TECHNICAL CATALOGUE

HITACHI

airHome 800

ROOM AIR CONDITIONER
SPLIT TYPE
GJ SERIES

MODELS

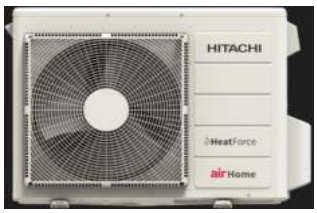
RAK-XJ09PHAA, RAC-XJ09WHAA
RAK-XJ12PHAA, RAC-XJ12WHAA
RAK-XJ18PHAA, RAC-XJ18WHAA
RAK-XJ24PHAA, RAC-XJ24WHAA

INDOOR UNIT

RAK-XJ09PHAA
RAK-XJ12PHAA
RAK-XJ18PHAA
RAK-XJ24PHAA

OUTDOOR UNIT

RAC-XJ09WHAA
RAC-XJ12WHAA
RAC-XJ18WHAA
RAC-XJ24WHAA



Cooling & Heating

HITACHI

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1 SPECIFICATIONS

1.1. WALL TYPE (RAK-XJ09PHAA, RAC-XJ09WHAA, RAK-XJ12PHAA, RAC-XJ12WHAA)

Indoor Model No			RAK-XJ09PHAA	RAK-XJ12PHAA
Outdoor Model No			RAC-XJ09WHAA	RAC-XJ12WHAA
Rated Performance	System Type		Heat Pump	Heat Pump
	Rated Cooling Capacity	BTU/h	9500	12500
	Cooling Capacity (Min-Max)	BTU/h	4500 - 12000	5000 - 14000
	Rated Heating Capacity	BTU/h	12000	13500
	Heating Capacity (Min-Max)	BTU/h	3800 - 15800	4700 - 19000
	EER2		16.1	14.5
	SEER2		26.5	25.0
	HSPF2		12.0	11.5
	COP at 47°F		4.00	3.12
	COP at 17°F (Normal Peak)		2.90	2.90
	COP at 5°F (Normal Peak)		2.10	2.10
	min Heating Capacity at +5 ^{O}F (-15 ^{O}C)	BTU/h	2900	3500
	max Heating Capacity at +5^{O}F (-15^{O}C)	BTU/h	14000	15200
	min Heating Capacity at -4^{O}F (-20^{O}C)	BTU/h	2100	3226
	max Heating Capacity at -4^{O}F (-20^{O}C)	BTU/h	12000	13500
	min Heating Capacity at -13^{O}F (-25^{O}C)	BTU/h	1400	2000
	max Heating Capacity at -13^{O}F (-25^{O}C)	BTU/h	8500	10500
	Moisture Removal	l/h	2.12	3.00
Electrical Data	Rated Voltage	V-Ph-Hz	230V - 1P- 60Hz	230V - 1P- 60Hz
	Rated Cooling Current	Amps	2.85	4.31
	Rated Heating Current	Amps	4.24	5.029853979
	MCA	Amps	14	14
	MOP	Amps	25	25
Indoor Unit	Set Temp Range	^{O}F (^{O}C)	60.8~89.6 (16~32)	60.8~89.6 (16~32)
	Cooling Airflow (HH/H/M/L/SL)	CFM	460/410/350/290/250	400/385/340/300/270
	Heating Airflow (HH/H/M/L/SL)	CFM	460/420/320/270/220	460/430/350/300/220
	Sound Pressure Level (H/M/S/SL) - Cooling	dB(A)	46/44/39/34/30	48/46/41/34/30
	Sound Pressure Level (H/M/S/SL) - Heating	dB(A)	45/43/38/34/30	48/46/40/34/30
	Unit Dimension (WxHxD)	inch (mm)	41.33x11.73x10.03 (1050x294x255)	41.33x11.73x10.03 (1050x294x255)
	Packaging Dimension (WxHxD)	inch (mm)	1110x361x326	1110x361x326
	Net / Gross Weight	lbs (kg)	30.07/37.48 / (14.0/17.0)	30.07/37.48 / (14.0/17.0)

Outdoor Unit	Operation Range - Cooling	^{O}F (^{O}C)	-5^{o}F to 114.8^{o}F (-20^{o}C to 46^{o}C)	-5^{o}F to 114.8^{o}F (-20^{o}C to 46^{o}C)
	Operation Range - Heating	^{O}F (^{O}C)	-22^{o}F to 75.2^{o}F (-30^{o}C to 24^{o}C)	-22^{o}F to 75.2^{o}F (-30^{o}C to 24^{o}C)
	Refrigerant		R32	R32
	Refrigerant Charge	oz (Kg)	42.32(1.2)	42.32(1.2)
	Sound Pressure Level (High)-Cool	dB(A)	52	52
	Sound Pressure Level (High)-Heat	dB(A)	52	52
	Unit Dimension (WxHxD)	inch (mm)	33.46x25.59x11.73 (850x650x298)	33.46x25.59x11.73 (850x650x298)
	Packaging Dimension (WxHxD)	Inch (mm)	1008x690x404	1008x690x404
	Net / Gross Weight	lbs (kg)	91.0/97.5 / (41.0/44.0)	91.0/97.5 / (41.0/44.0)
Piping	Max Total Piping Length	Ft (m)	100(30)	100(30)
	Max Total Piping Height	Ft (m)	65.6(20)	65.6(20)
	Piping Connection - Liquid	inch	1/4"	1/4"
	Piping Connection - Gas	inch	3/8"	3/8"
	Piping Connection - Drain	inch	5/8"	5/8"

1.2. WALL TYPE (RAK-XJ18PHAA, RAC-XJ18WHAA, RAK-XJ24PHAA, RAC-XJ24WHAA)

Indoor Model No			RAK-XJ18PHAA	RAK-XJ24PHAA
Outdoor Model No			RAC-XJ18WHAA	RAC-XJ24WHAA
Rated Performance	System Type		Heat Pump	Heat Pump
	Rated Cooling Capacity	BTU/h	18000	22000
	Cooling Capacity (Min-Max)	BTU/h	6800 - 22000	9000-28000
	Rated Heating Capacity	BTU/h	21600	25400
	Heating Capacity (Min-Max)	BTU/h	8800 - 28000	13000-34000
	EER2		14.0	12.5
	SEER2		21.5	21.0
	HSPF2		11.5	11.0
	COP at 47°F		4.20	4.00
	COP at 17°F (Normal Peak)		2.15	2.15
	COP at 5°F (Normal Peak)		2.06	1.90
	min Heating Capacity at +5 ^{O}F (-15 ^{O}C)	BTU/h	4320	6500
	max Heating Capacity at +5^{O}F (-15^{O}C)	BTU/h	23000	27000
	min Heating Capacity at -4^{O}F (-20^{O}C)	BTU/h	4320	5500
	max Heating Capacity at -4^{O}F (-20^{O}C)	BTU/h	21600	25500
	min Heating Capacity at -13^{O}F (-25^{O}C)	BTU/h	3500	5000
	max Heating Capacity at -13^{O}F (-25^{O}C)	BTU/h	16000	20000
	Moisture Removal	l/h	4.0	4.50
Electrical Data	Rated Voltage	V-Ph-Hz	208~230V - 1P- 60Hz	208~230V - 1P- 60Hz
	Rated Cooling Current	Amps	6.60	9.00
	Rated Heating Current	Amps	7.70	9.60
	MCA	Amps	20	20
	MOP	Amps	35	35
Indoor Unit	Set Temp Range	^{O}F (^{O}C)	61-90（16-32）	61-90（16-32）
	Cooling Airflow (HH/H/M/L/SL)	CFM	580/550/500/400/300	600/580/500/400/300
	Heating Airflow (HH/H/M/L/SL)	CFM	700/700/580/450/350	700/700/580/450/350
	Sound Pressure Level (H/M/S/SL) - Cooling	dB(A)	52/52/47/43/36	52/52/47/43/36
	Sound Pressure Level (H/M/S/SL) - Heating	dB(A)	52/52/47/43/36	52/52/47/43/36
	Unit Dimension (WxHxD)	inch (mm)	43.3x11.8x10.2 （1100x300x260）	43.3x11.8x10.2 （1100x300x260）
	Packaging Dimension (WxHxD)	inch (mm)	1155 x330 x365	1155 x330 x365
	Net / Gross Weight	lbs (kg)	33.1/37.5 (15/17)	33.1/37.5 (15/17)

Outdoor Unit	Operation Range - Cooling	^{O}F (^{O}C)	-5^{o}F to 114.8^{o}F (-20^{o}C to 46^{o}C)	-5^{o}F to 114.8^{o}F (-20^{o}C to 46^{o}C)
	Operation Range - Heating	^{O}F (^{O}C)	-22^{o}F to 75.2^{o}F (-30^{o}C to 24^{o}C)	-22^{o}F to 75.2^{o}F (-30^{o}C to 24^{o}C)
	Refrigerant		R32	R32
	Refrigerant Charge	oz (Kg)	65.95(1.87)	77.6(2.20)
	Sound Pressure Level (High)-Cool	dB(A)	52	55
	Sound Pressure Level (High)-Heat	dB(A)	54	55
	Unit Dimension (WxHxD)	inch (mm)	37.4x37.2x14.6 (950X945X370)	37.4x37.2x14.6 (950X945X370)
	Packaging Dimension (WxHxD)	Inch (mm)	1116x1100x520	1116x1100x520
	Net / Gross Weight	lbs (kg)	163/172（74/78）	168/179（76/81）
Piping	Max Total Piping Length	Ft (m)	164(50)	164(50)
	Max Total Piping Height	Ft (m)	98(30)	98(30)
	Piping Connection - Liquid	inch	1/4	3/8
	Piping Connection - Gas	inch	1/2	5/8
	Piping Connection - Drain	inch	5/8	5/8

NOTE:

1. Capacity and seasonal performance data (SEER/HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	**dB**	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	**dB**	95 °F	47 °F
	WB		43 °F
Piping Length: 16.4f (5.0 meters); **Piping Lift**: 0f (0 meter) **dB**: Dry Bulb; **WB**: Wet Bulb			

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

INDOOR

- 2.62ft (0.8 meter) beneath indoor height center
- 3.28ft (1 meter) from Discharge grille

OUTDOOR

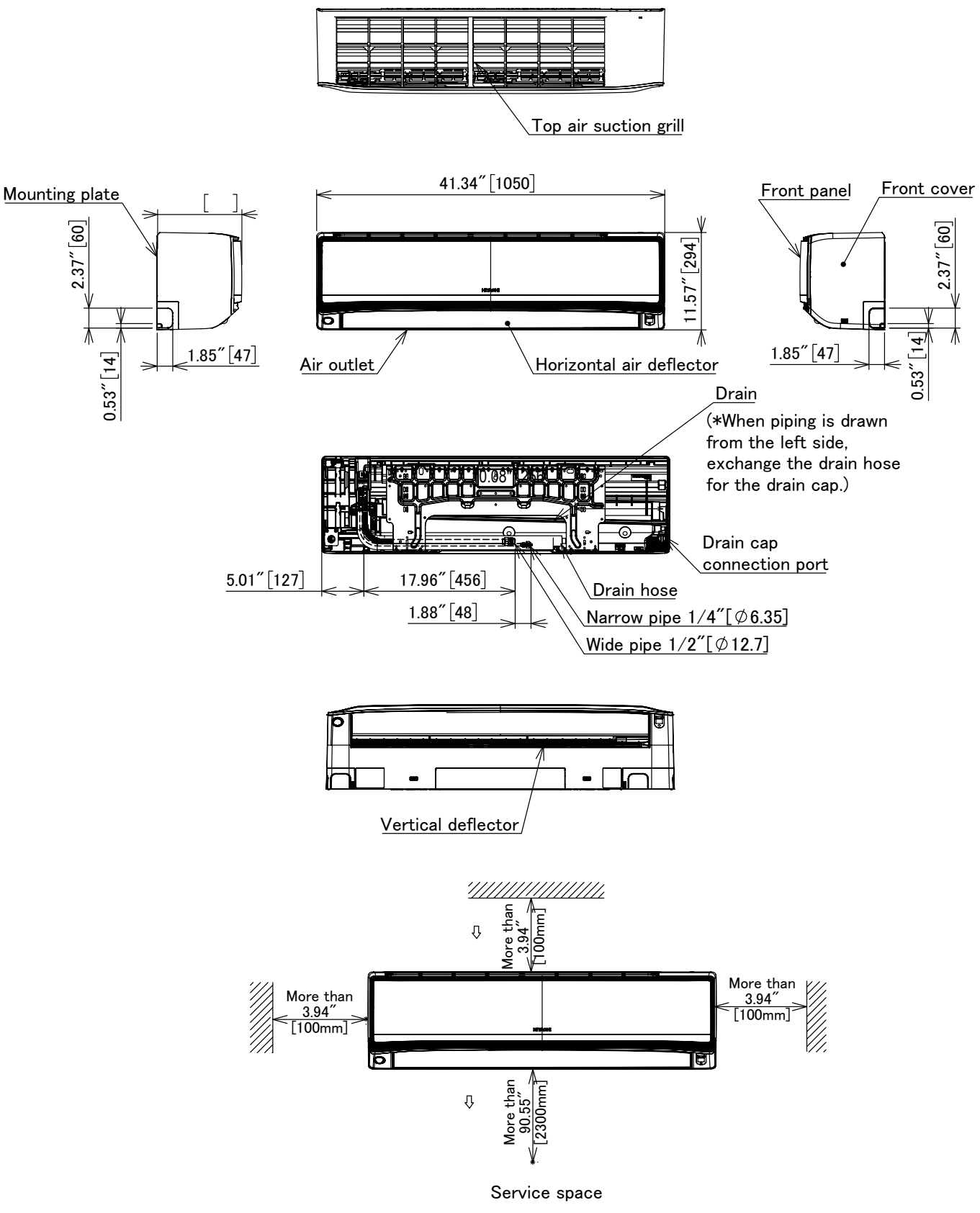
- 3.28ft (1 meter) from the unit front surface and 3.28ft (1 meter) from floor level.

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

2 DIMENSIONAL DATA

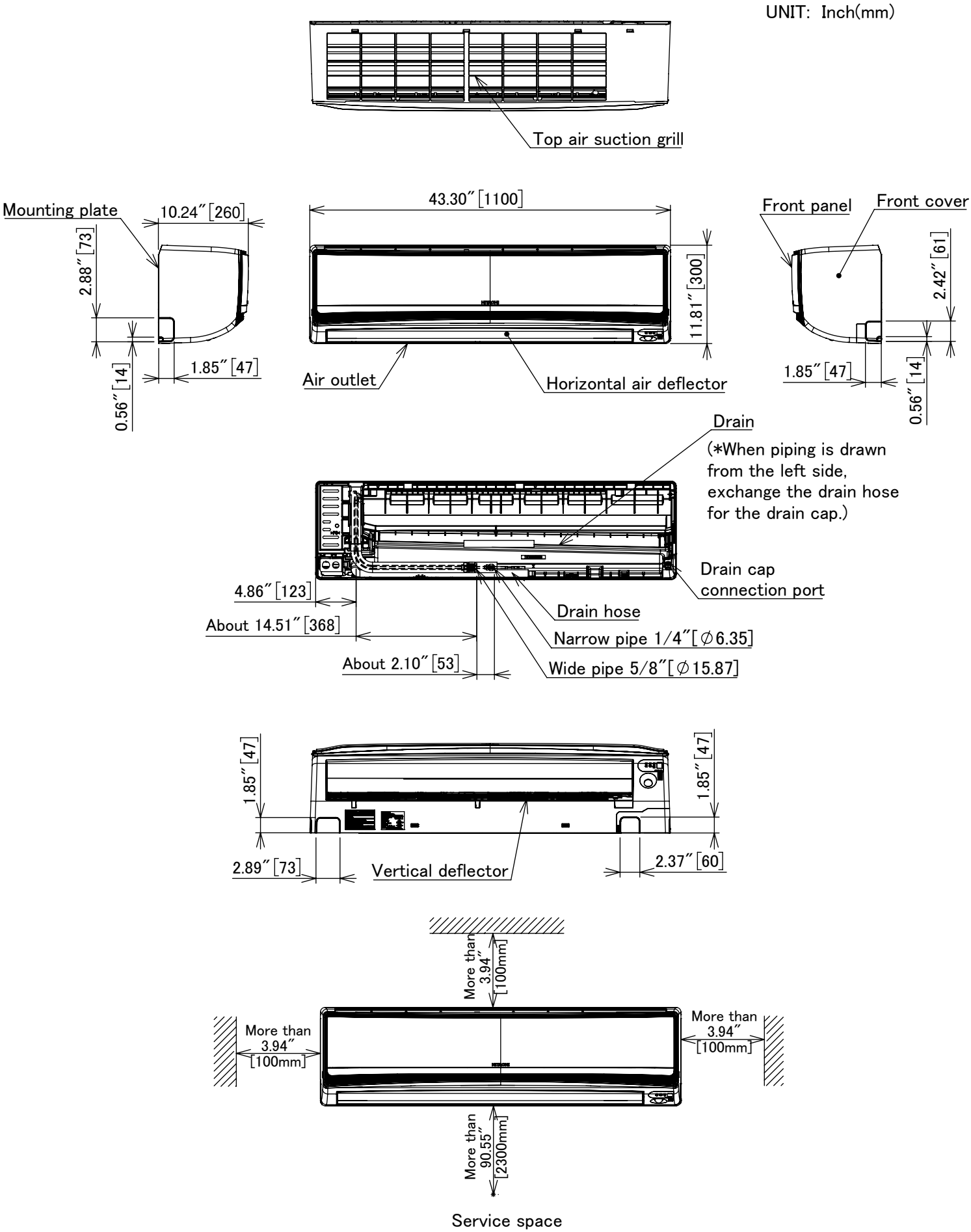
2.1. INDOOR WALL TYPE: RAK-XJ09PHAA , RAK-XJ12PHAA

UNIT: Inch(mm)



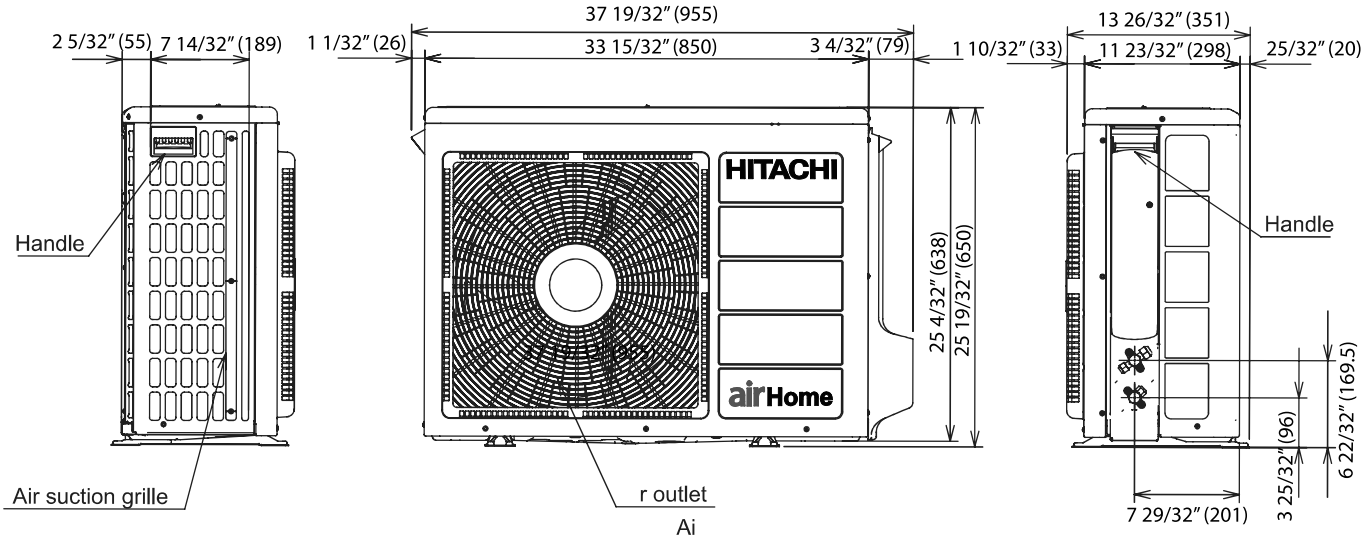
2.2. INDOOR WALL TYPE: RAK-XJ18PHAA, RAK-XJ24PHAA

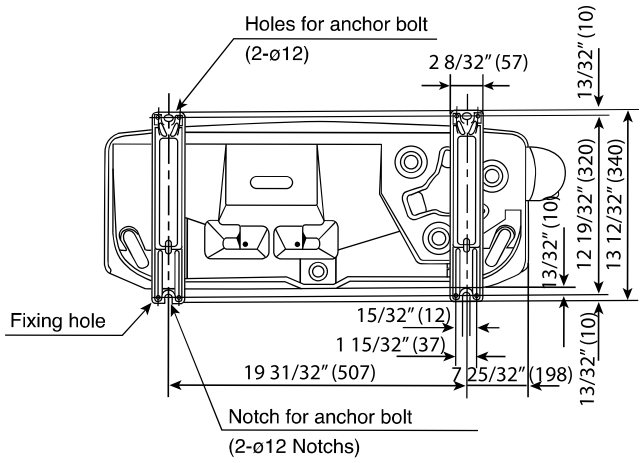
UNIT: Inch(mm)

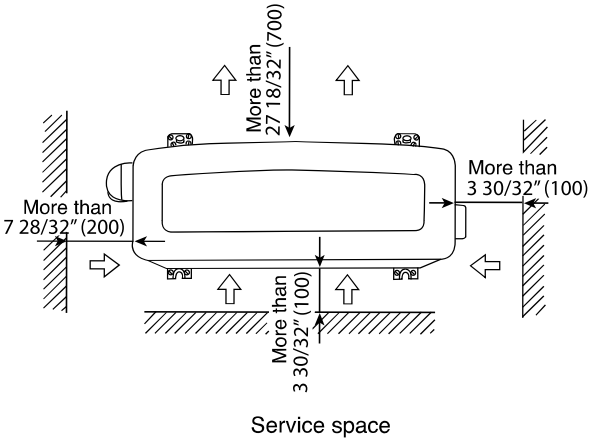


2.3 OUTDOOR: RAC-XJ09WHAA, RAC-XJ12WHAA

UNIT: Inch(mm)

