	Display History 4			04
	Display History 5			05

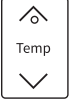
The specific information of error code is shown in the table below:


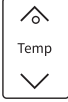
	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
INDOOR	-	-	000 00	Normal
	1 time	-	001 00	Refrigerant cycle fault
	2 times	-	-	Outdoor unit is under forced operation
	3 times	9 times	003 00	Communication error (indoor)
	9 times	-	009 00	Indoor thermistor defective
	10 times	-	003 00	Abnormal rotating numbers of DC fan motor
	12 times	9 times	012 00	Communication error (outdoor)
	13 times	-	013 00	EEPROM data reading error
	20 times	-	020 00	Human sensor defective
	21 times	-	021 00	Interface defective (other machine cause)
	25 times	-	025 00	CN7A/B connection defective


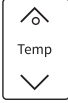
	OPERATION LAMP BLINKING	CODE	MEANING (THE FOLLOW DEFECTIVES IN OUTDOOR?? UNIT)
INDOOR	2 times	002 01	Peak current cut
	3 times	003 01	Compressor abnormal low speed rotation
	4 times	004 01	Compressor switching failure
	5 times	005 01	Overload lower limit cut
	6 times	006 01	OH thermistor temperature rise
	7 times	007 01	Abnormal outdoor thermistor
	9 times	009 01	Communication error
	10 times	010 01	Abnormal power source
	11 times	011 01	Fan stop for strong wind
	12 times	012 01	Fan motor fault
	13 times	013 01	EEPROM reading error
	14 times	014 01	DC Voltage abnormal
	15 times	015 01	Abnormal PWB circuit
	16 times	016 01	High load stop

9.7.2. HOW TO REMOVE ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.






















3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t2” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.






5. Press “” (On/Off) button of the remote control, and the error code will be removed.

10 OPTION LIST

10.1. WIRED REMOTE CONTROL – SPX-RCDB1



 <p>RAR-5G2 (SPX-RCDB1)</p>	BUTTONS	FUNCTION
		MODE Selector Use this button to select the operating mode. Every time you press this button, the mode will change from  (AUTO) →  (HEAT) →  (DEHUMIDIFY) →  (COOL) and →  (FAN) cyclically.
		FAN SPEED Selector Button This determines the fan speed. Every time you press this button, the airflow rate will change from  (AUTO) →  (HIGH) →  (MED) →  (LOW) →  (SILENT) (This button allows selection of optimal or preferred fan speed for each operation mode).
		ON/OFF button Press this button to start operation. Press it again to stop operation.
		SLEEP button Use this button to set the SLEEP timer.
		SET button Timer setting reservation.
		OFF button Select the turn OFF timer.
		ON button Select the turn ON timer.
		CANCEL button Cancel timer reservation.
		AUTO SWING (Vertical) button Controls the angle of the horizontal air deflector.
	ROOM TEMPERATURE setting button Value will change quicke when keep pressing.	

10.1.1. SHIFT VALUE

1. Press and hold  (ON/OFF) button and  (ON TIMER) button at the same time while giving a single press on the RESET button until remote controller now enter 'Shift value change mode'.
2. Press  (ON/OFF) button so that the display indicates  (FAN) speed.
3. Select  (FAN SPEED) button to choose Heating Shift or Cooling Shift Mode.

By setting fan speed to HIGH  or MED  , it will go to Cooling Shift mode.

By setting fan speed to LOW  or SILENT  , it will go to Heating Shift mode.

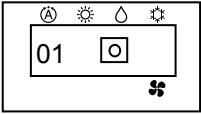
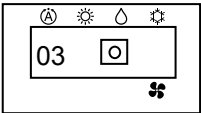
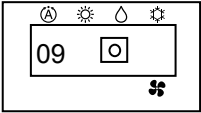
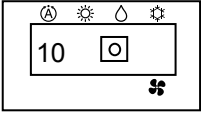
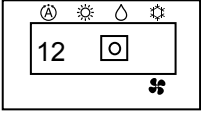
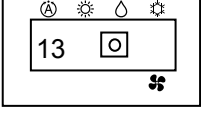

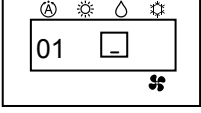
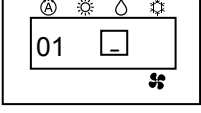
4. Press  (ROOM TEMPERATURE) button to change the shift value (-3°C ~ 0 ~ 3°C).
5. Press  (ON/OFF) button to end 'Shift value setting mode'.