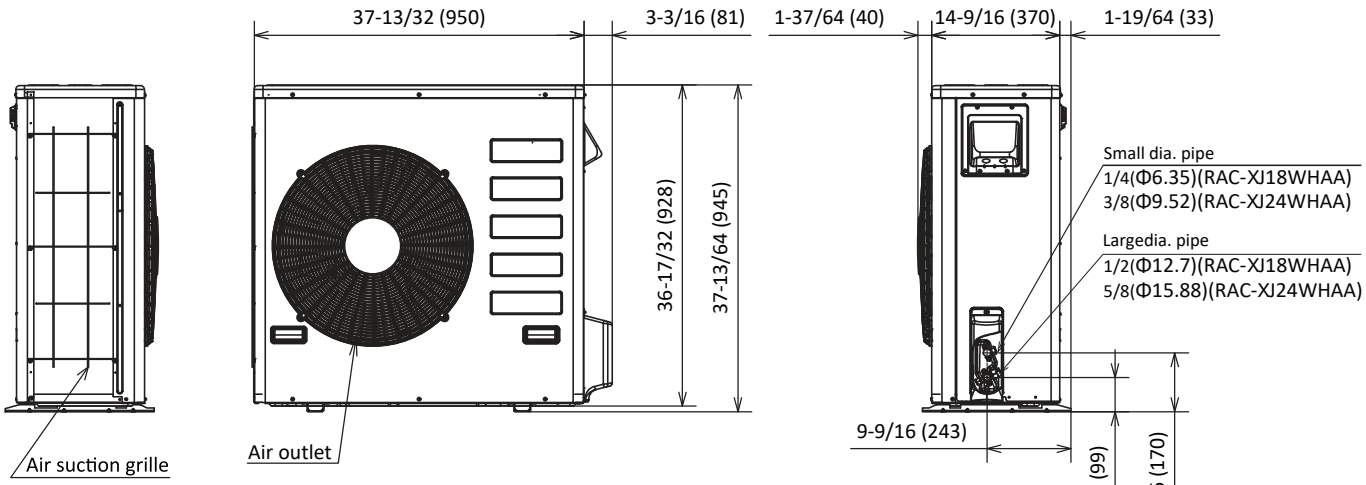


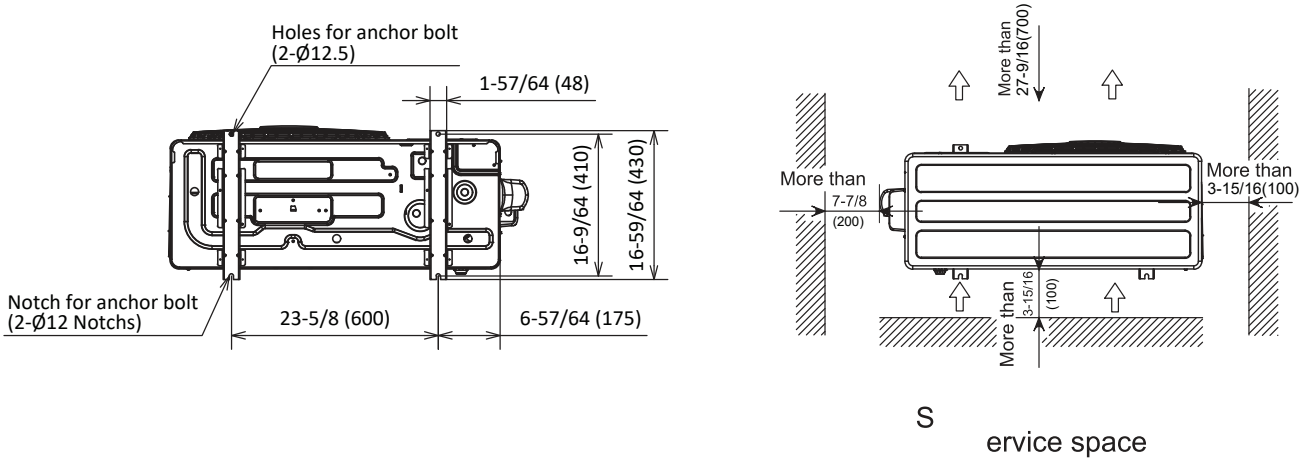




2.4 OUTDOOR: RAC-XJ18WHAA , RAC-XJ24WHAA

UNIT: Inch(mm)





Service space

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:

①Pipe length / height difference:16.4ft (5m) / 0ft (0m) ③Capacity loss due to white frost and defrost operation is not included.

②Indoor fan speed at High mode

3.1.1 RAK-XJ18PHAA/RAC-XJ18WHAA

COOLING [60Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°FDB)																							
EWB	EDB	-4			14			70			81			90			95			104			110		
°F	°F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
54	64	11389	8563	430	8566	6440	439	15341	13578	824	14198	12534	971	14760	13104	1183	14220	12528	1235	13320	11808	1325	12780	11232	1376
57	68	11389	8563	430	8566	6440	439	16483	13578	824	15341	12664	983	15840	13104	1196	15300	12672	1247	14220	11808	1337	13680	11376	1402
61	72	11389	9112	437	8566	6852	446	17626	13578	835	16320	12664	994	16920	13104	1209	16380	12672	1273	15300	11808	1363	14760	11376	1415
64	77	12213	9770	443	9185	7348	453	18768	14753	846	17299	13709	1006	18000	14256	1222	17280	13680	1273	16200	12816	1376	15480	12240	1427
66	81	12624	10100	450	9494	7596	459	19421	15537	857	17952	14362	1017	18720	14976	1235	18000	14400	1286	16920	13536	1376	16200	12960	1427
72	86	13997	11197	450	10526	7513	459	21542	15406	857	19910	14231	1017	20700	14832	1247	19980	14256	1299	18000	13824	1427	16740	13536	1505
75	90	14957	11966	457	11249	7513	466	23011	15406	867	21216	14231	1028	22140	14832	1247	21240	14256	1312	18720	14112	1466	17100	13968	1556

HEATING [60Hz, 230V]

INDOOR	OUTDOOR TEMPERATURE (°FDB)																													
EDB	-22			-13			-4			5			14			17			23			32			47			50			59		
°F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
61	13082		2523	16150		2626	21803		3271	23216		3370	25716		3370	27273		3352	26542		3070	24646		2389	21848		1388	23338		1382	26000		1367
64	13021		2512	16075		2638	21701		3285	23108		3385	25608		3385	27136		3376	26385		3100	24473		2421	21724		1448	23219		1444	25800		1437
68	12960		2500	16000		2650	21600		3300	23000		3400	25500		3400	27000		3400	26229		3130	24300		2454	21600		1507	23100		1507	25600		1507
72	12899		2488	15925		2662	21499		3315	22892		3415	25392		3415	26864		3424	26072		3159	24127		2486	21476		1566	22981		1570	25400		1577
75	12838		2477	15850		2674	21397		3329	22784		3430	25284		3430	26727		3448	25915		3189	23954		2518	21352		1626	22862		1632	25200		1647

* Maximum Output values are not based on AHRI test conditions

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

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

3.1.2. RAK-XJ24PHAA/RAC-XJ24WHAA

COOLING [60Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°FDB)																							
EWB	EDB	-4			14			70			81			90			95			104			110		
°F	°F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
54	64	18469	13885	955	15651	11767	898	18612	16474	1120	17226	15206	1319	18040	16016	1619	17380	15312	1690	16280	14432	1813	15620	13728	1883
57	68	18469	13885	955	15651	11767	898	19998	16474	1120	18612	15365	1335	19360	16016	1637	18700	15488	1707	17380	14432	1830	16720	13904	1918
61	72	18469	14775	970	15651	12521	912	21384	16474	1134	19800	15365	1351	20680	16016	1654	20020	15488	1742	18700	14432	1866	18040	13904	1936
64	77	19804	15844	985	16783	13426	926	22770	17899	1149	20988	16632	1366	22000	17424	1672	21120	16720	1742	19800	15664	1883	18920	14960	1954
66	81	20472	16378	1000	17349	13879	940	23562	18850	1164	21780	17424	1382	22880	18304	1690	22000	17600	1760	20680	16544	1883	19800	15840	1954
72	86	22697	18158	1000	19234	13728	940	26136	18691	1164	24156	17266	1382	25300	18128	1707	24420	17424	1778	22000	16896	1954	20460	16544	2059
75	90	24255	19404	1015	20554	13728	954	27918	18691	1178	25740	17266	1397	27060	18128	1707	25960	17424	1795	22880	17248	2006	20900	17072	2130

HEATING [60Hz, 230V]

INDOOR	OUTDOOR TEMPERATURE (°FDB)																													
EDB	-22			-13			-4			5			14			17			23			32			47			50			59		
°F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
61	15120		2822	20160		3071	25704		3467	27216		3963	29091		3963	30273		3941	29656		3622	28046		2855	25648		1721	26763		1713	28800		1694
64	15060		2811	20080		3086	25602		3484	27108		3981	28983		3981	30136		3970	29499		3658	27873		2894	25524		1795	26644		1790	28600		1781
68	15000		2800	20000		3100	25500		3500	27000		4000	28875		4000	30000		4000	29343		3695	27700		2934	25400		1868	26525		1868	28400		1868
72	14940		2789	19920		3114	25398		3516	26892		4019	28767		4019	29864		4030	29186		3732	27527		2974	25276		1941	26406		1946	28200		1955
75	14880		2778	19840		3129	25296		3533	26784		4037	28659		4037	29727		4059	29030		3769	27354		3013	25152		2015	26287		2023	28000		2042

* Maximum Output values are not based on AHRI test conditions

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

TC: Total Capacity (BTU)
SHC: Sensible Heating Capacity (BTU)
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 x 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:

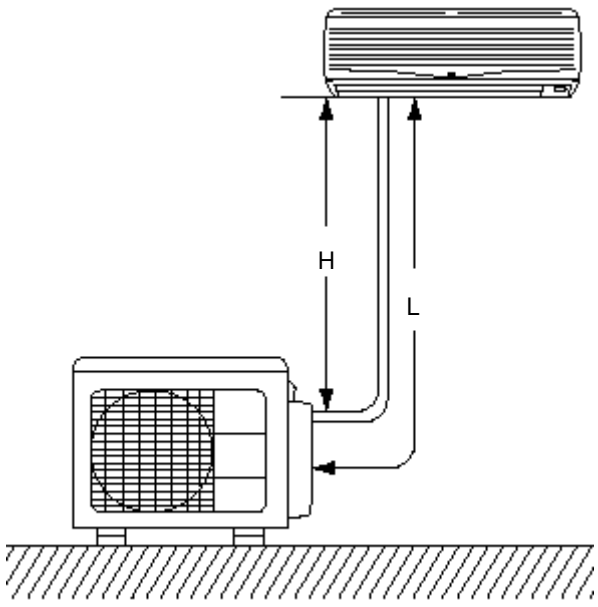
HCA= HC x F

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

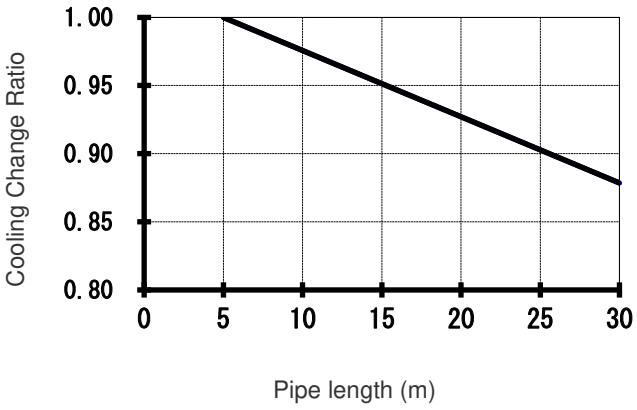


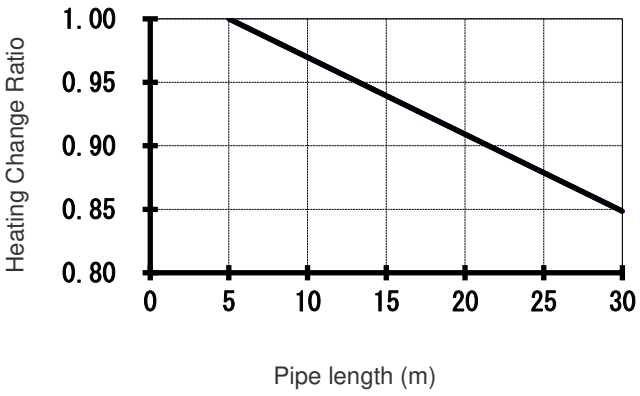
H: Vertical Distance Between Indoor Unit and Outdoor Units in Meters

L: Actual One-Way Piping Length Between Indoor Unit and Outdoor Unit in Meters

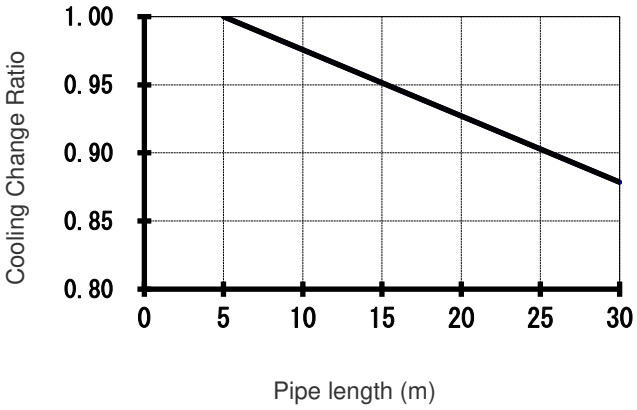
EL: Equivalent Total Distance Between Indoor Unit and Outdoor Unit in Meters
(Equivalent One-Way Piping Length)

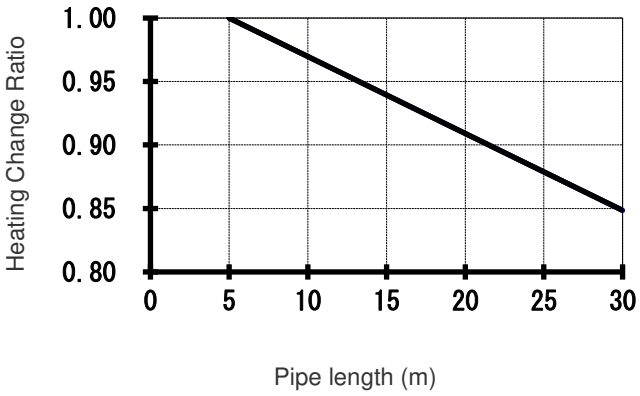
Models : RAC-XJ09WHAA



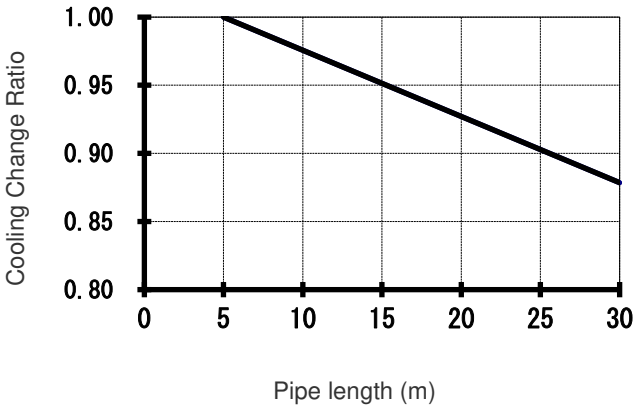


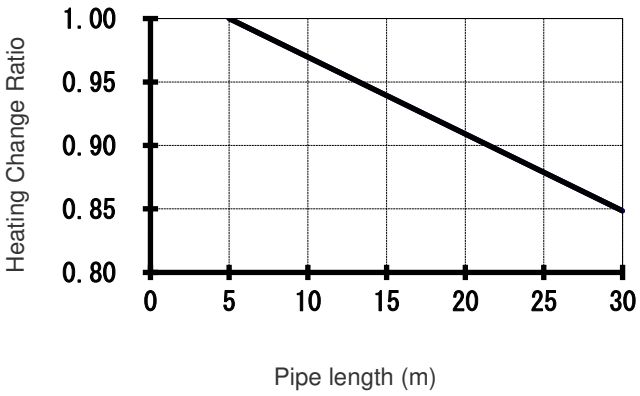
Models : RAC-XJ12WHAA



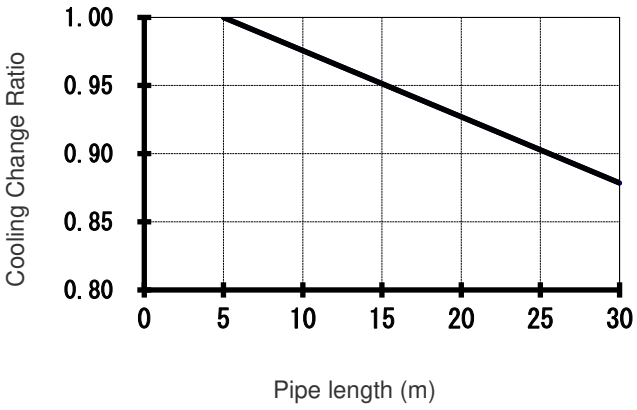


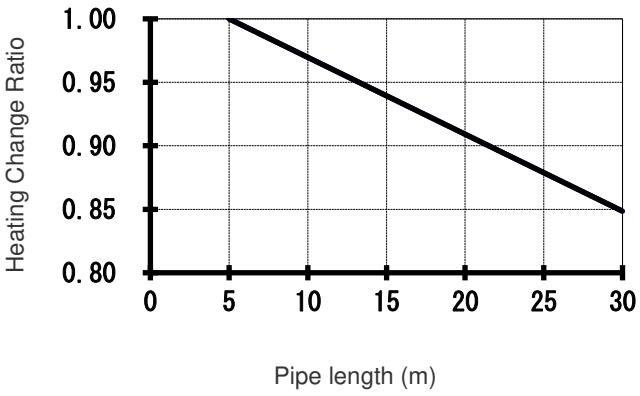
Models : RAC-XJ18WHAA





Models : RAC-XJ24WHAA





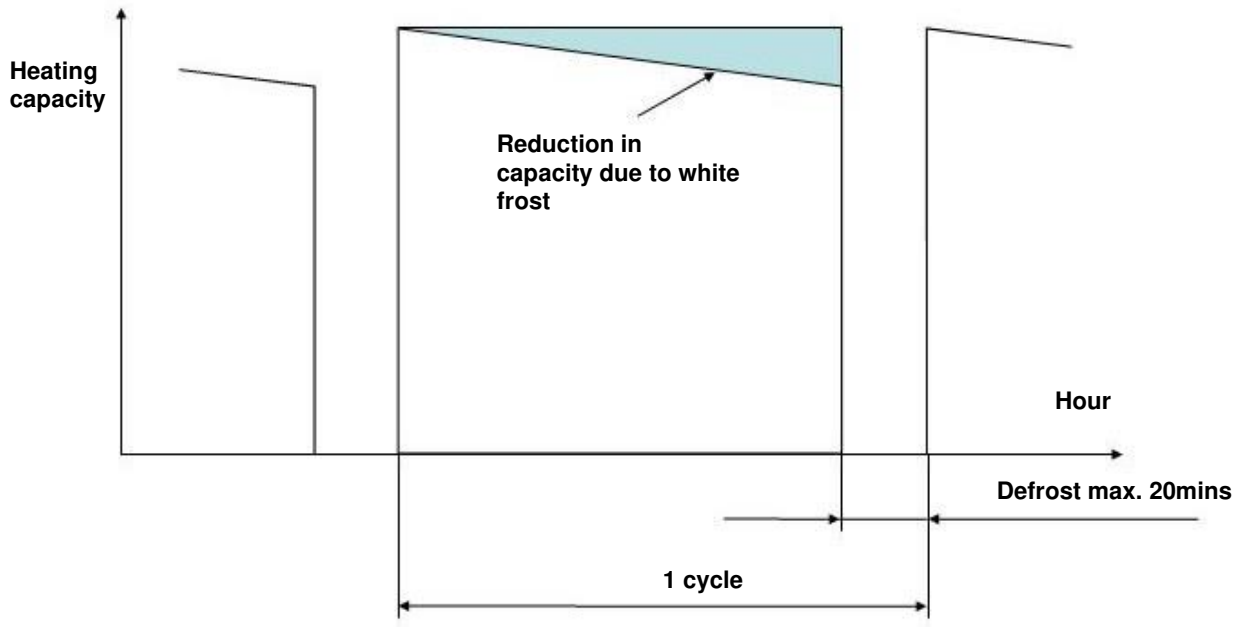
3.3. CORRECTION FACTORS ACCORDING TO DEFROSTING OPERATION

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 (°FDB)	5	14	19.4	23	32	44.6	50	56
Correction factor (humidity rate85% RH)	0.95	0.95	0.89	0.85	0.81	1.0	1.0	1.0

Correction Factor

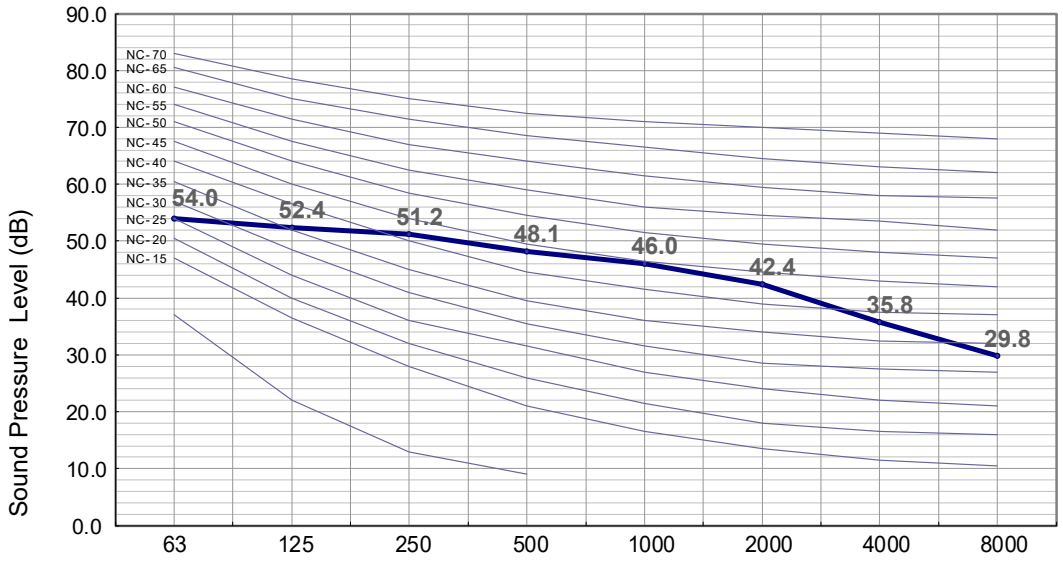


NOTE:
The correction factor is not valid for special conditions such as snowfall or operation in a transitional period.

4. SOUND DATA

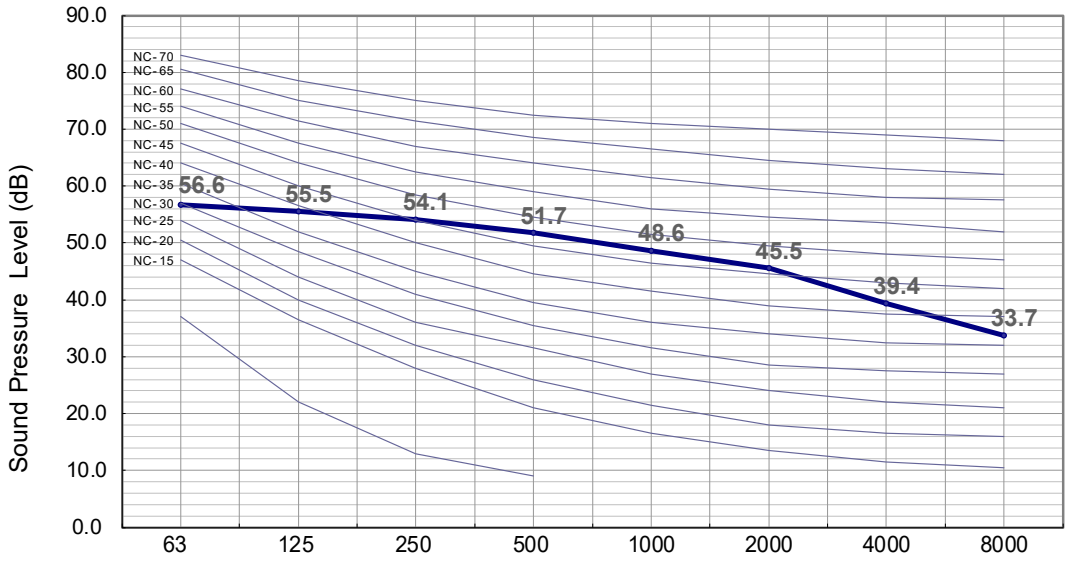
4.1. RAC-XJ18WHAA

COOLING



Octave band main wave length (Hz)

HEATING



Octave band main wave length (Hz)

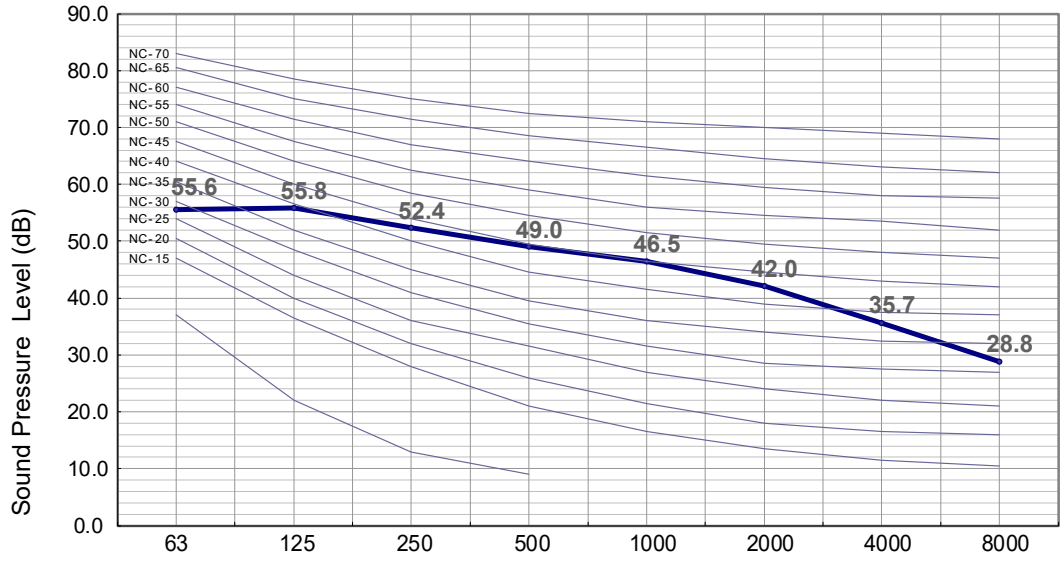
The Sound Pressure Level is based on the following conditions:

- 2.62ft (1 meter) from the beneath indoor heigh center and 3.28ft (1 meter) from discharge grille

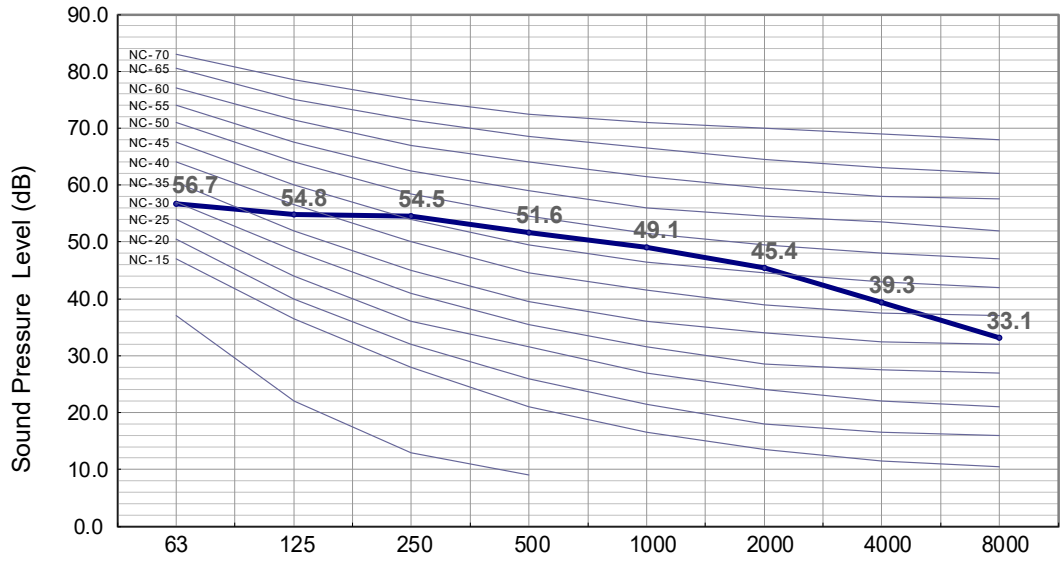
The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site.

4.2. RAC-XJ24WHAA

COOLING



HEATING



The Sound Pressure Level is based on the following conditions:

- 3.28ft (1 meter) from the unit front surface and 3.28ft (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	208V ~ 230V
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

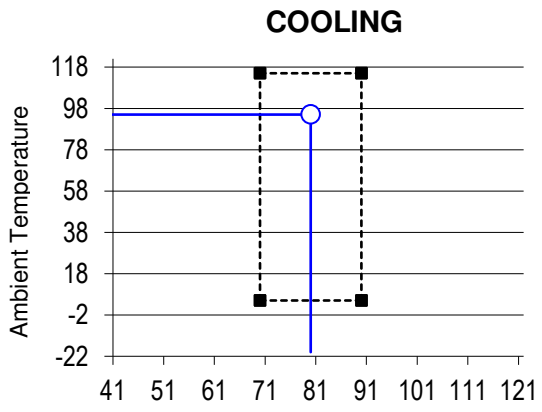
Applicable models:

RAC-XJ09WHAA
RAC-XJ12WHAA
RAC-XJ18WHAA
RAC-XJ24WHAA

The temperature range is indicated in the following table.

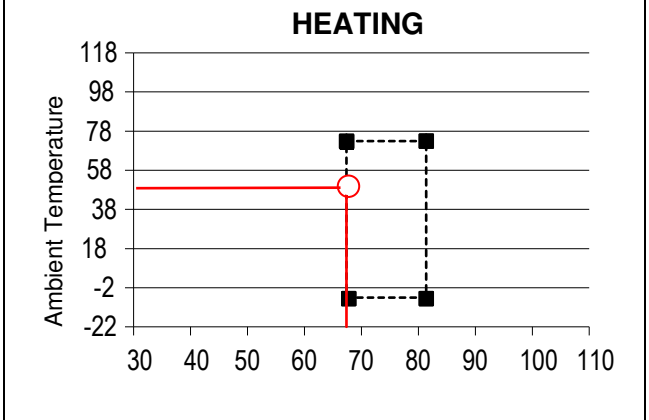
Cooling

working range	min °F(°C)	max °F(°C)	rated °F(°C)
outdoor	-0.4 (-18)	114.8 (46)	95 (35)
indoor	70 (21)	90 (32)	80.6 (27)



Heating

working range	min °F(°C)	max °F(°C)	rated °F(°C)
outdoor	-13 (-25)	75.2 (24)	44.6 (7)
indoor	68 (20)	81 (27)	68 (20)



6. ELECTRICAL DATA

6.1. INDOOR UNIT

Model	Unit Main Power VOL, PH, Hz	Rated input current of power conversion equipment (A)	Indoor Fan Motor	
			RNC (A)	IPT (W)
RAK-XJ09PHAA	208-230, 1, 60	0.80	0.56	38
RAK-XJ12PHAA	208-230, 1, 60	0.80	0.56	38
RAK-XJ18PHAA	208-230, 1, 60	0.80	0.70	38
RAK-XJ24PHAA	208-230, 1, 60	0.80	0.70	38

VOL: Rated Unit Power Supply Voltage (V)
Hz: Frequency (Hz)
IPT: Input (W)
RNC: Running Current (A)
PH: Phase (ϕ)

6.2. OUTDOOR UNIT

Model	Unit Main Power		Electrical Data			
	VOL, PH, Hz	Rated input current of power conversion equipment (A)	Rated Cooling Current (A)	Rated Heating Current (A)	MCA	MOP
RAC-XJ09WHAA	208-230, 1, 60	10.0	2.90	4.10	14	25
RAC-XJ12WHAA	208-230, 1, 60	10.0	4.05	4.88	14	25
RAC-XJ18WHAA	208-230, 1, 60	15.0	6.6	7.7	20	35
RAC-XJ24WHAA	208-230, 1, 60	17.0	9.0	9.6	20	35

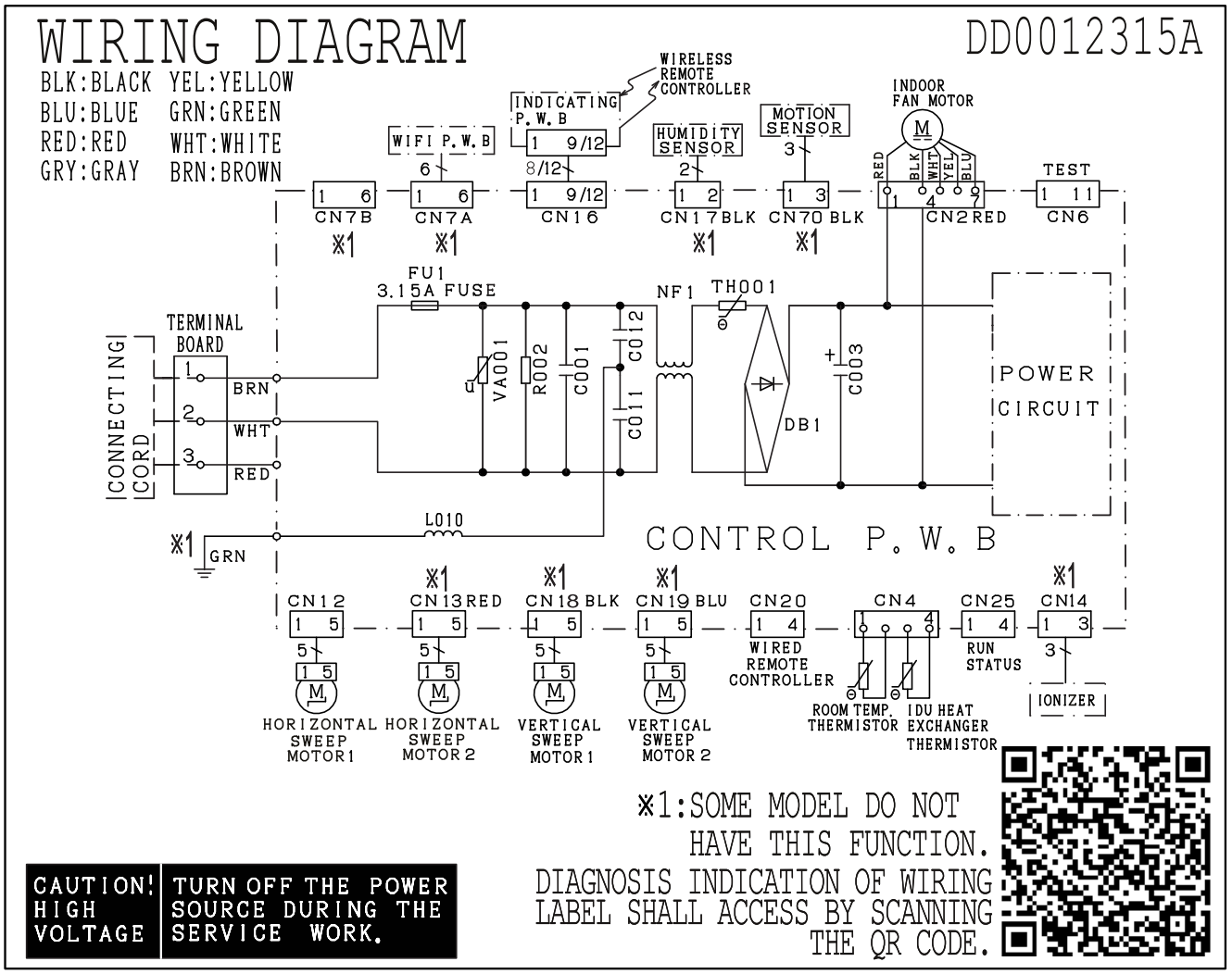
VOL: Rated Unit Power Supply Voltage (V)
HZ: Frequency (Hz)
STC: Starting Current (A)
RNC: Running Current (A)
PH: Phase (ϕ)
IPT: Input (W)

NOTE:

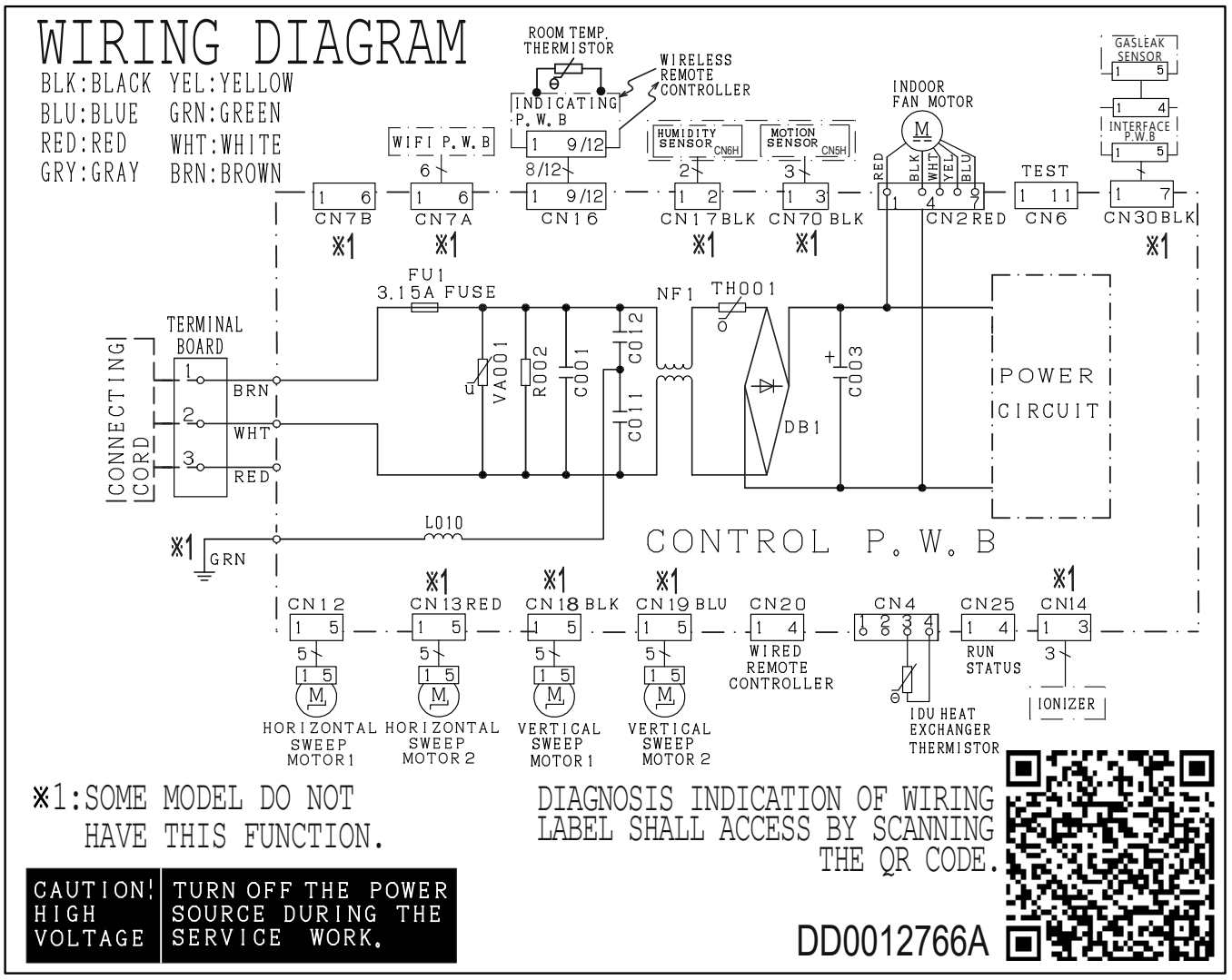
1. The above compressor data is based on 100% capacity combination of indoor units at the rated operating frequency
2. This data is based on the same conditions as the nominal heating and cooling capacities.
3. The compressor started by an inverter, resulting in extremely low starting current.