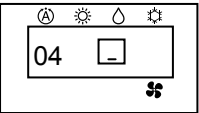
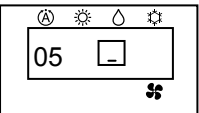
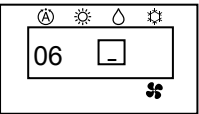
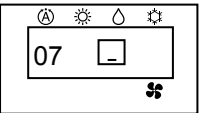
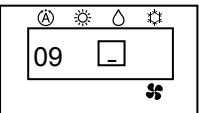
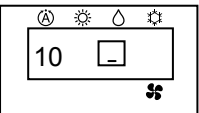
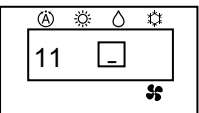
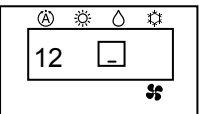
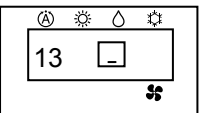
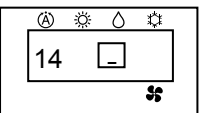
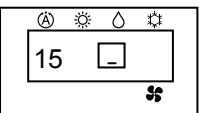
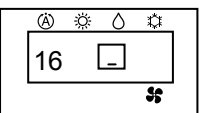
NOTE:

1. There are total of 7 shift values ranging from -3 to 3.
2. The changed shift value will remain unchanged after turned off the power.

10.1.2. ERROR CODE INFORMATION

1. In case failure occurs to the air conditioner, the error code will constantly appear on the wired remote controller display.

	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
INDOOR	-	-	-	Normal
	1 time	-		Refrigerant cycle fault
	2 times	-	-	Outdoor unit is under forced operation
	3 times	9 times		Communication error (indoor)
	9 times	-		Indoor thermistor defective
	10 times	-		Abnormal rotating numbers of DC fan motor
	12 times	-		Communication error (outdoor)
	13 times	-		EEPROM data reading error
	21 times	-		Interface defective (other machine cause)
OUTDOOR	4 times	2 times		Peak current cut
	4 times	3 times		Compressor abnormal low speed rotation

	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
OUTDOOR	4 times	4 times		Compressor switching failure
	4 times	5 times		Overload lower limit cut
	4 times	6 times		OH thermistor temperature rise
	4 times	7 times		Abnormal outdoor thermistor
	4 times	9 times		Communication error
	4 times	10 times		Abnormal power source
	4 times	11 times		Fan stop for strong wind
	4 times	12 times		Fan motor fault
	4 times	13 times		EEPROM reading error
	4 times	14 times		DC Voltage abnormal
	4 times	15 times		Abnormal PWB circuit
	4 times	16 times		High load stop

10.2. H-LINK ADAPTOR – PSC 6RAD

10.2.1. SAFETY SUMMARY

DANGER:

- DO NOT pour water into the remote control switch (hereafter called “controller”). This product is equipped with electrical parts. This will cause serious electrical shock.

WARNING:

- DO NOT perform installation work and electrical wiring connection by yourself. Contact your distributor or dealer of HITACHI and ask then for installation work and electrical wiring by service person. The specified cable should be used to connect (i) room air conditioner and adaptor, and (ii) controller and adaptor.


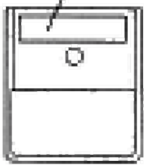

CAUTION:




- DO NOT install the indoor unit, outdoor unit, controller and cable as such places as:
 - where there is oil vapor and dispersion of oil
 - where there is sulfuric environment (near the hot springs)
 - where there is a flammable gas
 - where there is salty environment (near the sea)
- DO NOT install the indoor unit, outdoor unit, controller and cable within approximately 3 meters from strong electromagnetic wave radiators, such as medical equipment. In case that the controller is installed in a place where there is electromagnetic wave direct-radiation, shield the controller and cables by covering with the steel box and running the cable through the metal conduit tube.
- In case that there is electric noise at the power source for the indoor unit, provide a noise filter.

10.2.2. INSTALLATION WORK

■ Before installation

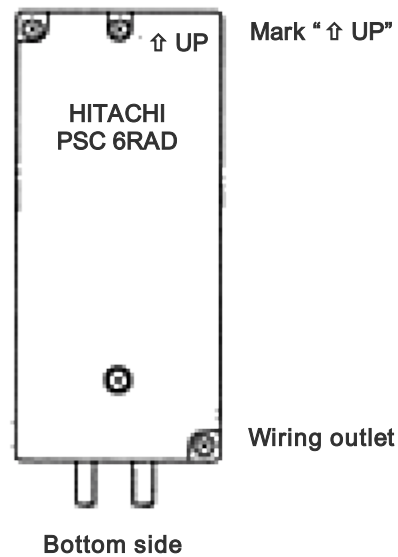
Check the contents and the number of the accessories in the packing.

Adaptor	 With two 1.8m cables
1 piece of cover for hiding the covering	 Attached 2 sided tapes
Two-sided tape for attaching to Adaptor	 110x40x3mm

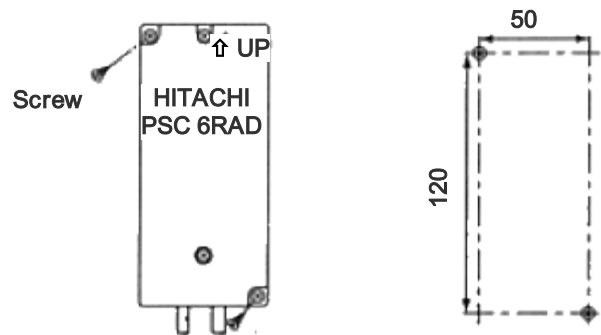
2 connectors for H-Link connection	
2 tapping screws for attaching to wall	 $\phi 3.0 \times 10\text{mm}$
2 screws for attaching to wooden wall	 $\phi 3.1 \times 16\text{mm}$

- 1) RAC adaptor can be installed to the wall as well as on the air conditioner itself
- 2) Install RAC adaptor in the vertical surface as shown below.

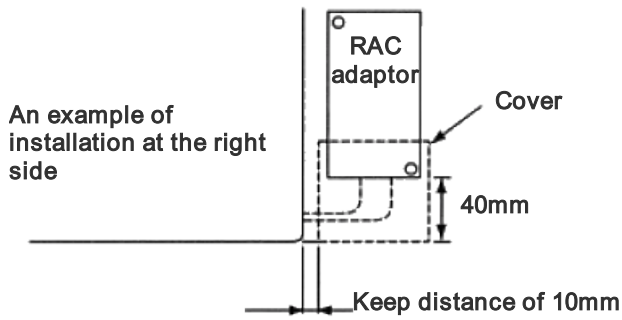
Upper side



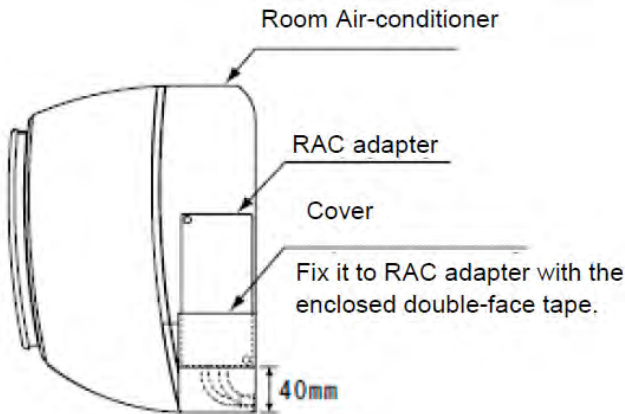
- 3) Installation procedure
 - a) When installing to the wall.
 - i) Fix the adaptor with 2 screws. Tapping screw is for metal surface, and other screw is for wooden surface.



- ii) When using the cover
It can be installed at the right and left side of room air conditioner. Fix the cover and RAC adaptor with the two-sided tape (accessory).