7. WIRING DIAGRAM

7.1. RAK-XJ09PHAA, RAK-XJ12PHAA

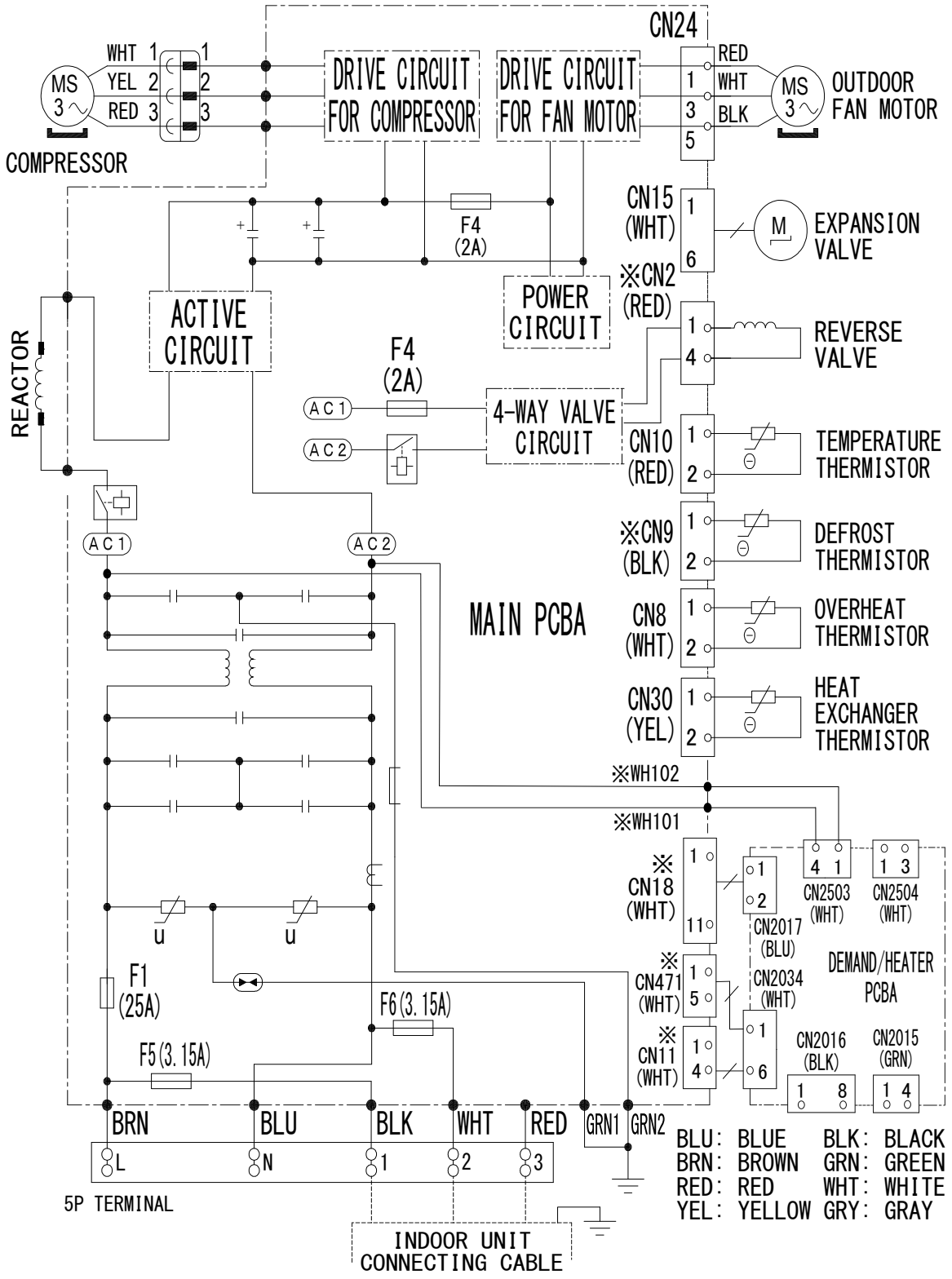


7.2. RAK-XJ18PHAA, RAK-XJ24PHAA



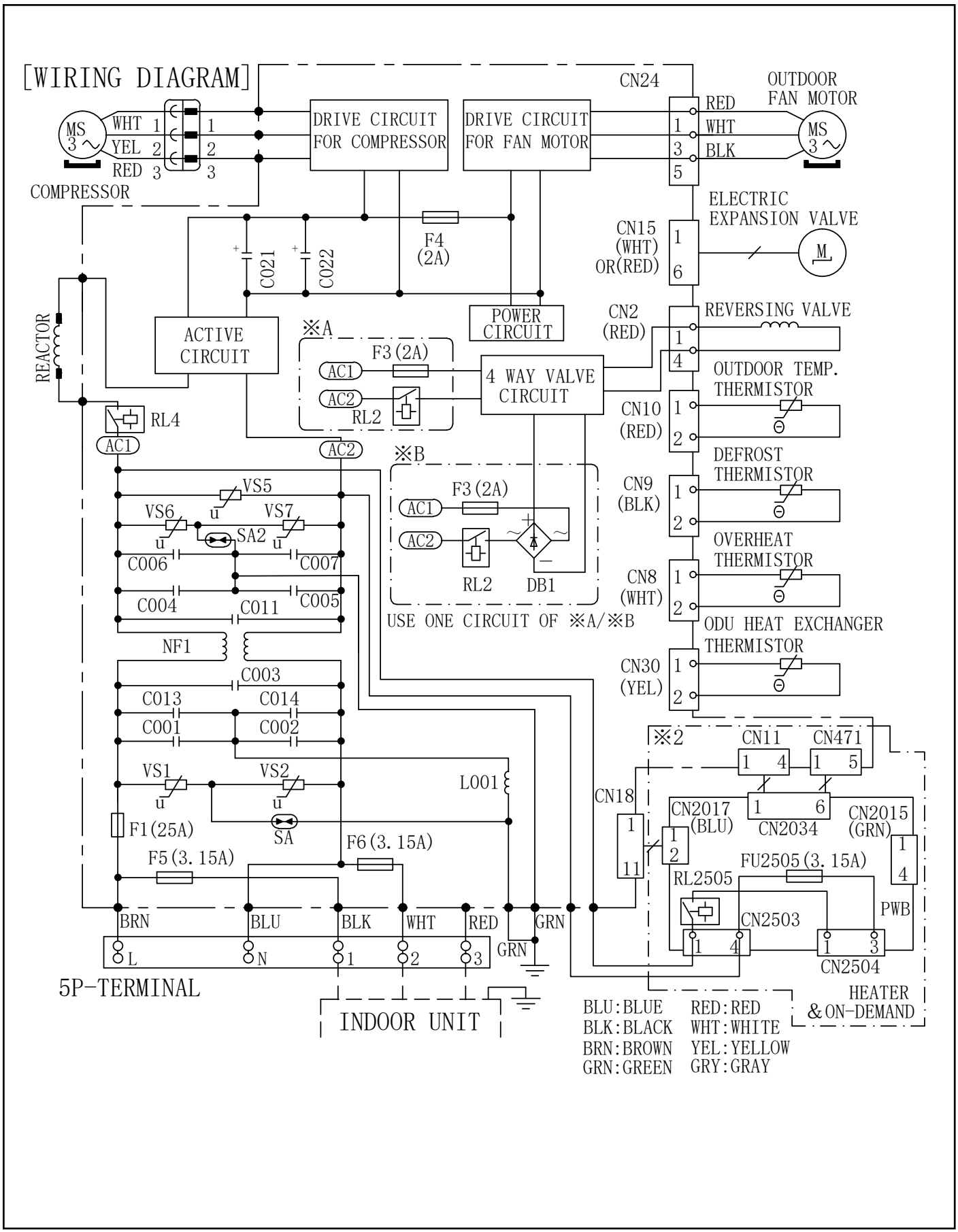
7.3. RAC-XJ09WHAA / RAC-XJ12WHAA

OUTDOOR UNIT



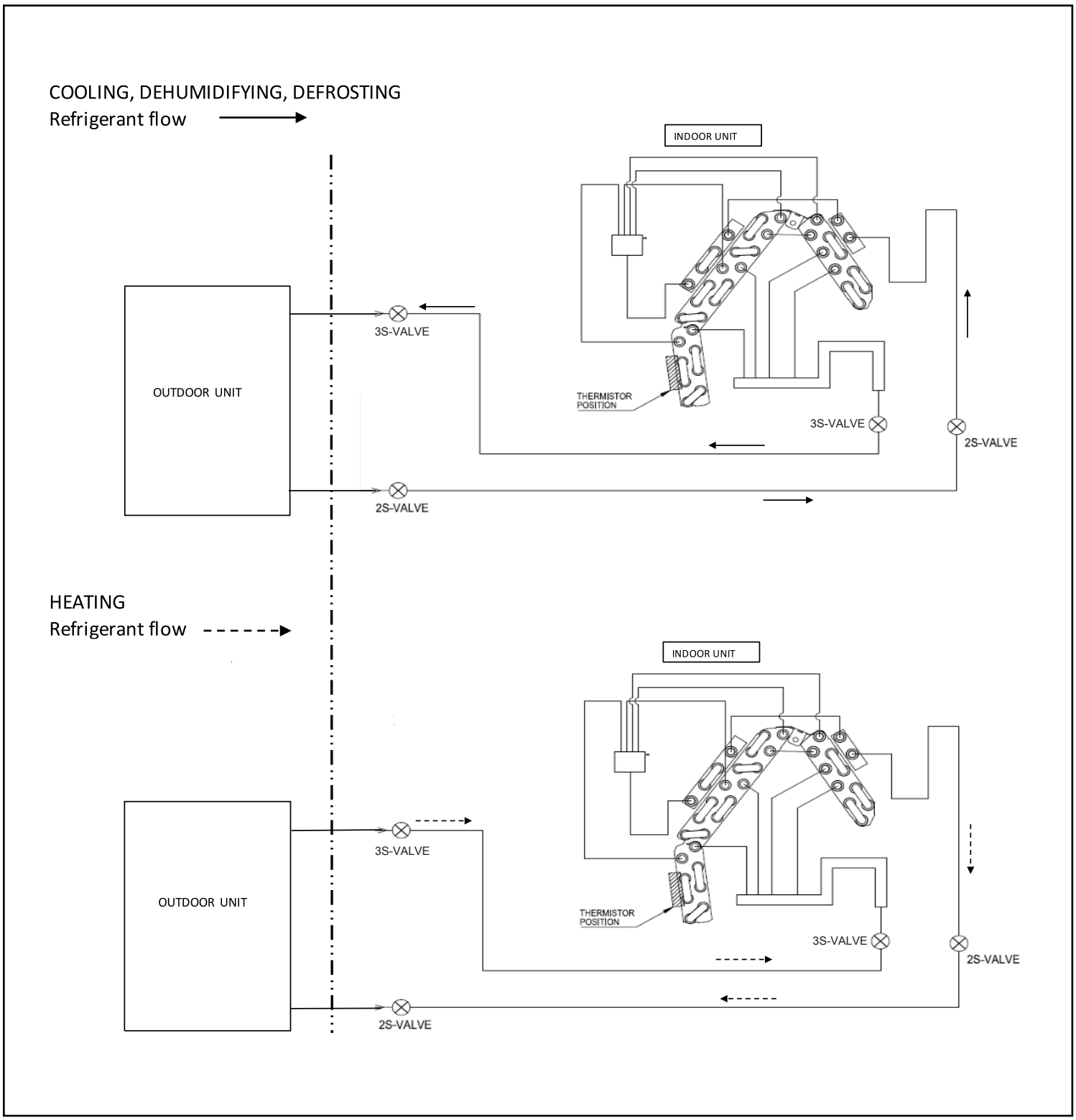
※SOME MODEL DO NOT HAVE THIS FUNCTION.

7.4. RAC-XJ18WHAA / RAC-XJ24WHAA



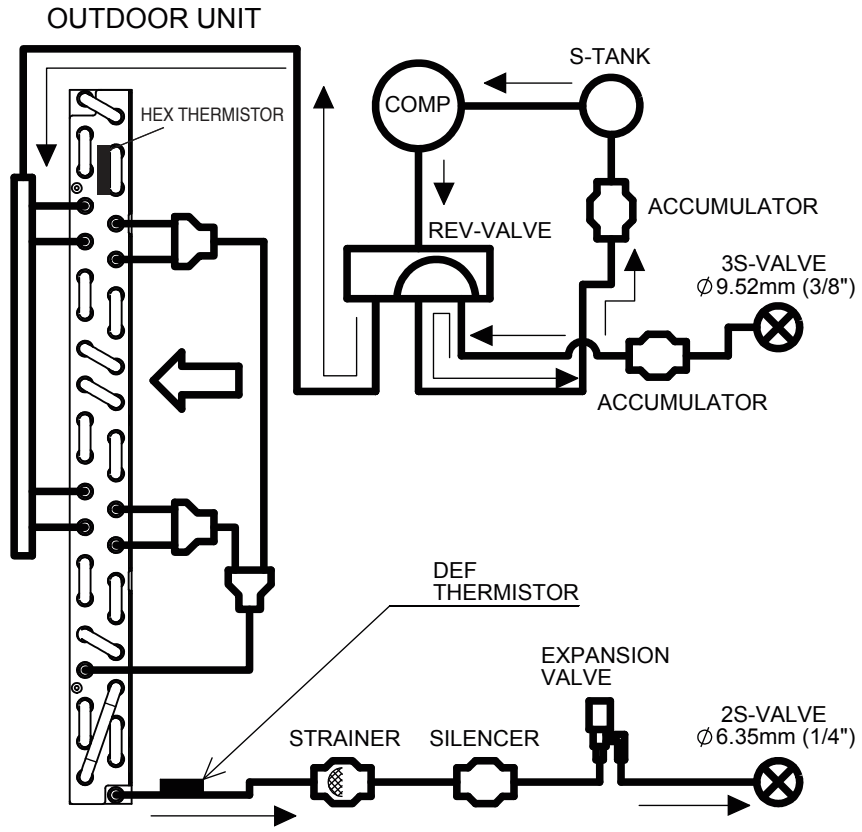
8. REFRIGERANT CYCLE

8.1. RAK-XJ09PHAA, RAK-XJ12PHAA

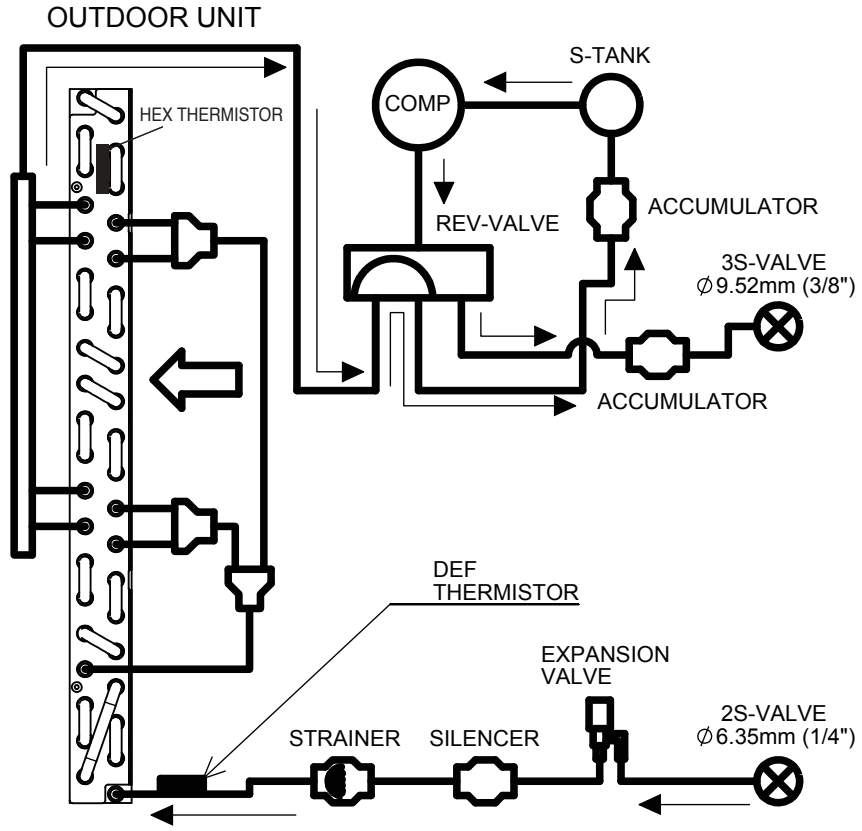


8.2. RAC-XJ09WHAA, RAC-XJ12WHAA

COOLING, DEHUMIDIFYING, DEFROSTING



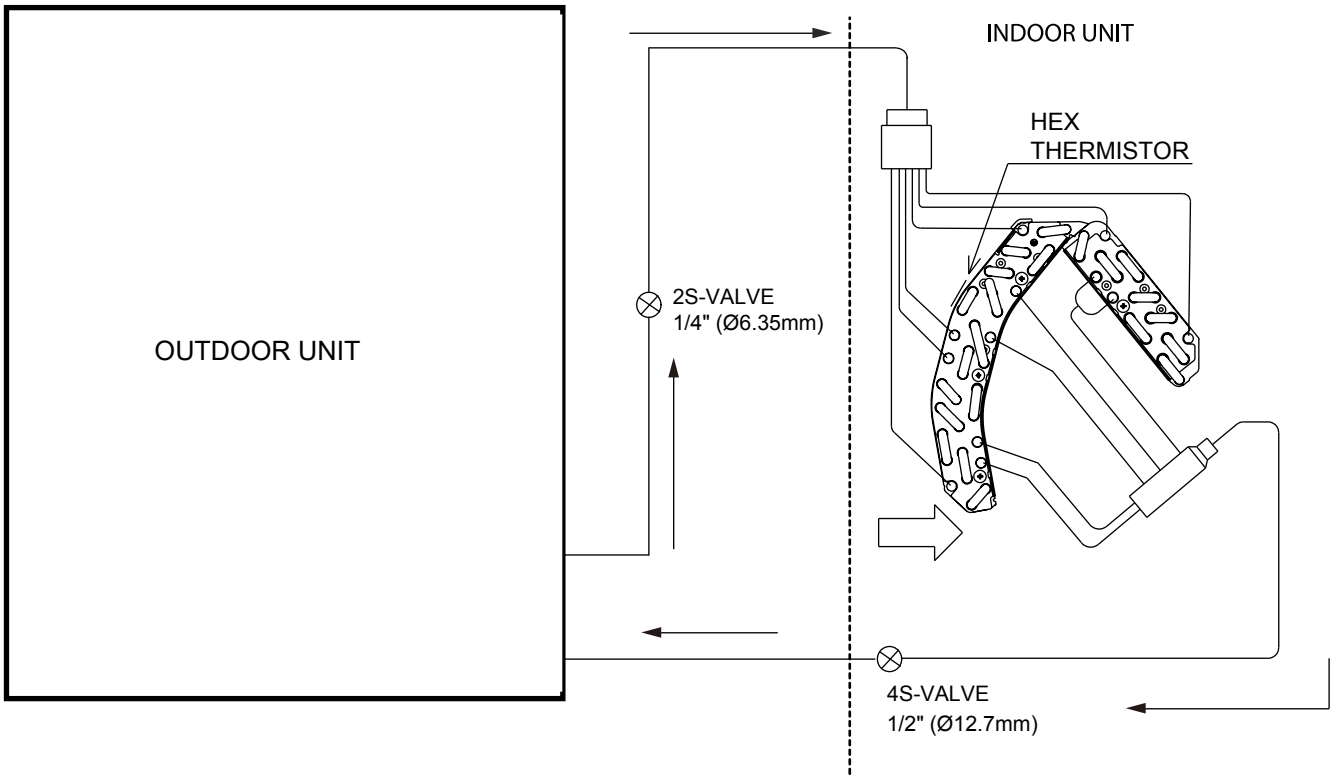
HEATING



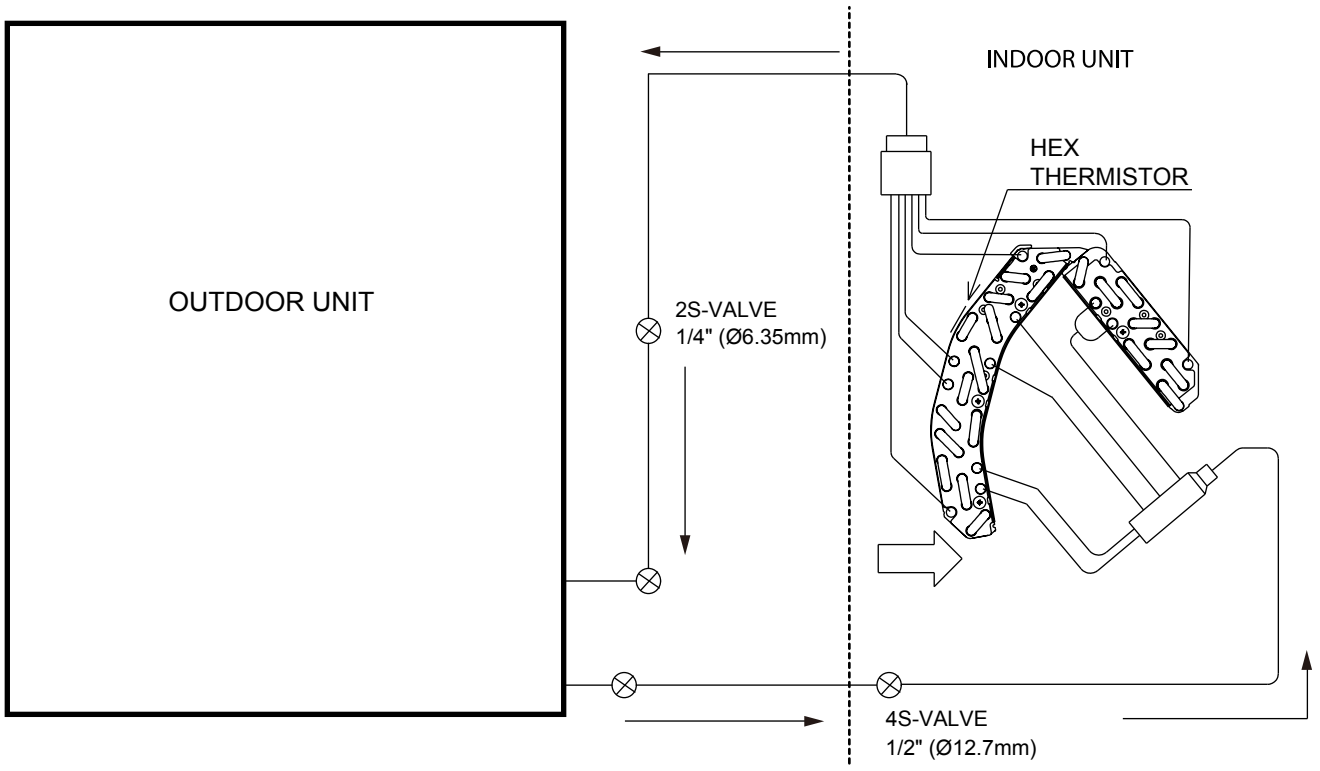
(26)