- b) When installing on the room air-conditioner
- In case that it cannot be installed to the wall due to the space or material problem, install the RAC adaptor with the two-sided tape (accessory) on the room air-conditioner.
- Confirm if the piping cover of the unit can be removed when performing the service maintenance, and then fix the RAC adaptor in the side of room air-conditioner with two-sided tape. (Available at the right as well as left side)
 - Clean the surface to be installed with a dry cloth.

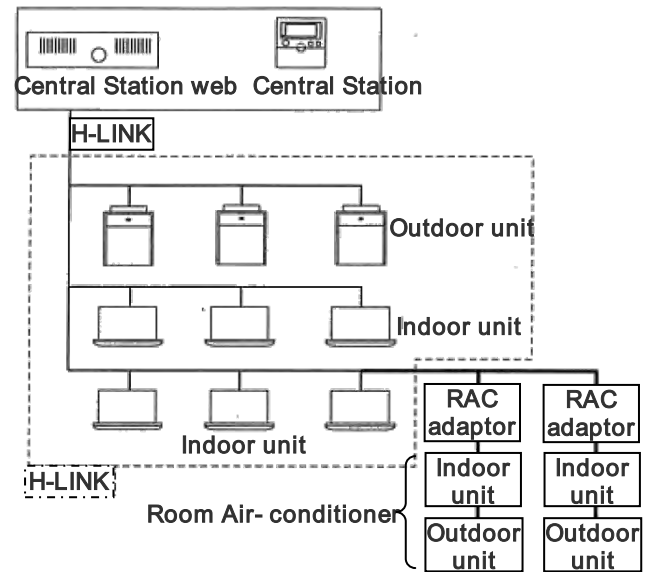


NOTE:

- Consider the following points since the adhesiveness changes according to the environmental conditions (temperature, humidity etc)
- The adhesiveness is decreased when there is humidity or oil.
- Warm the adhesive part and installation place of the two-sided tape to avoid the decrease of the adhesiveness in case the ambient temperature is low.
- DO NOT touch the adhesive part by fingers nor re-attach it many times. The adhesiveness has decreased and the RAC adaptor may fall off.
- DO NOT apply any force within 24 hours after installation.

10.2.3. ELECTRICAL WIRING

■ System configuration



CAUTION:

- Turn OFF the power supply of the room air-conditioner of the central control device when performing the wiring work
- DO NOT run all the H-LINK cable or power supply cable along the other signal cable, or malfunction may occur due to the noise, etc. If it is required to run along the other transmission cable, separate the cable more than 30cm, or run the cable through the metal tube and earth the tube.
- Follow local codes and regulations when performing electrical wiring and earth wiring.
- Transmissions cable used in H-LINK shall be 2 cores cable (0.7mm^2 to 1.25mm^2 for model: VCTF, VCT, CVV, MVVX, CVVX, VVR, VVF) or 2 cores twisted pair cable (model: KPEV, KPEV-Spec). Total length of cable shall be below 1000mm.
- DO NOT use wire with more than 3 cores.

■ Internal components and Wiring connections

Check the contents and the number of the accessories in the packing.

- Access
Open the cover by removing the ① and ② screws.



- Wiring Connection
Connection with Room Air-Conditioner
 - Remove the front cover of the room air-conditioner and the cover of electrical box.
 - The cable attached with the connector of the RAC adaptor shall be connected with the connector of indoor PCB

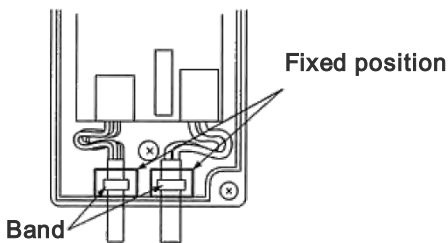
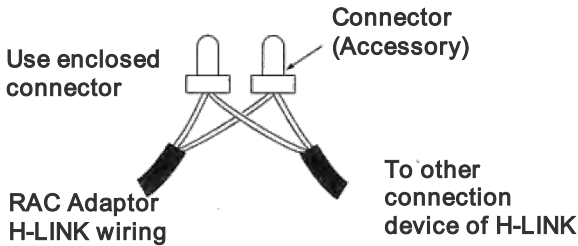
- iii) Install the electrical box cover paying attention not to clamp the cable. Read the installation manual of each room air-conditioner for confirming how to connect and how to assemble the cable of the RAC adaptor.

CAUTION:

- Disconnect the power plug before performing this work
- Turn OFF the break power source in case the power is supplied from the outdoor unit.

- Connection of Transmission Cable

H-LINK transmission cable connecting to RAC adaptor shall be connected to H-LINK.

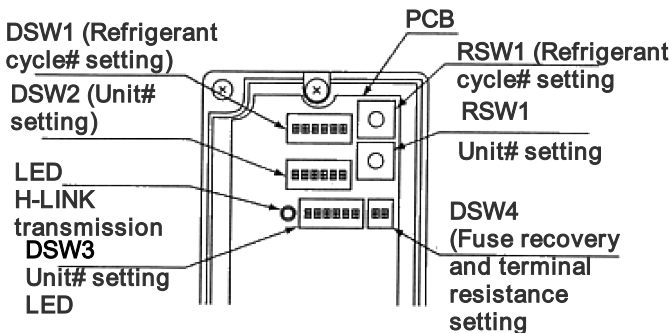


CAUTION:

- DO NOT connect incorrect wiring. It may cause the failure of the RAC Adaptor. Especially pay attention not to apply high voltage e.g. AC400/230V.
- DO NOT perform the wiring work while power to the central station or the RAC Adaptor is still being supplied. It may cause malfunction. Turn OFF devices when performing the wiring work.
- The RAC Adaptor side cable should not overload to the connector.
- DO NOT clamp the cable when attaching the RAC adaptor cover.
- Band should not be loose and in fixed position.

10.2.4. DIP SWITCH SETTING

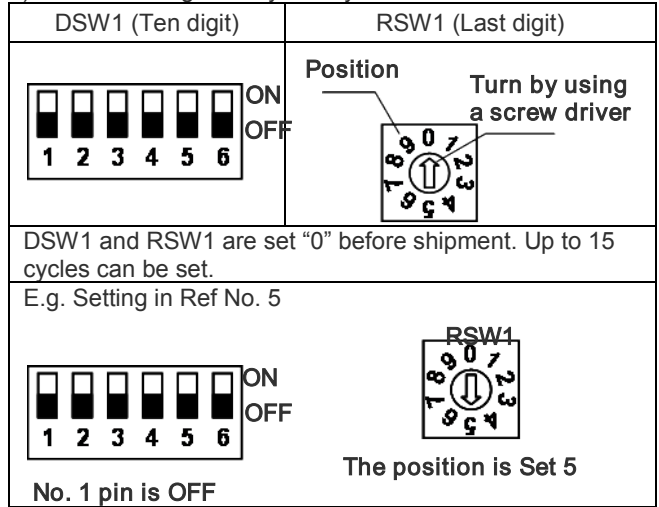
- 1) Switch OFF the power of room air conditioner before setting the DIP switch. If the power is ON, the settings are INVALID.
- 2) The position of the DIP switch is shown below.



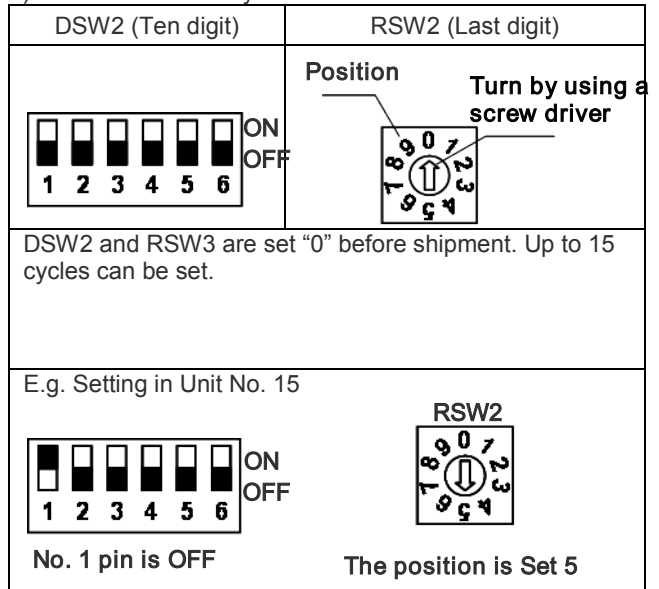
CAUTION:

- DO NOT turn ON various pins of DSW1 and DSW2

- 3) Set the refrigerant cycle# by RSW1 and DSW1

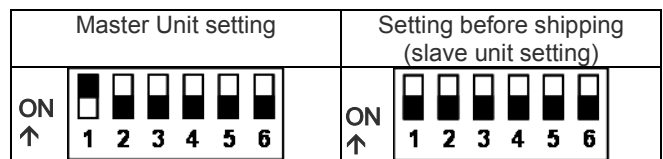


- 4) Set the unit No. by RSW2 and DSW2



- 5) Slave unit.