8.3. RAK-XJ18PHAA

COOLING, DEHUMIDIFYING, DEFROSTING



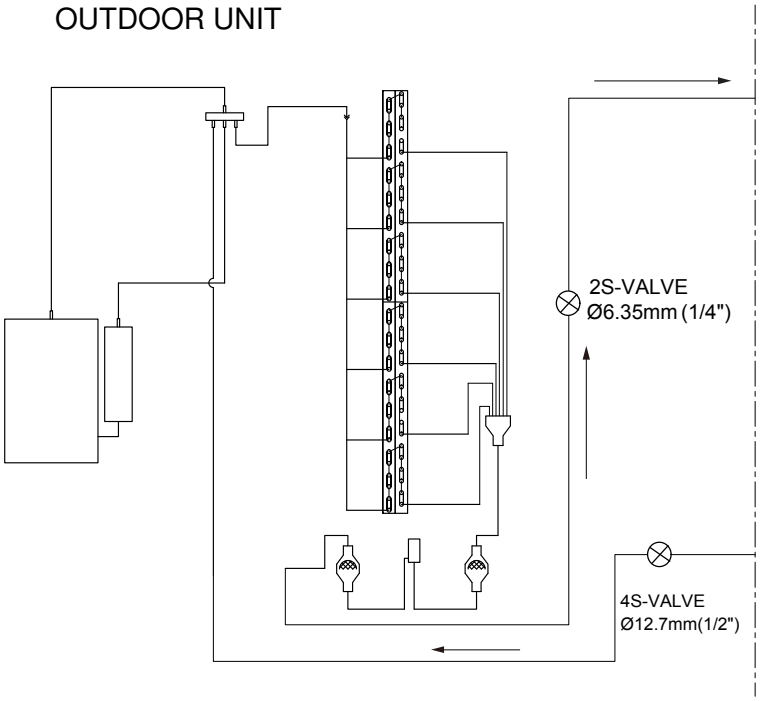
HEATING



8.4. RAC-XJ18WHAA

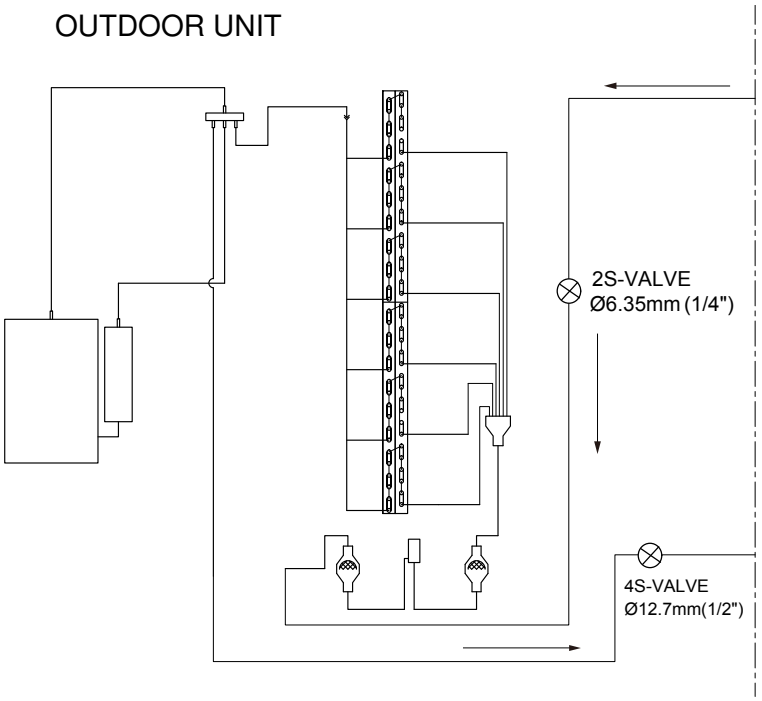
COOLING

OUTDOOR UNIT



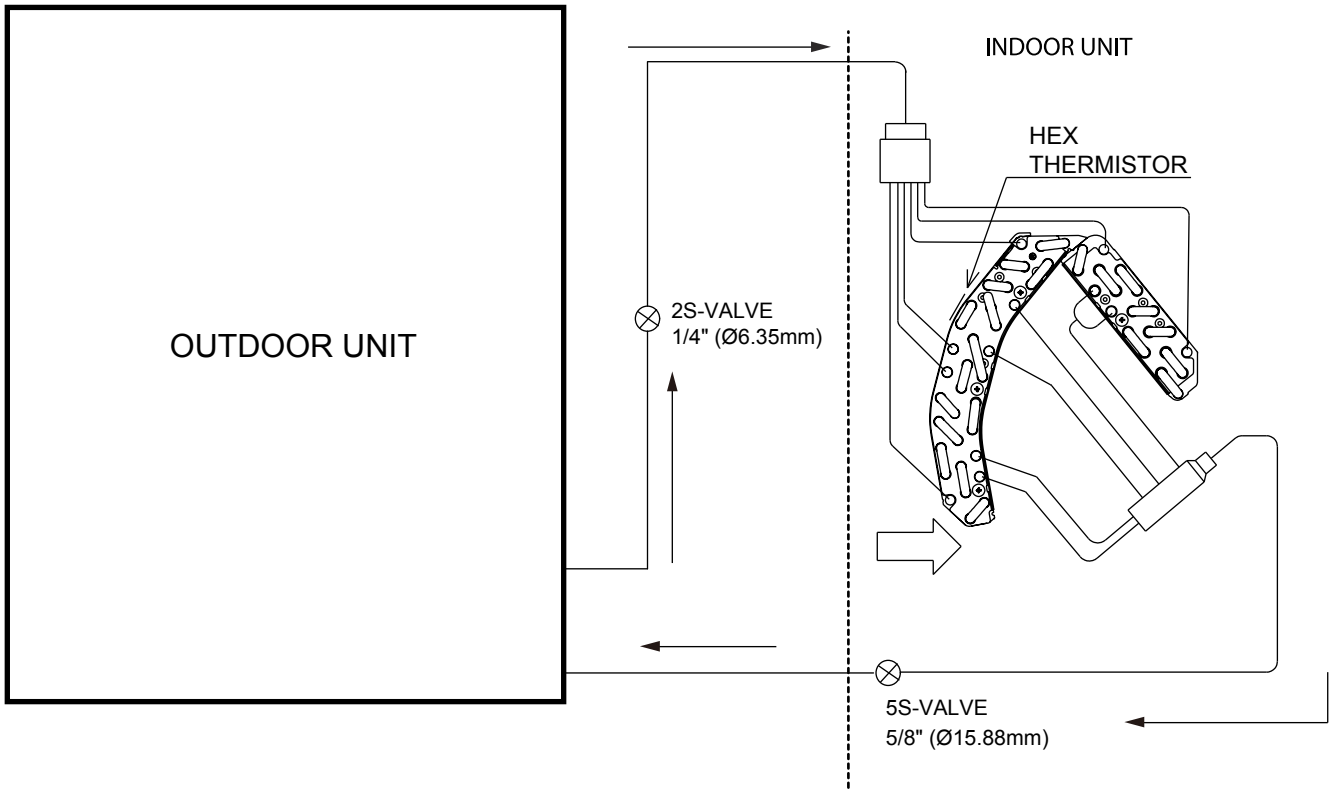
HEATNG

OUTDOOR UNIT

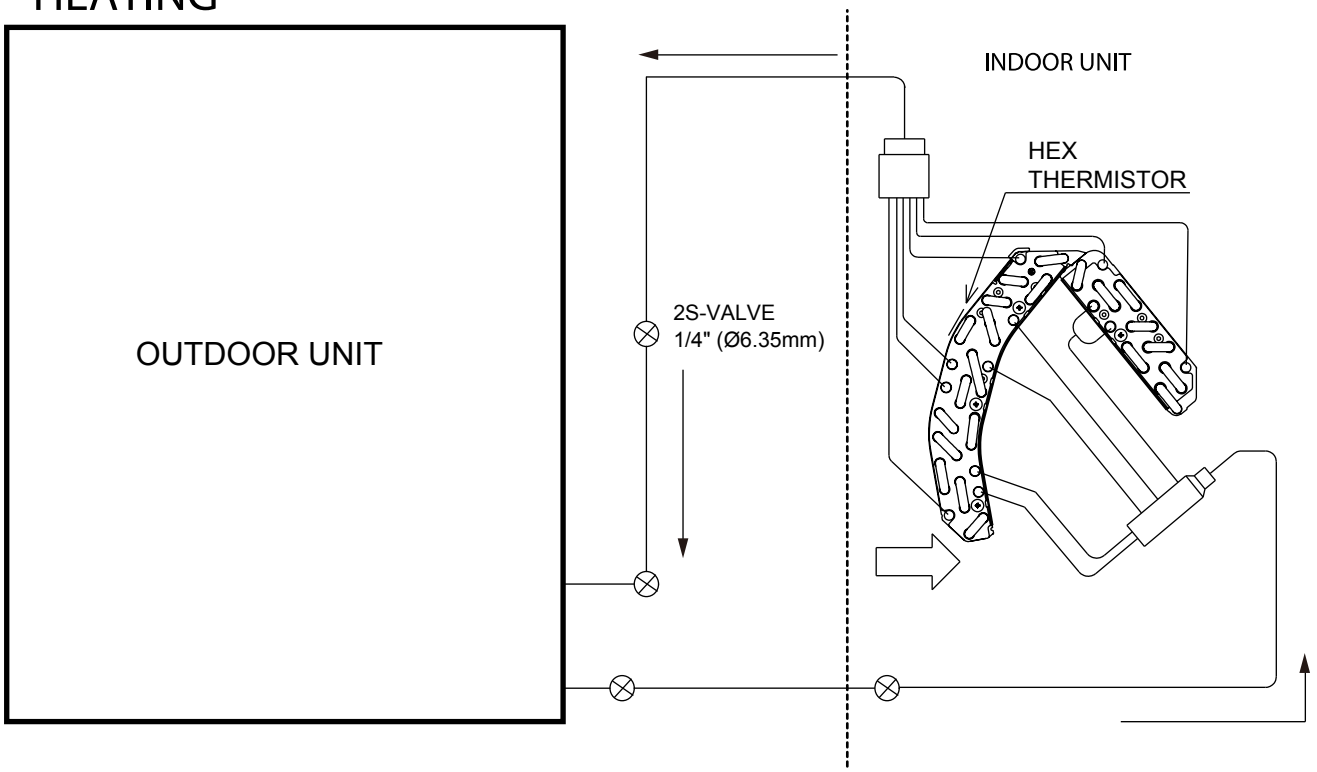


8.5. RAK-XJ24PHAA

COOLING, DEHUMIDIFYING, DEFROSTING



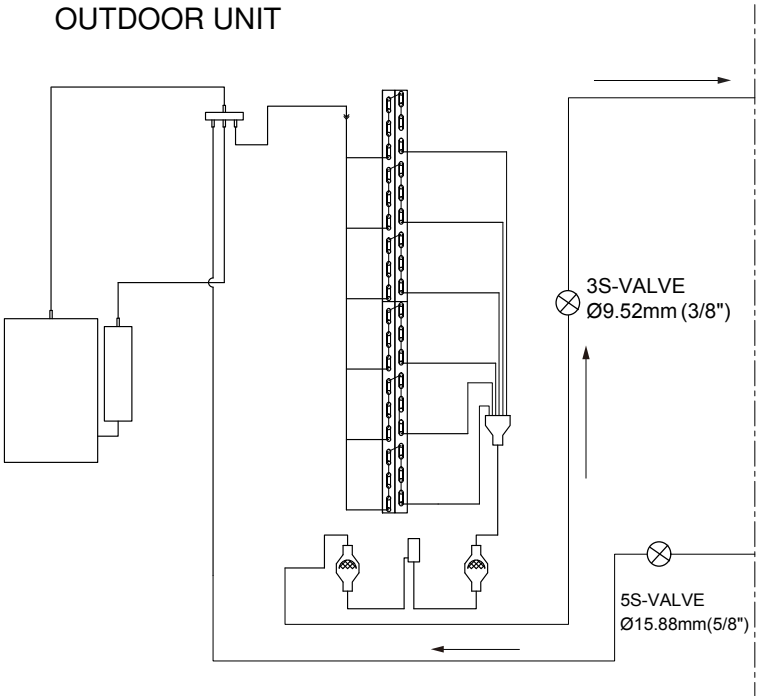
HEATING



8.6. RAC-XJ24WHAA

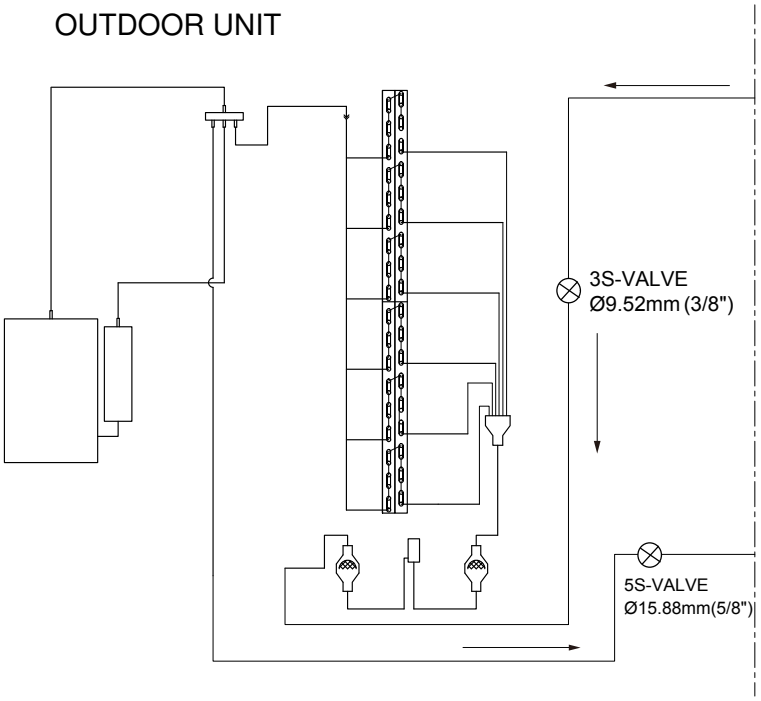
COOLING

OUTDOOR UNIT



HEATING

OUTDOOR UNIT



9. CONTROL AND FUNCTION

9.1. WIRELESS REMOTE CONTROL FUNCTION

RC-BGH1FA0N

BUTTONS	FUNCTION
Mode	**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.
SleepSense	**SleepSense Button** Control set temperature and fan speed.
Smart Eco	**Smart Eco Button** Use this button to set the Eco mode.
	On/Off Button Press this button to start operation. Press it again to stop operation.
	Temperature Button Room temperature setting.Valuewillchangequickerwhen keep pressing.
Fan Speed	**Fan Speed Button** Select the fan speed.
Powerful	**Powerful Button** The air conditioner performs at maximum power.
Silent	**Silent Button** The fan speed changes to the silent fan speed
FrostWash	**FrostWash Button** The dust and dirt adhering to indoor heat exchanger which is the cause of the smell.
Up/Down	**Up/Down Button** Control the angle of the horizontalair deflector.
Info	**Info Button**
Left/Right	**Left/Right Button** Control the angle of the Vertical air deflector.
Filter	**Filter Sign Reset Button**
My Mode	**My Mode Button** Use this mode for personalized comfor table settings. The My Mode can be set by using the remote controller. Up to 3 programs can be set.
Wide Reach	**Wide Reach Button** Control the angle of the Vertical air deflector.
LeaveHome	**LeaveHome Button** Prevent the room temperature from falling too much by setting temperature 10°C~16°C when no one is at home.

RC-BGH1FA0N

WEEKLY TIMER Buttons	FUNCTION
On Timer	**On Timer Button** Select the turn ON time.
Off Timer	**Off Timer Button** Select the turn OFF time.
Time	**Time Button** Press the button to set starting time of the program.
OK	**OK Button** Press the button to save the program. The button shall be pressed everytime after finishing a program setting.
Delete	**DELETE Button** 1) Press the button to delete the selected program. 2) Press the button for about 10 seconds by directing the remote controller towards the indoor unit while Mode A or B display blinks, programs for Mode A or B will be deleted both from the indoor unit and the remote controllerafter the beep sound from the indoor unit.The program setting remains in the remote controller.
Mon-Sun	**DAY Button** Select the desired day of the week.
1-6	**PROGRAM NO. Button** Press this button to select a program number.
Cancel	**CANCEL Button** 1) Press the button to cancel the current setting process on the screen. 2) Press the button by directing the remote controller towards the indoor unit, then weekly timer setting will be canceled from indoor unit after the beep sound from the indoor unit. The program setting remains in the remote controller.
Send	**SEND Button** Press the button for about 3 seconds by directing the remote controller towards the indoor unit after finishing the program setting. Timer lamp on the indoor unit will blink rapidly and after the beep sound from indoor unit, TIMER lamp will light up.
Clock	**CLOCK Button** Press the button to set calendar and clock.
A/B	**WEEKLY TIMER MODE Button** 1) Select Mode A or Mode B. 2 modes can be set and stored as a weekly timer. 2) By pressing thebutton longer than 3 seconds, program setting screen will appear.

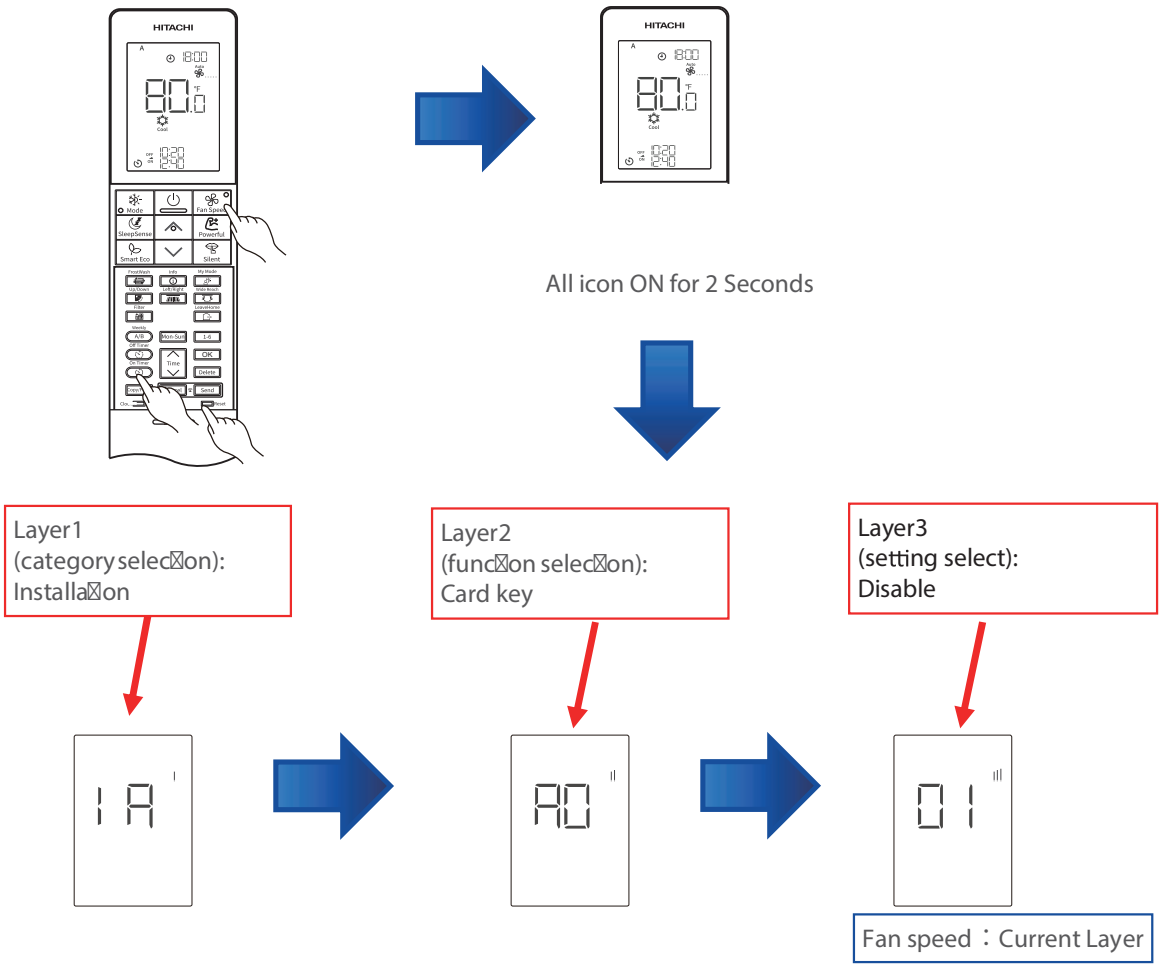
For more information, please refer to the operation manual.

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.

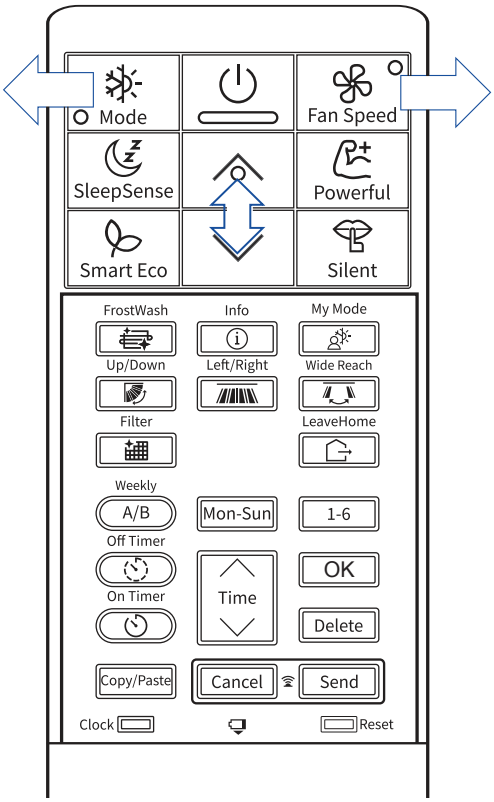
「On⊠mer」 + 「Fan speed」 + 「Reset」

(Press three Key for 5 seconds to avoid access by User)

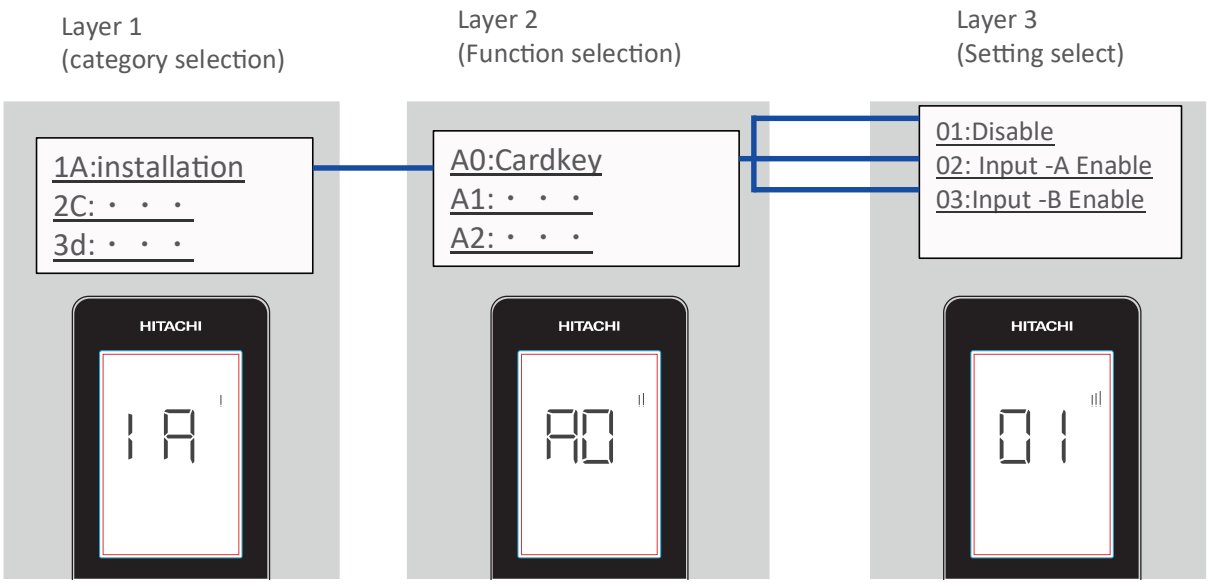


⊠ If you don't do anything for 30 seconds, you will be out of the service setting mode.

9.3. HOW TO OPERATE THE HHRC METHOD

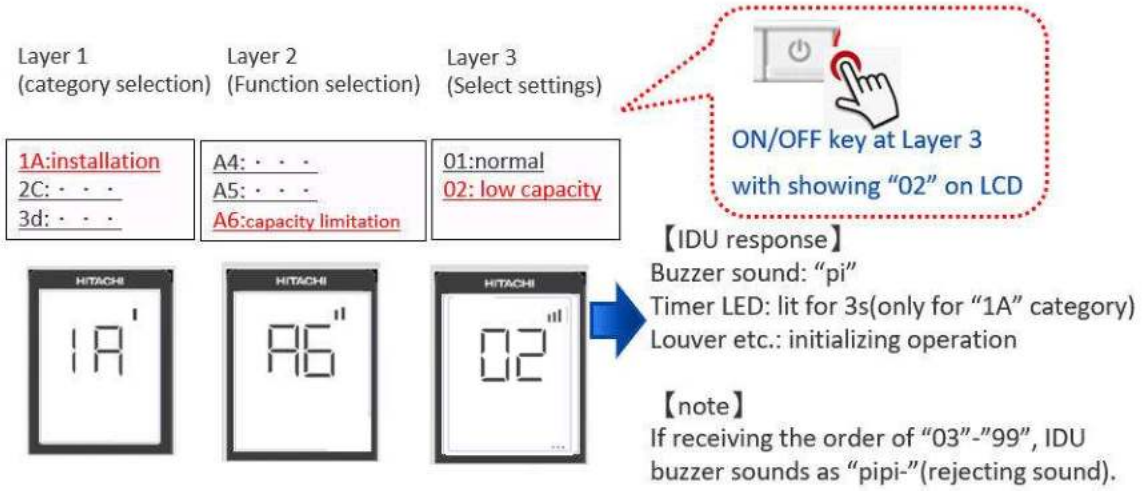


Temp△▽ : Selection (in the same layer)
Mode : move to previous layer
Fan Speed : Move to next layer
ON/OFF : Decision/Send (at layer 3)
: Current setting check(at layer 2)
Filter: category initialization(at layer 1)
Filter + ON/OFF: all category initialization(at layer 1)
※ To exit from this setting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



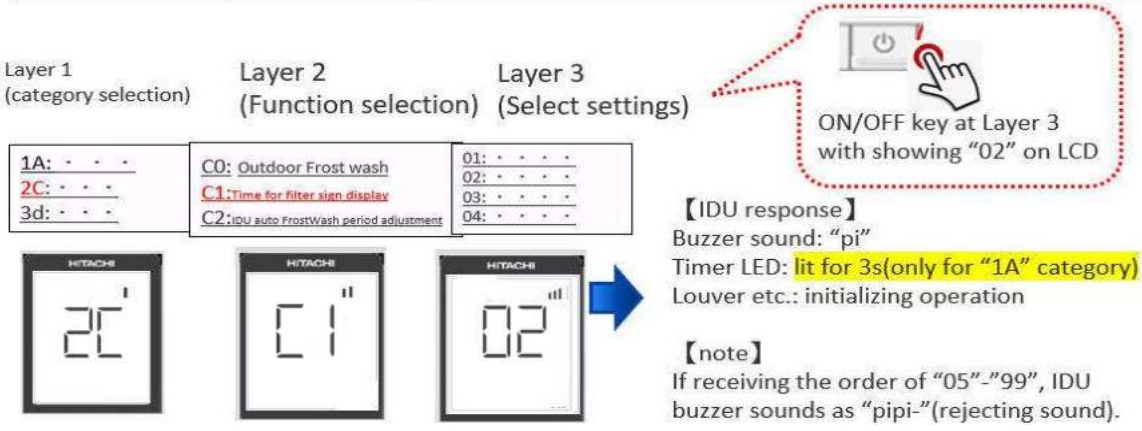
The Capacity Limits can be changed by the remote controller.
(For models:RAK-XJ18QHAE)
(This procedure shall be implemented strictly by service personnel only.)
It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display Layer1 Category	Layer2 Function	Layer3 Value
Installation	Capacity limitation	normal	1A	A6	01
		low capacity			02
		reserve			03-99



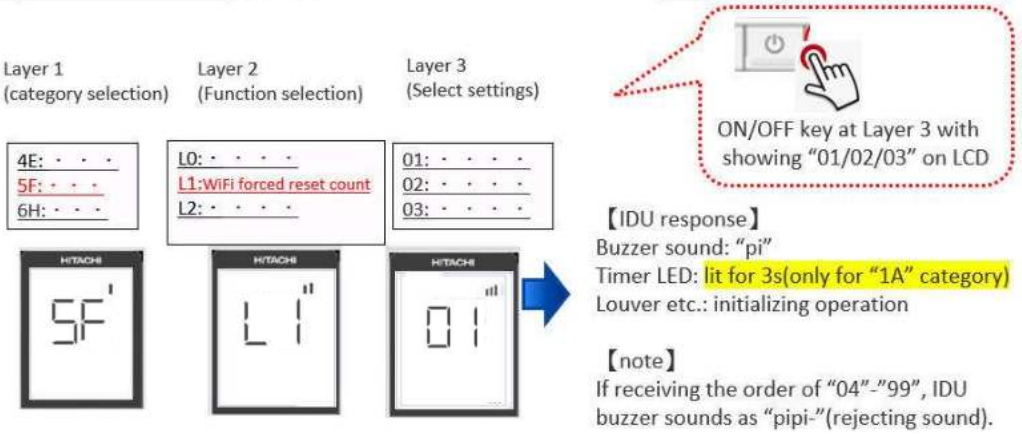
The Adjust filter sign Time can be changed by the remote controller.
(This procedure shall be implemented strictly by service personnel only.)
It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display Layer1 Category	Layer2 Function	Layer3 Value
Clean	Time for filter sign display	filter lamp lighting time:Adjustment -1(100h)	2C	C1	01
		filter lamp lighting time:Adjustment ±0(200h)			02
		filter lamp lighting time:Adjustment ±1(300h)			03
		filter lamp lighting time:Adjustment ±2(400h)			04
		reserve			05-99



The Global Wi-Fi forced resetting count can be changed by the remote controller.
(This procedure shall be implemented strictly by service personnel only.)
It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display Layer1 Category	Layer2 Function	Layer3 Value
Supporting service	WiFi forced reset count	4 (Number of forced resets)	5F	L1	01
		8 (Number of forced resets)			02
		12(Number of forced resets)			03
		reserve			04-99

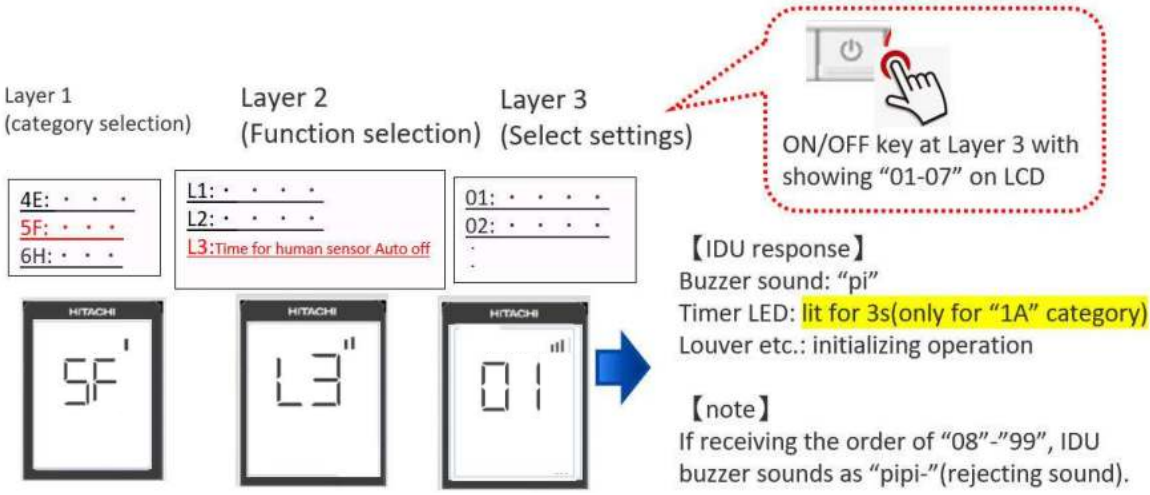


【IDU response】
Buzzer sound: "pi"
Timer LED: lit for 3s(only for "1A" category)
Louver etc.: initializing operation

【note】
If receiving the order of "04"-"99", IDU buzzer sounds as "pipi-"(rejecting sound).

The AUTO OFF time can be changed by the remote controller.
(This procedure shall be implemented strictly by service personnel only.)
It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display Layer1 Category	Layer2 Function	Layer3 Value
Supporting service	Time for human sensor Auto off	Auto-off monitoring time:Adjustment -3 (20min)	5F	L3	01
		Auto-off monitoring time:Adjustment -2 (30min)			02
		Auto-off monitoring time:Adjustment -1 (40min)			03
		Auto-off monitoring time:Adjustment ±0 (50min)			04
		Auto-off monitoring time:Adjustment +1 (60min)			05
		Auto-off monitoring time:Adjustment +2 (90min)			06
		Auto-off monitoring time:Adjustment +3 (120min)			07
		reserve			08-99

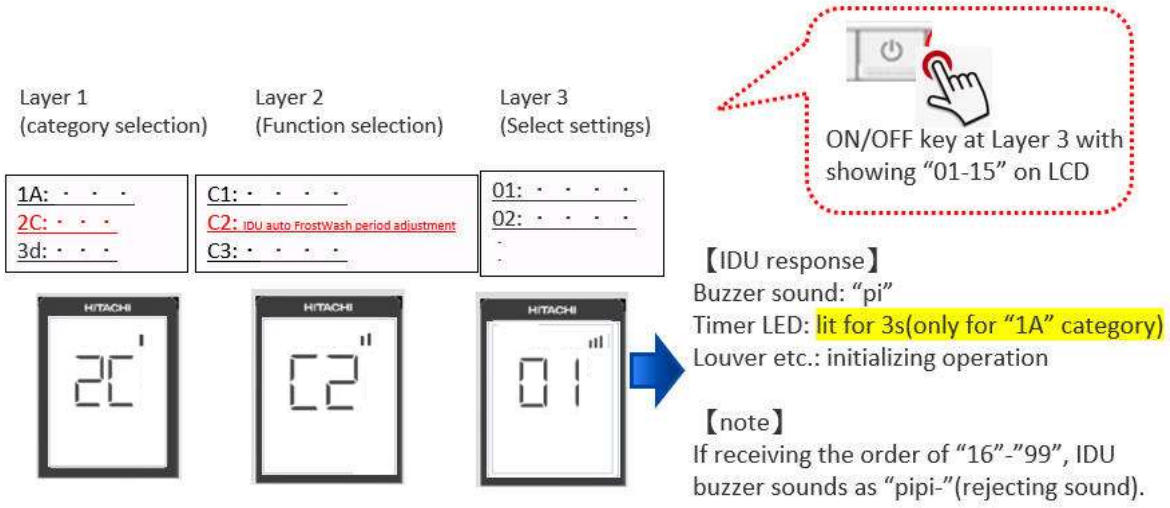


【IDU response】
Buzzer sound: "pi"
Timer LED: lit for 3s(only for "1A" category)
Louver etc.: initializing operation

【note】
If receiving the order of "08"-"99", IDU buzzer sounds as "pipi-"(rejecting sound).

The IDU Frost Wash(Auto) time-adjusting can be changed by the remote controller.
(This procedure shall be implemented strictly by service personnel only.)
It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display Layer1 Category	Layer2 Function	Layer3 Value
Clean	IDU Frost Wash(Auto) time-adjusting	Cleaning time setting (normal case) :Adjustment_No1 (2h)	2C	C2	01
		Cleaning time setting (normal case) :Adjustment_No2 (6h)			02
		Cleaning time setting (normal case) :Adjustment_No3 (10h)			03
		Cleaning time setting (normal case) :Adjustment_No4 (20h)			04
		Cleaning time setting (normal case) :Adjustment_No5 (42h)			05
		Cleaning time setting (normal case) :Adjustment_No6 (60h)			06
		Cleaning time setting (normal case) :Adjustment_No7 (84h)			07
		Cleaning time setting (normal case) :Adjustment_No8 (90h)			08
		Cleaning time setting (normal case) :Adjustment_No9 (100h)			09
		Cleaning time setting (normal case) :Adjustment_No10 (120h)			10
		Cleaning time setting (normal case) :Adjustment_No11 (140h)			11
		Cleaning time setting (normal case) :Adjustment_No12 (160h)			12
		Cleaning time setting (normal case) :Adjustment_No13 (180h)			13
		Cleaning time setting (normal case) :Adjustment_No14 (200h)			14
		Cleaning time setting (normal case) :Adjustment_No15 (250h)			15
		reserve			16-99



9.4. SERVICE SETTING ITEM USED FOR (NA WIRELESS REMOTE MODEL : RC-BGH1FA0N)

Category	Function	Display on LCD Temperature 7 segment Layer Wise			
		1	2	3	Value setting meaning at Layer-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
	Capacity limitation	1A	A6	01	Normal
				02	low capacity
				03-99	(reserve)
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

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)
				30	(Lower set temp. start from 30 °C)
				31	(Lower set temp. start from 31 °C)
				32	(Lower set temp. start from 32 °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)
				18	(Upper set temp. start from 18 °C)
				17	(Upper set temp. start from 17 °C)
				16	(Upper set temp. start from 16 °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)
				06-99	Reserved
	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
	Human Sensor failure diagnosis	7J	t4	01	1: failure diagnosis request
				02-99	Reserved

Clean	Time for filter sign display	2C	C1	01	filter lamp lighting time:Adjustment -1 (100hours)
				02	filter lamp lighting time:Adjustment ±0 (200hours)
				03	filter lamp lighting time:Adjustment +1 (300hours)
				04	filter lamp lighting time:Adjustment +2 (400hours)
				05-99	Reserved
	IDU auto FrostWash period adjustment	2C	C2	01	Cleaning time setting(normal case):Adjustment_NO 1 (2hours)
				02	Cleaning time setting(normal case):Adjustment_NO 2 (6hours)
				03	Cleaning time setting(normal case):Adjustment_NO 3 (10hours)
				04	Cleaning time setting(normal case):Adjustment_NO 4 (20hours)
				05	Cleaning time setting(normal case):Adjustment_NO 5 (42hours)
				06	Cleaning time setting(normal case):Adjustment_NO 6 (60hours)
				07	Cleaning time setting(normal case):Adjustment_NO 7 (84hours)
				08	Cleaning time setting(normal case):Adjustment_NO 8 (90hours)
				09	Cleaning time setting(normal case):Adjustment_NO 9 (100hours)
				10	Cleaning time setting(normal case):Adjustment_NO 10 (120hours)
				11	Cleaning time setting(normal case):Adjustment_NO 11 (140hours)
				12	Cleaning time setting(normal case):Adjustment_NO 12 (160hours)
				13	Cleaning time setting(normal case):Adjustment_NO 13 (180hours)
				14	Cleaning time setting(normal case):Adjustment_NO 14 (200hours)
				15	Cleaning time setting(normal case):Adjustment_NO 15 (250hours)
				16~19	(Reserve)
Supporting service category	Time for human sensor Auto off	5F	L3	01	Auto-off monitoring time: Adjustment- 3 (20min)
				02	Auto-off monitoring time: Adjustment- 2 (30min)
				03	Auto-off monitoring time: Adjustment- 1 (40min)
				04	Auto-off monitoring time: Adjustment± 0 (50min)
				05	Auto-off monitoring time: Adjustment+ 1 (60min)
				06	Auto-off monitoring time: Adjustment+ 2 (90min)
				07	Auto-off monitoring time: Adjustment+ 3 (120min)
				08~99	(Reserve)

9.5 . BUZZER SOUNDING FOR SHOWING ERROE CONTENTS

【Purpose】

Reduction of “mis-communication about error contents" at contacting the service call center.

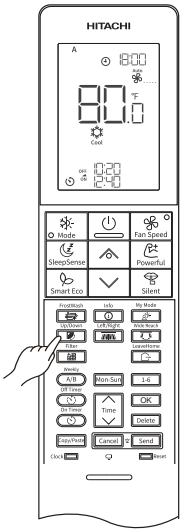
【Function】

Add buzzer sounding for showing error contents during error, in addition to IDU LED action .

【How to use】

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

「Up/Down」
(Press this Key for 5 seconds)



In case of IDU failure

LED action

Timer lamp is blinking

Buzzer action

【note】
・for stopping buzzer, stop by On/Off button, or press Up/Down button for 5 seconds.

In case of ODU failure

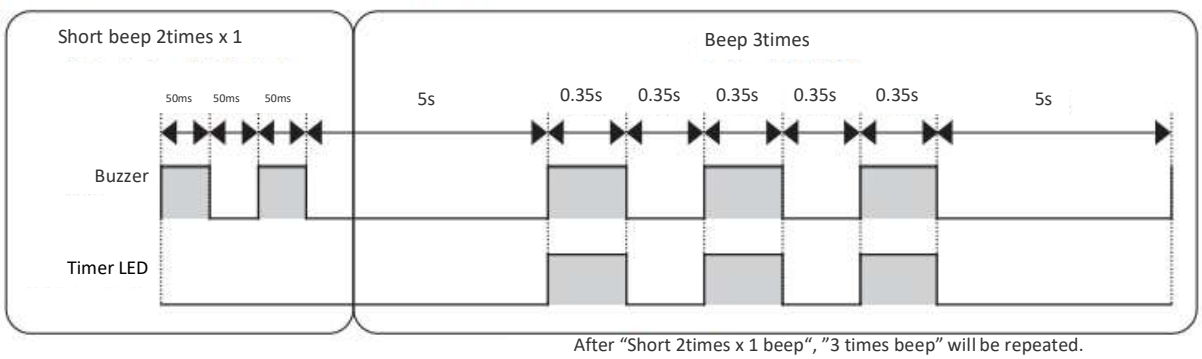
LED action

Operation lamp is blinking

Buzzer action

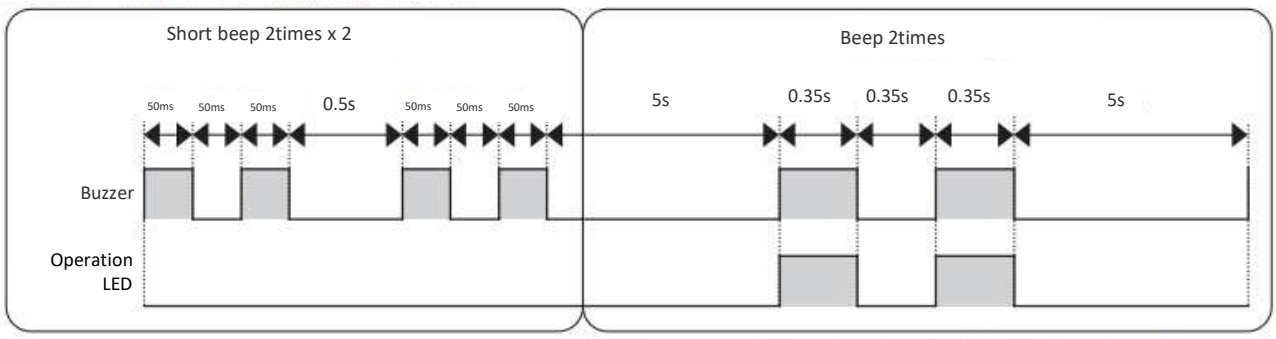
Sounding by same rhythm with LED

<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) >



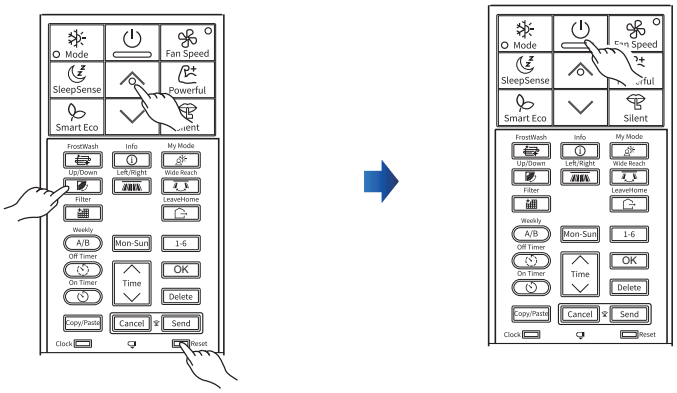
After “Short 2times x 2 beep“, ”2 times beep” will be repeated.

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.)