In case of setting various RAC adaptors in the same refrigerant cycle, set the RAC adaptor with smallest Unit# as a master unit. In case of setting only one RAC adaptor in a refrigerant system, this adaptor should be a master unit. Set this procedure by DSW3.



●: Master Unit setting

○: Setting before Shipping (Slave Unit setting)

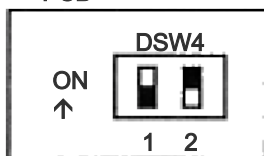
		Indoor Unit#								
		0	1	2	3	4	5	6	7	
Refrigerant Unit#	0	●	○	○	○	○				
	1			●	○	○				
	2				●	○	○	○	○	
	3		●							
	4									

CAUTION:

- DO NOT set various main adaptors in the same refrigerant cycle.

- 6) Procedure when applying 200V voltage to H-LINK wiring incorrectly.

In case of applying 200V voltage to H-LINK wiring incorrectly, the fuse installed in a transmission circuit on PCB will blow out. In this case, reconnect the wiring correctly and turn ON No. 2 pin of DSW4 on PCB. The transmission circuit can be recovered. (If applying this error again, the transmission circuit can not be recovered)

PCB

Turn ON No.2 pin of DSW4

- 7) Terminating resistance is set in whole H-LINK system.
- If H-LINK connecting devices like package air-conditioner are connected besides the RAC Adaptor, set the terminating resistance by those connecting devices. The terminating resistance should be set ON in only one position in whole H-LINK system.
 - In case that H-LINK is connected only by the RAC adaptor, set the terminating resistance by the RAC adaptor. The terminating resistance should be set ON in only one position in whole H-LINK system.

PCB

Turn ON No.1 pin of DSW4

10.2.5. TEST RUN

Test run should be performed in the following after finishing the installation, wiring and setting. Refer to the installation manuals enclosed with the control system equipment.

- Confirmation of RAC Adaptor Connection

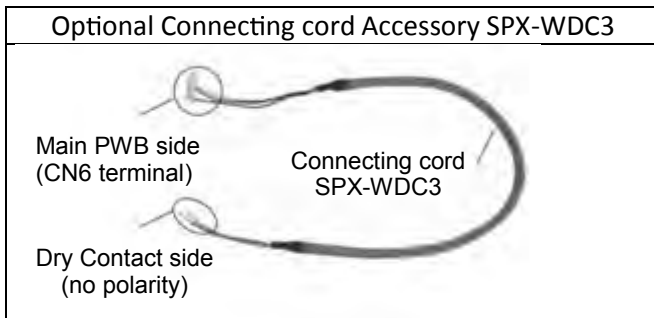
Confirm if the RAC adaptor connection is recognized in the control system equipments. In case that it is not confirmed, check the transmission cable, refrigerant cycle #, indoor unit #, terminal resistance setting etc.
- Registration

Confirm if the RAC adaptor connection is recognized.
- Confirmation of RUN/STOP Operation.

Confirm if the room air-conditioner operate correctly by RUN/STOP from the central control system equipments. Check also if the room air-conditioner operation changes correctly by each setting.

10.3. DRY CONTACT (SPX-WDC3) APPLICATION

The dry contact system enables the operation of the air conditioner indoor unit to be controlled by using external dry contacts (with non voltage) such as card-key controller or window for facilities such as hotels.



- Please decide A or B type of dry contact , you can use HHRC method and more details you can refer to Page 23.

Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
CardKey	Disable	1A	A0	01
	Card Key Input -A Enable			02
	Card Key Input -B Enable			03
	reserve			04-99

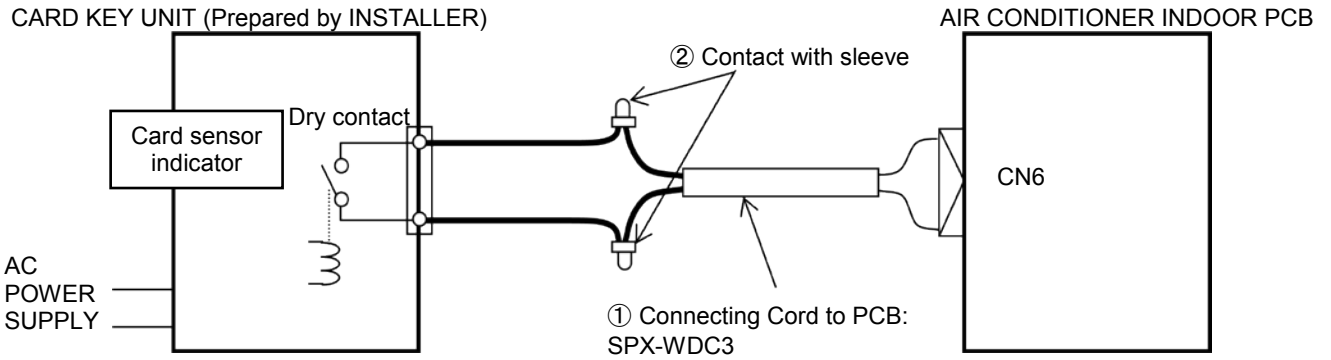
[1] CHECK DRY CONTACT OF CARD KEY UNIT

	AIR CONDITIONER Standby	AIR CONDITIONER Operating
	CARD KEY (Door Switch)	REMOVE
Contact type A	OPEN 	CLOSE
Contact type B	CLOSE 	OPEN

After all connection has been done as below diagram, ON the breaker and push ON button of wireless remote controller or wired remote controller to operate the air conditioner unit.

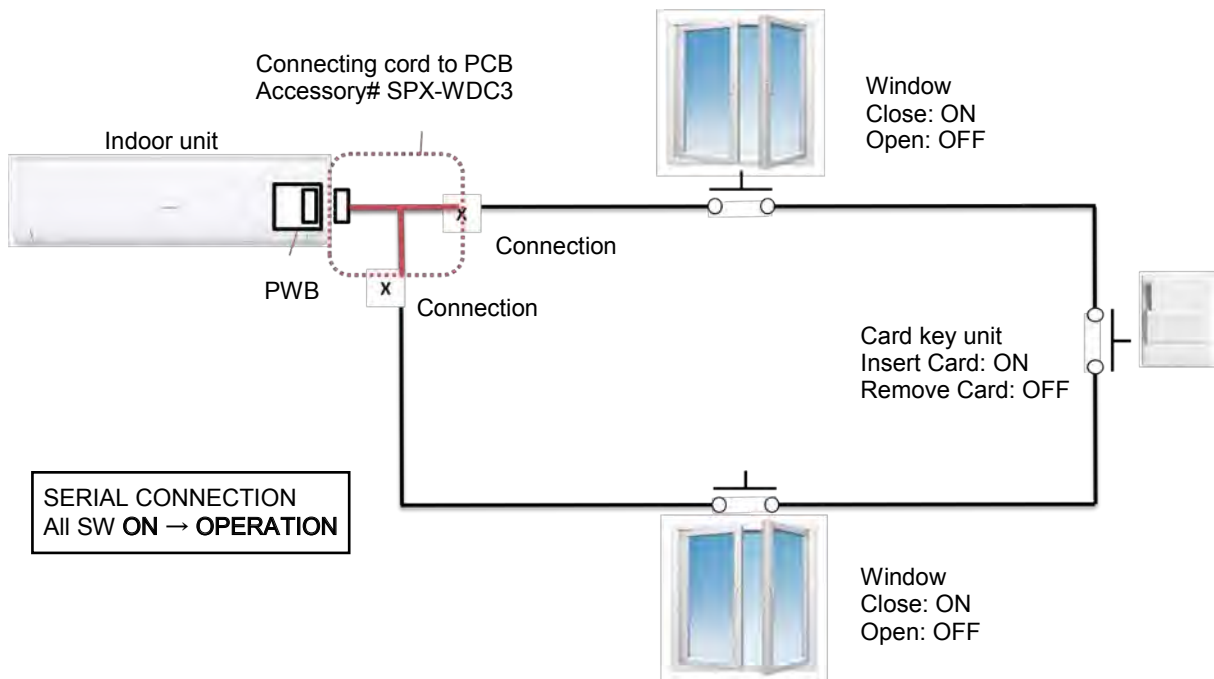
- When the CARD KEY is in insert condition, the air conditioner operation is allowable by remote controller.
- When the dry contact switch on the Card Key Unit is open (refer to diagram below for contact type a), the unit stops to operate (it takes 10 seconds to stop the unit operation after the dry contact switch on the card key turns off) and vice versa.
- When the card key is removed from the Card Key Unit, the wireless remote controller cannot be used.
- When the card key is removed from the Card Key Unit, the wired remote controller LCD display is activated; however it has no control over the unit.
- The suitable accessory Connecting Cord (accessory code#: SPX-WDC3) need to be used to connect the Card Key Unit's dry contact switch to the connector on the control board of the indoor unit. Please refer to Table 1 to select suitable accessory code# for the concerning indoor model.

Example of wiring connection to Card Key Unit will be as below (reference only)

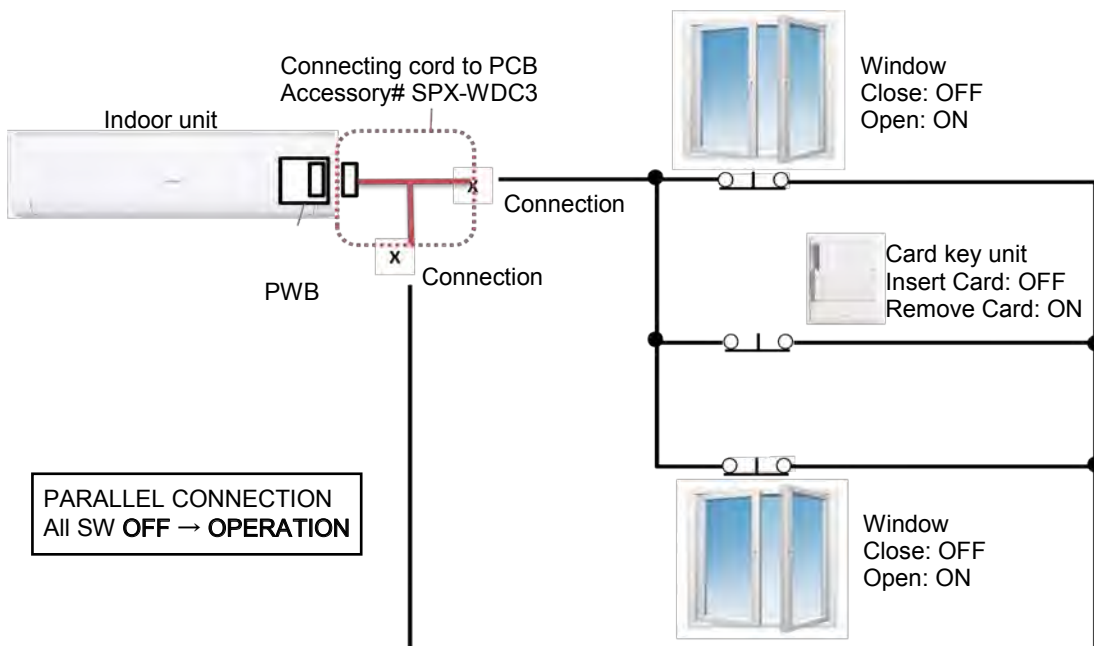


• CONNECTION EXAMPLE

i. HHRC for Dry Contact Type A



ii. HHRC for Dry Contact Type B



Please refer to the actual manual supplied with the optional connecting cords SPX-WDC3 for more details.

HITACHI

INDOOR

RAK-DJ25PHAT

RAK-DJ35PHAT

RAK-DJ50PHAT

OUTDOOR

RAC-DJ25PHAT

RAC-DJ35PHAT

RAC-DJ50PHAT