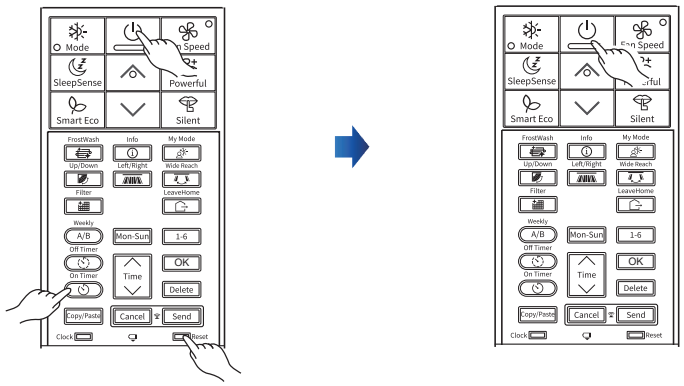


 DISPLAY MODE

For operating indoor unit independently (without outdoor unit connection), remote controller has to be set according to below procedures before send the signal to the indoor unit. New communication format between indoor and outdoor is required to communicate with outdoor unit.

1. Press and holding “On Times button” and “On/Off button”, press “reset button” on the same time.
2. Release “reset button” only and make sure thar the FAN speed icon on LCD display.
3. Press”On/Off button” toward IDU.

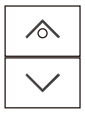
   Then, the indoor unit will starts to operate independently according the selected operation mode.



9.7. ERROR CODE INFORMATION

9.7.1. HOW TO DISPLAY ERROR CODE

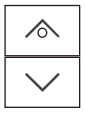
1.Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

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.

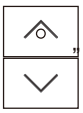
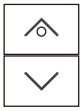
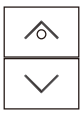
Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
Display self-diagnosis memory(※)	Display History 1 (Latest(newest) of last Five)	7J	t0	01
	Display History 2			02
	Display History 3			03
	Display History 4			04
	Display History 5			05

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	-	010 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

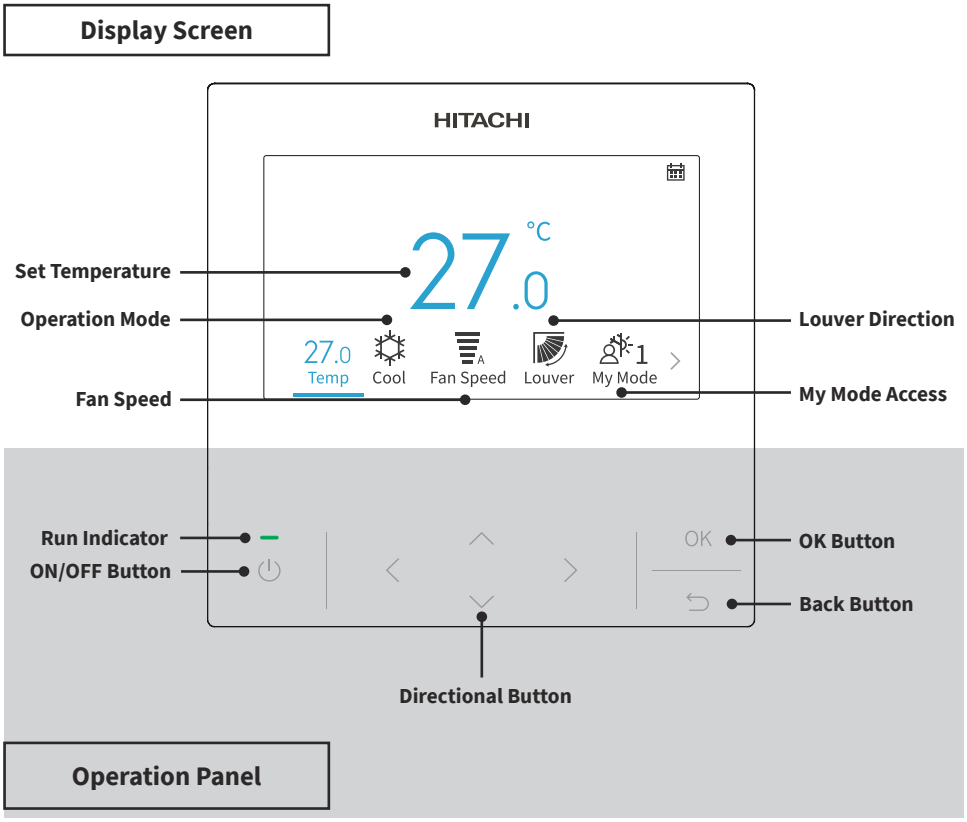
1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.
2. Press “  ” (Temperature) button of the remote control and select the “7J” option.
3. Press “  ” (Fan Speed) button of the remote control, then Press “  ” (Temperature) button 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

WIRED REMOTE CONTROL FUNCTION SPX-URFG1

10.1. Setting Names and Functions

The figure below shows all the functions for reference. The actual display during operation is different.



NOTES:

- If the screen is off or the backlight is dim, press any button to re-energise the screen.
- Make sure to press the buttons lightly with your fingertips.
- Do NOT press the buttons with any sharp objects as it may damage the button.

10.1.1 Operation Method

Basic Procedures

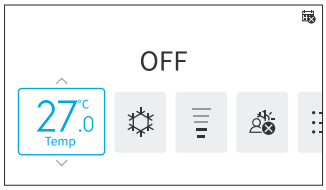
1. Initialisation screen

   When power is supplied to the system, the screen below is displayed when the wired remote controller is establishing communication with the indoor unit.

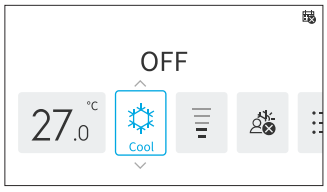
2. Air Conditioner OFF

   When air conditioner is off, press "<" or ">" to switch between the settings below: "Temperature" ↔ "Mode" ↔ "Fan Speed" ↔ "My mode" ↔ "Menu".(The louver/Swing icon is not displayed when the system is turned off.)

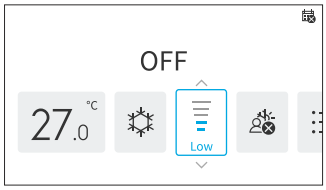
Temperature



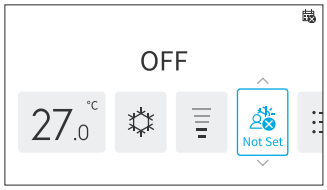
Mode



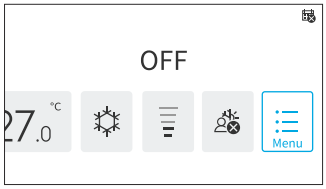
Fan Speed



My mode



Menu

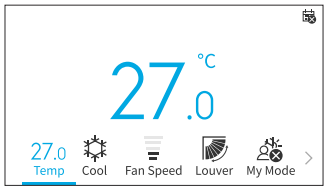


3. Air Conditioner ON

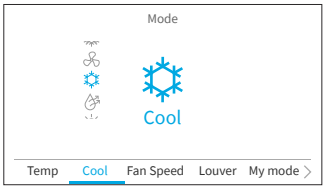
When air conditioner is on, press "<", or ">" to switch between the settings below:
"Temperature" ↔ "Mode" ↔ "Fan Speed" ↔ "Louver"/"Swing"* ↔ "My mode" ↔ "Menu".

*: The display of "Louver" or "Swing" depends on the indoor unit models.

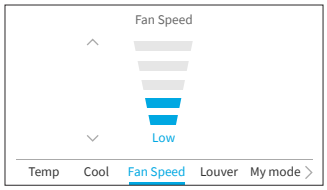
Temperature



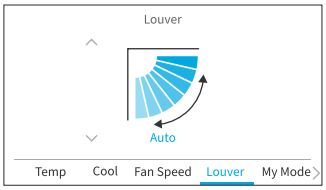
Mode



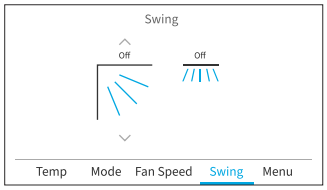
Fan Speed



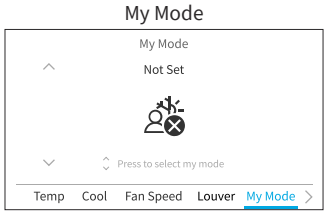
Louver



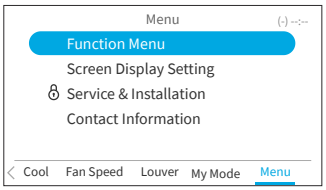
Swing



My Mode



Menu

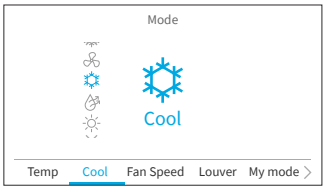


Operation Mode

Heat mode is only available when the system is capable of both cooling and heating. The Heat icon is not displayed on cooling only systems.

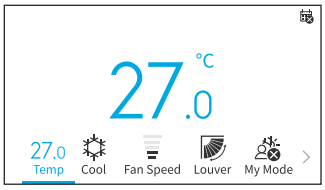
1. Operation mode setting

Step1. Press "<" or ">" to select "Mode".

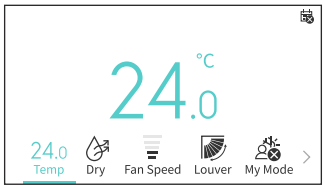


Step2. Set the operation mode with "∧" or "∨". The operation mode is switched in the following order:
"Cool" ↔ "Dry" ↔ "Heat" ↔ "Auto" ↔ "Fan"

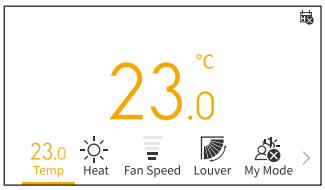
Cool Mode



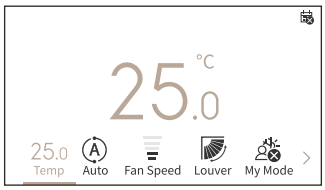
Dry Mode



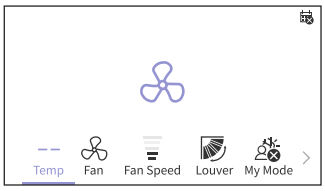
Heat Mode



Auto Mode



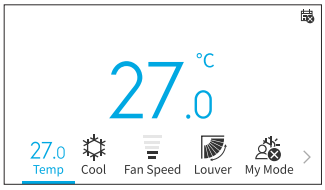
Fan Mode



Temperature Setting

1. Temperature setting

Step1. Press "<" or ">" to select "Temp".



Step2. By pressing "∧", the temperature is increased in increments of 0.5°C(1°F) to a maximum of 32°C(90°F) .
By pressing "∨", the temperature is decreased in decrements of 0.5°C(1°F) to a minimum of 16°C(60°F).
In Leave Home mode, the setting temperature range is 10°C(50°F) to 16°C(60°F).

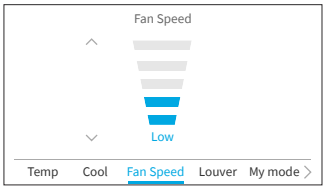
NOTES:

- Depending on the type and setting of the indoor unit, it may not be possible to set the temperature by 0.5°C.
- Cooling and heating set temperature ranges can be restricted through the Service menu.
- Contact your Hitachi service agent for assistance with setting the "Temperature Range Restriction" functions.

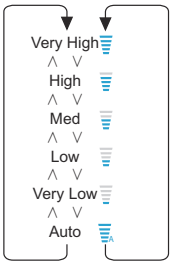
Fan Speed Setting

1. This function is used to set fan speed.

   Step1. Press "<" or ">" and select "Fan Speed".



   Step2. By pressing "∧" or "∨", the fan speed changes as follows.



NOTES:

- During Dry operation, the fan speed can only be changed to "Very Low", "Low" and "Auto".
- During Fan mode, "Auto" fan speed is not available.
- The number of Fan Speed level may change depending on indoor unit models.

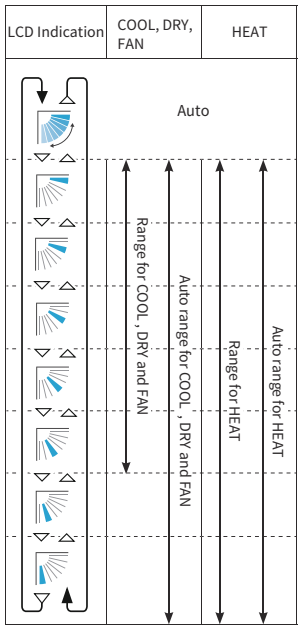
Louver/Swing Direction

1. The air flow direction displays as "Louver" style or "Swing" style depending on indoor unit model.
2. This function is used to set the louver/swing direction and is only applicable to indoor units that have an oscillating louver/swing.

Louver

Step1. Press "⏻" (On/Off). Make sure that the air conditioner is ON. Press "<" or ">" and select "Louver".

Step2. By pressing "∧" or "∨", the louver direction changes as below diagram, and the direction of different types of louver is displayed differently.



: Auto operation is active. At this time, the louver swings repeatedly on the LCD.

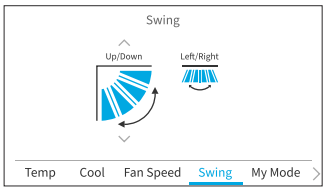
NOTES:

- The louver position on the LCD and the actual louver position may not match during the Auto-Swing.
  To set the louver positions, set the angle after checking the position on the LCD.
- The louver may NOT stop immediately after the button is pressed.

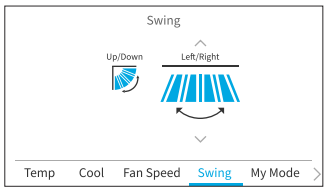
Swing

Step1. Press "⏻" (On/Off). Make sure that the air conditioner is ON. Press "<" or ">" and select "Swing".

Step2. By pressing "^" or "v", the swing direction changes between "Up/Down" and "Off".



Step3. Press ">" to move the focus to the "Left/Right". By pressing "^" or "v", the swing direction changes between "Left/Right", "Wide Reach" and "Off".



NOTES:

- "Wide Reach" is available only if the indoor unit supports wide air flow feature.
- Left/right swing setting may not be available depending on indoor unit model.

My Mode

My mode offers swift configuration by allowing users to choose from pre-set options based on their preferences. Users can configure up to three modes, adjusting settings such as temperature, operation mode, fan speed, louver direction, and ON/OFF timer for each mode.

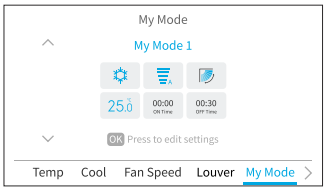
If My Mode is enabled in Function Menu(refer to **"6.12 My Mode Setting"**), press "<" or ">" to select "My Mode" on home screen.

NOTES:

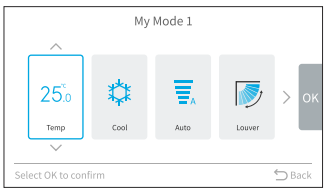
- When My Mode 1/My Mode 2/My Mode 3 is selected, "Simple Timer“ in Function Menu will be disabled.
- When "GoodSleep Timer" or "Leave Home" is set, "My Mode"is changed to "Not Set" automatically.

a. When the air conditioner is ON

Step1. Press "∧" or "∨" to switch the mode selection as follow:
"Not Set" ↔ "My Mode 1" ↔ "My Mode 2"↔ "My Mode 3".
Press "OK" to change the detailed settings of My Mode.



Step2. Press "<" or ">" to select the setting item, then press "∧" or "∨" to change the setting of each item.

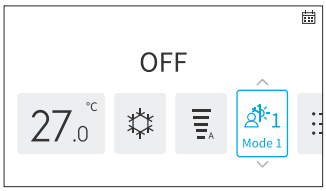


NOTE:

- The "ON Time"/"OFF Time" on My Mode 1/My Mode 2/My Mode 3 screen is the ON/OFF time of Simple Timer. The air conditioner will be turned ON/OFF every day according to this setting.

b. When the air conditioner is OFF

Step1. Press "∧" or "∨" to switch the mode selection as follow:
"Not Set" ↔ "My Mode 1" ↔ "My Mode 2"↔ "My Mode 3"
To change the detailed mode setting, please go to "My Mode" in "Function Menu".

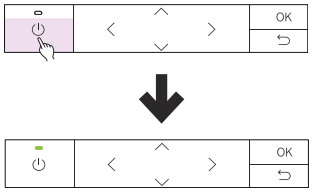


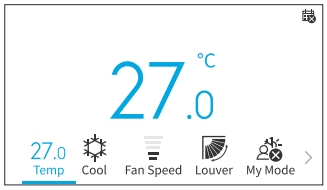
Operation

Operation Start

1. To turn the system on.

Step1. Press "⏻" (On/Off).
→ The run indicator LED turns on and the operation starts.

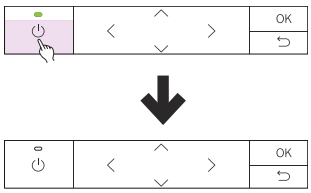


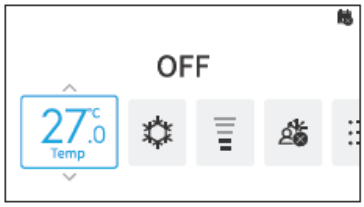


Operation Stop

1. To turn the system off.

Step1. Press "⏻" (On/Off).
→ The run indicator turns off and the operation stops.





NOTE:

- After the heating operation is stopped, the fan may continue to run for about 2 minutes to dissipate residual heat within the unit.

Icon Description

The status of the wired remote controller is displayed on the operation screen.

NOTES:

- It may not be displayed depending on the type of outdoor unit or indoor unit you are using.
- If there are multiple status, the high priority icon is displayed first.

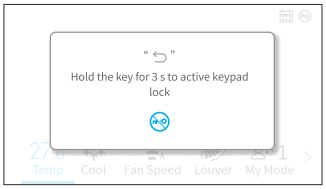
No.	Icon	Description
1		A schedule timer is set.
2		The current time has not been set. Schedule timer operation is not possible.
3		The keypad is locked.
4		The operation lock is set.
5		Displayed when using the central wired remote controller. Control through the wired remote controller may be restricted depending on the settings of the central wired remote controller.
6		The FrostWash cycle is due to be run.
7		It is time to clean the air filter.
8		Displays the room temperature.
9		GoodSleep timer is activated.
10		SleepSense is activated.
11		Powerful operation starts.
12		Leave Home is set.
13		Silent is set.
14		Internal clean is set.
15	Central Control	Displayed when using the central controller. Remote controller operation is restricted.
16		ECO Auto-Off is in operation.
17		Standard ECO mode operation is set.
18		Powersafe mode is set.
19	External Device	Displayed when Forced Cooling is running or WRC is controlled by external device, e.g. central wired remote controller.
20	Forced Cooling	Displayed when Forced Cooling is running.

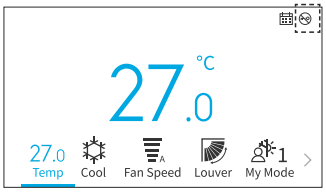
No.	Icon	Description
22	Change the Gas Leak Sensor	Displayed when gas sensor lifespan is run out and to remind replacement of gas sensor. Each of blow messages display for 1 second with below order, then repeat from No.1 message: 1. Change the Gas Leak Sensor 2. Check Contact Info. in menu list 3. Blank
	Check Contact Info. in menu list	
	Blank	

Keypad Lock

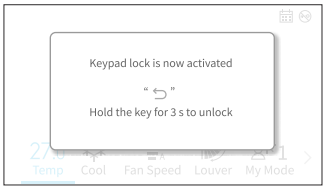
This function is to lock all touch key on home screen.

Step1. On Home off/on screen, press and hold "⮌" for 3 seconds to active keypad lock. The icon "⊗" shows on the home screen to indicate that the keypad is locked.

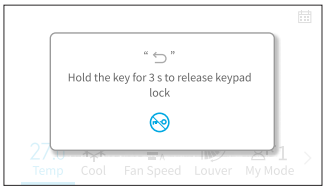




Step2. During keypad lock, a reminder is pop upped if press any buttons.



Step3. To release the keypad lock, press and hold "⮌" for 3 seconds and the icon "⊗" disappeared.



NOTE:

- Keypad lock function only can be activated and deactivated on home screen.

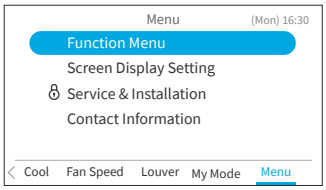
10.2 Menu Operation

Menu Operation

NOTES:

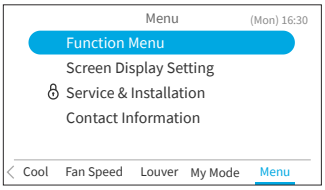
- If "⃠" is displayed and grayed out, these functions are not available and cannot be set.
- Once the indoor unit connected with wired remote controller is changed, the previous setting data on the controller must be cleared first. For clear details, please refer to **"Remote Controller auto-test"** on service manual.

Press "<" or ">" at home screen to select "Menu".

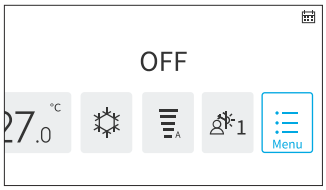


When the air conditioner is ON:

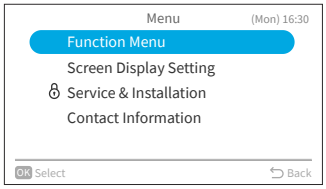
- The "Menu" screen is displayed.



When the air conditioner is OFF:



- Select "Menu" and press "OK".
- The "Menu" screen is displayed.



- About the Function Menu, please refer to **"6. Function Menu Screen Display"**.
- About the Display Settings, please refer to **"7. Screen Display Setting"**.

10.3 Function Menu Screen Display

Function Menu Screen Display

Various function settings are shown in this chapter.

For how to enter the Menu screen, please refer to **"5. Menu Operation"**.

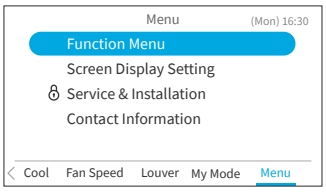
NOTES:

- Some functions cannot be set depending on the type, configuration, and usage status of the indoor unit.
- If a function with "⃠" is displayed, it means that the function setting is disabled to be changed.

1. Display the function menu

Step1. Select the "Function Menu" and press "OK".

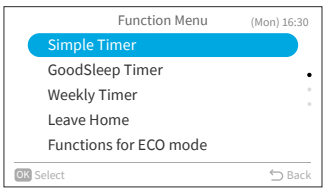
→ The "Function Menu" screen is displayed.



Step2. Press "∧" or "∨" to select the item to set and press "OK".

Press "⮌" to return to the "Menu" screen.

- If the "Function Menu" screen remains unchanged for approximately 10 minutes, the screen returns to the home screen.
- Various settings are retained even when the power is turned off.



Simple Timer

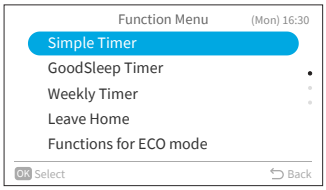
This function is used to start or stop the unit operation at the set time within one day.
The timer operation contents can be set from "Not Used", "Once", or "Everyday".

NOTES:

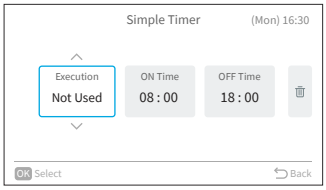
- If "Once" on the timer operation setting is selected, the setting reverts automatically to "Not Used" after the "Once" timer program has been executed.
- Do not set the same time for both ON/OFF timers.
- Scheduled operation (stop) is not possible while the remote control is prohibited.
- When "⊗" is displayed, scheduled operation (stop) is not available.
- Refer to **" Adjusting Date/Time"** to set the date and time.
- The timer is controlled by this wired remote controller.
- The timer lamp of indoor unit does not turn on.
- During "Simple timer" operation, if "Leave Home" or "GoodSleep Timer" operation is started, the setting will be automatically changed to "Not Used".
- "Simple Timer" cannot be set in "Leave Home" or "GoodSleep Timer" operation.

1. Set the simple timer.

Step1. Select "Simple Timer" on the "Function Menu" screen and press "OK".
When the current time has not been set yet, the "Adjusting Date/Time" setting screen is displayed.

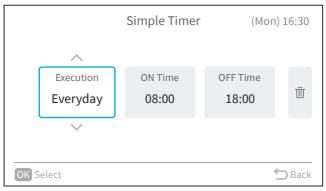


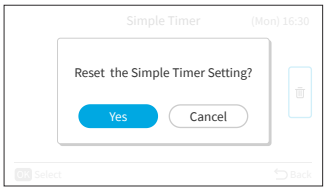
Step2. Press "<" or ">" to select the item to be set:
"Execution" ↔ "ON Time" ↔ "OFF Time" ↔ "🗑".



Step3. Press "∧" or "∨" to set each item.
After setting, press "⮌" to confirm the settings and the screen returns to the "Function Menu" screen.

- When "Execution" is selected,
  press "∧" or "∨" to switch the setting items as follows:
  "Not Used": the on and off time of the system will not be executed.
  ↔ "Once": the on and off time of the system will be executed for one time.
  ↔ "Everyday": the on and off time of the system will be executed everyday.
- When "ON Time" or "OFF Time" is selected, the setting time can be adjusted in 10-minute increments by pressing "∧" or "∨".
- When "🗑" is selected and press "OK", the confirmation screen is displayed.
  If you select "Yes", the simple timer settings are discarded and the screen returns to Step2.
  If you select "Cancel", the screen still returns to Step2.



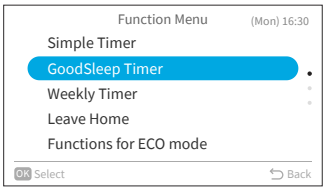


GoodSleep Timer

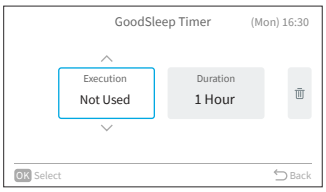
This function is Off Timer operation to stop the operation if preset time has passed when you sleep.

1. Set the GoodSleep Timer.

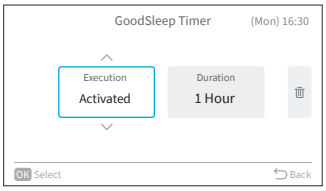
Step1. Select "GoodSleep Timer" on the "Function Menu" screen and press "OK".
When the current time has not been set yet, the "Adjusting Date/Time" setting screen is displayed.



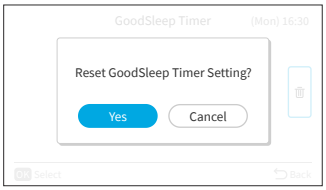
Step2. Press "<" or ">" to select the item to be set:
"Execution" ↔ "Duration" ↔ "🗑".



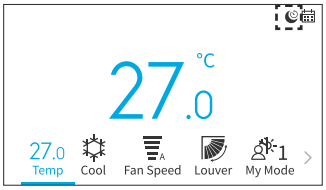
Step3. Press "∧" or "∨" to set each item.
After setting, press "⮌" to confirm the settings and the sleep timer operation will be started, the screen returns to the "Function Menu" screen.



- When "Execution" is selected, press "∧" or "∨" to switch the setting items as follows:
  "Not Used" ↔ "Activated".
- When "Duration" is selected, the duration time can be adjusted: 1↔2↔3↔7.
- When "🗑" is selected and press "OK", the confirmation screen is displayed.
  If you select "Yes", the GoodSleep Timer settings are discarded and the screen returns to Step2.
  If you select "Cancel", the screen still returns to Step2.



- After GoodSleep timer is activated, you will see an icon "🕒" displayed on the home screen.

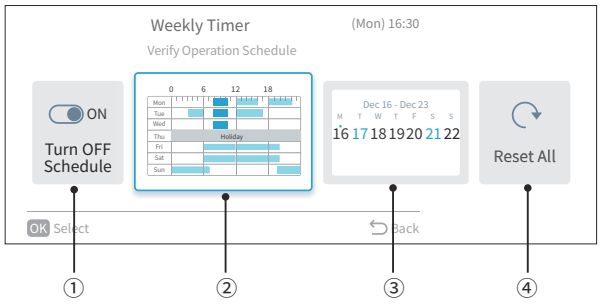


NOTES:

- You can set the time of the GoodSleep timer operation within the time range before "ON Time"(Simple Timer) preset time.
- When the timer is set, this wired remote controller will send the sleep timer information to indoor unit and the timer lamp of indoor unit turns on.
- "GoodSleep Timer" cannot be set or will be cancelled if "Leave Home" is set.
- If "GoodSleep Timer" is set, "Powerful", "SleepSense" and "Silent" will be cancelled.
- If "GoodSleep Timer" is set, "Simple Timer" and "Weekly Timer" setting cannot be set, but the preset "ON Time" of Simple Timer and Weekly Timer are still valid.

Weekly Timer

This function is used to automatically start or stop the unit operation at the set time.
The temperature can also be set.
Up to 5 schedules can be set for each day of the week.



① Schedule turn ON/OFF setting (Page 22)
This function is used to enable or disable the operation schedules. If disabled-Turn OFF Schedule, the operation schedules are not executed - for example, during extended holidays.

② Schedule day and time setting (Page 23)
The desired time and temperature can be set.
Set up to 5 schedules per day.

③ Schedule holiday setting (Page 24)
Holidays can be set six days in advance.
On the days set as holidays, scheduled operation is not executed for the entire day.
It is used when there are irregular off days such as holidays.

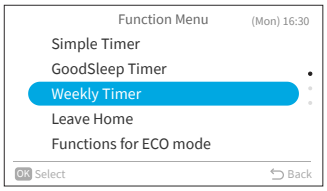
④ Reset setting (Page 25)
The schedule day/time setting and holiday setting are deleted.

Schedule Turn ON/OFF Setting

1. Set schedule ON / OFF

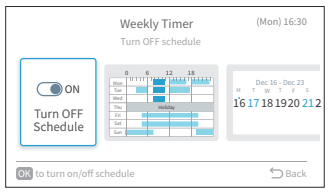
Step1. Select "Weekly Timer" on the "Function Menu" screen and press "OK".

- If the current time is not set, the "Adjusting Date/Time" setting screen is displayed.
- If no schedule or holiday has been set, Step3 of 6.3.2 is displayed.

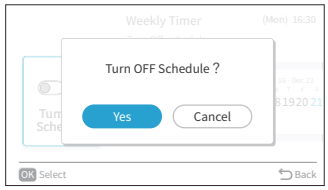


Step2. Press "<" or ">" to select "Turn ON/OFF Schedule", and then press "OK".

- When the schedule is ON, "Turn OFF Schedule" confirmation screen is displayed. When schedule is OFF, "Turn ON Schedule" confirmation screen is displayed.



Step3. Select "Yes" by pressing "<" or ">"and then press "OK".
→ Confirm the schedule enable/disable setting and return to Step2.
→ The indicator "" turns on when the schedule is ON.
→ The indicator "" turns off when the schedule is OFF.



Schedule Day and Time Setting

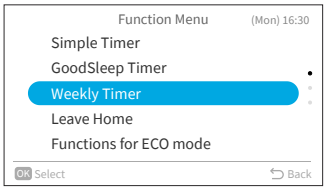
NOTES:

- Scheduled operation (stop) is not possible when the remote control is prohibited.
- When "" is displayed, scheduled operation (stop) is not available.
- Refer to **" Adjusting Date/Time"** to set the date and time.

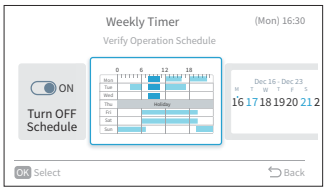
1. Set schedule day and time

Step1. Select "Weekly Timer" on the "Function Menu" screen and press "OK".

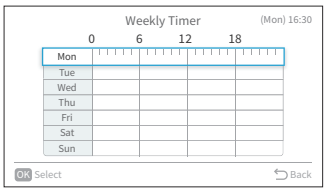
- If the current time is not set, the "Adjusting Date/Time" setting screen is displayed.
- If no schedule or holiday has been previously set, Step3 is displayed.



Step2. Press "<" or ">" to select "Verify Operation Schedule", and then press "OK".

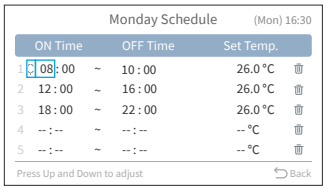


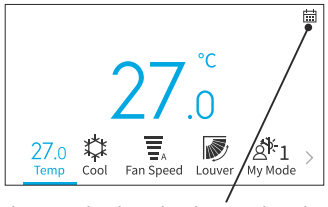
Step3. Select the day of the week (from Mon. to Sun.) to be set with "^" or "v", and press "OK".



Step4. Press "^" or "v" to select schedule timer No.1 to No.5, and press "<" or ">" to select "ON Time" ↔ "OFF Time" ↔ "Set Temp."↔ "". By pressing "^" or "v", "ON / OFF Time" and "Set Temp." can be set.

- 5 different schedule timers (maximum) can be set for each day of the week.
- Press "OK" to display the schedule time setting screen for the next day of the week.
- Select "" and press "OK" to delete the settings of "ON / OFF Time" and "Set Temp".
  Press "" to return to Step3.

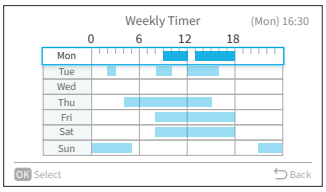




The icon displayed indicates that the weekly timer is set and activated.

Function Menu Screen Display

Step5. "■"(operation) and "□"(stop) are displayed on the screen.
To copy the setting contents of the previous day, press "<" and "OK" simultaneously. Select the other day and press "<" and "OK" simultaneously again to paste the copy based schedule.



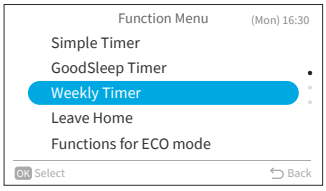
Schedule Holiday Setting

NOTES:

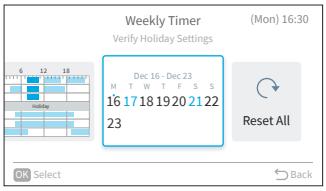
- Holiday period can be set to avoid running the weekly timer setting during this period.
- Holiday period is defined by day.
- The schedule icon is not displayed if the current day is set as holiday.

1. Set schedule holiday

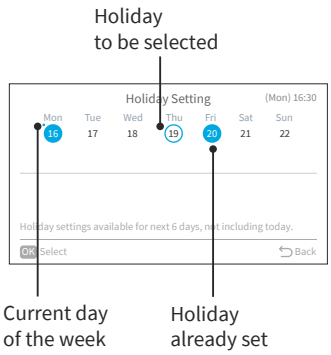
Step1. Select "Weekly Timer" on the "Function Menu" screen and press "OK".
- If the current time is not set, the "Adjusting Date/Time" setting screen is displayed.
- If no schedule or holiday has been set, Step3 is displayed.



Step2. Press "<" or ">" to select "Verify Holiday Settings", and then press "OK".



Step3. Select the day of the week (from Mon. to Sun.) to set as a holiday by pressing "^" "v" "<" or ">".
Press "OK" to select "Holiday setting" or "Cancel".
"●" indicates the current day of the week.
"O" indicates the holiday to be selected.
"⬤" indicates the holiday already set.
Press "⮌" to confirm the setting and return to Step2.



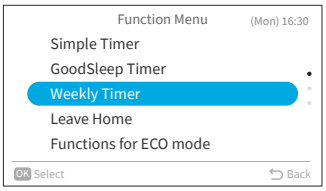
Function Menu Screen Display

Reset the Setting

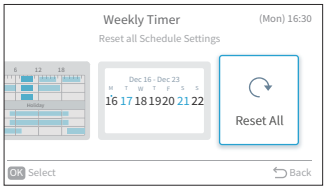
1. Reset the setting

Step1. Select "Weekly Timer" on the "Function Menu" screen and press "OK".

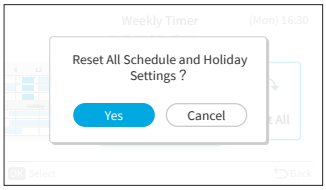
- If the current time is not set, the "Adjusting Date/Time" setting screen is displayed.
- If no schedule or holiday has been set, Step3 of **" Schedule Day and Time Setting"** is displayed.



Step2. Press "<" or ">" to select "Reset All" and then press "OK".



Step3. Select "Yes" by pressing "<" or ">"and then press "OK".
All schedule and holiday settings are reset, and the screen returns to Step3 of **"Schedule Day and Time Setting"**.



Function Menu Screen Display

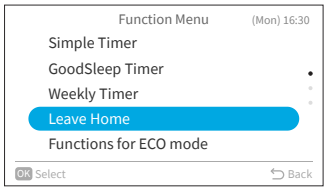
Leave Home

Prevent the room temperature from falling too much when no one is at home. The initial setting temperature is 10°C and the temperature range can be set between 10°C and 16°C.

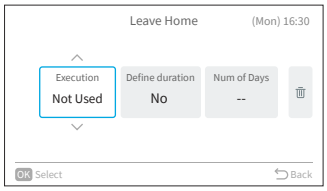
1. Set the Leave Home.

Step1. Select "Leave Home" on the "Function Menu" screen and press "OK".

- If the current time is not set, the "Adjusting Date/Time" setting screen is displayed.

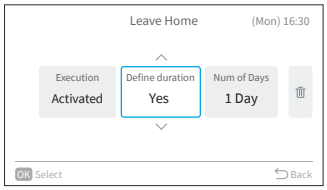


Step2. Press "<" or ">" to select the item to be set: "Execution" ↔ "Define duration" ↔ "Num of Days" ↔ "🗑".

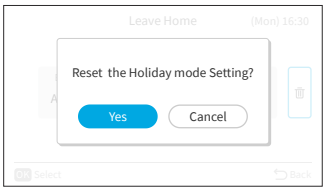


Step3. Press "∧" or "∨" to set each item.
After setting, press "⮌" to confirm the settings, the leave home operation will be started and the screen returns to the "Function Menu" screen.

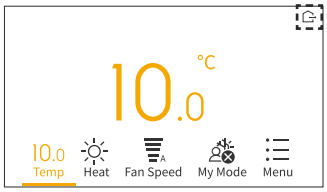
- When "Execution" is selected, press "∧" or "∨" to switch the setting items as follows: "Not used" ↔ "Activated".
- When "Define duration" is selected, press "∧" or "∨" to switch the setting items as follows: "Yes" ↔ "No".
- When "Num of Days" is selected, the days can be adjusted in 1-day increments by pressing "∧" or "∨" to a maximum of 99 days.



- When "🗑" is selected and press "OK", the confirmation screen is displayed.
  If you select "Yes", the holiday mode settings are discarded and the screen returns to Step2.
  If you select "Cancel", the screen still returns to Step2.



- After Leave Home is activated, you will see an icon "🏠" displayed on the home screen.



Function Menu Screen Display

NOTES:

- The timer is controlled by this wired remote controller.
- The timer lamp of indoor unit does not turn on.
- Number of day is counted when clock indicates 00:00.
- During leave home operation, fan speed cannot be changed and louver/swing icon is hidden.
- After reaching the set number of operation days for leave home or leave home operation is canceled, the unit will operate in previous mode.
- If "Leave Home" is set, "Simple timer", "Weekly timer", "GoodSleep Timer", "Powerful", "Standard ECO mode"/"ECO mode with Auto-Off", "SleepSense" and "Silent" operations will be cancelled and cannot be set.
- For multi connection:
  - Fan/Cool/Dry and leave home cannot operate at the same time. The first-run unit has a priority and other units in different mode will be in standby mode.
  - Heating operation can be used with leave home.
  - When two or more rooms are set to operate leave home, the temperature set by leave home may not be reached. It also depends on outdoor temperature.

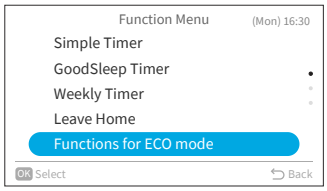
Functions for ECO mode

Functions for ECO mode serves to activate or deactivate energy-saving control features on the indoor unit. This includes three modes: "Standard ECO mode," "ECO mode with Auto-Off," and "PowerSafe mode."
The availability of these features depends on the specific indoor unit model, whether it has motion sensors or not. For more detailed information, please consult your indoor unit's user manual.

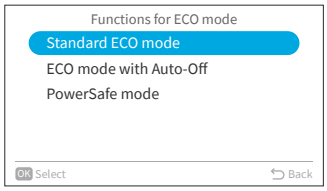
1. Set Standard ECO mode.

This function optimizes energy usage by automatically adjusting the indoor unit set temperature and limiting maximum power consumption.
It is available for indoor units with or without motion sensors.

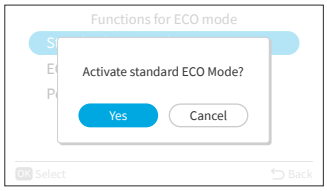
Step1. Select "Functions for ECO mode" on the "Function Menu" screen and press "OK".



Step2. Select "Standard ECO mode" and press "OK".

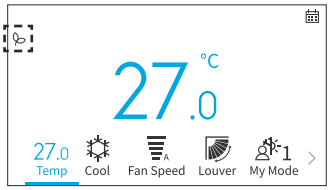


Step3. Select "Yes" and press "OK" to activate Standard ECO mode.



Function Menu Screen Display

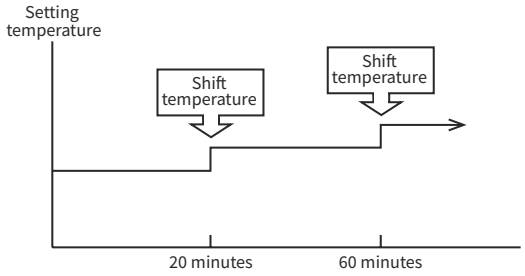
- After enabling this mode, you will see an ECO icon "" displayed on the home screen.
- When this feature is activated, the indoor unit will shift the set temperature twice: first after 20 minutes and then again after 60 minutes to save energy. For models without motion sensors, energy-saving control begins immediately.
- For models equipped with motion sensors, energy-saving control will activate when no people are detected.



NOTES:

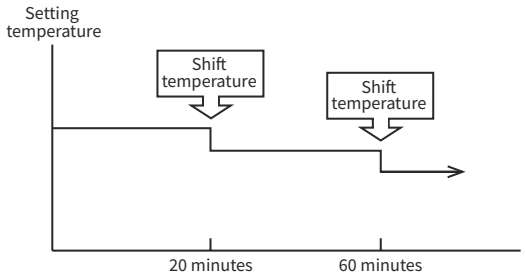
- "Standard ECO mode" operation will not be effective when power consumption is low.
- When "Standard ECO mode" is set, "Fan" mode cannot be set.
- When "Powerful", "SleepSense" or "Fan mode" operation is set or the unit is off, "Standard ECO mode" operation will be cancelled.
- After unit auto restart, "Standard ECO mode" operation is canceled and previous operation mode shall start.
- The energy saving effect of "Standard ECO mode" depends on operation conditions.
- Control diagram is as follow:

Standard ECO mode Control Diagram



Cooling operation

[Diagram representation for illustrative purpose only]



Heating operation

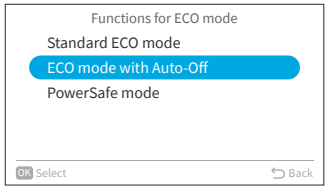
[Diagram representation for illustrative purpose only]

Function Menu Screen Display

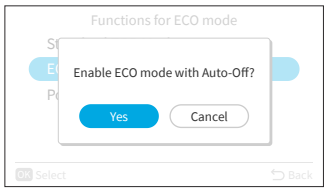
2. Set ECO mode with Auto-Off.

This function is available with indoor unit models equipped with motion sensor. Adjusts the set temperature when "no people are in the room" then automatically turns off after a set time for energy saving.

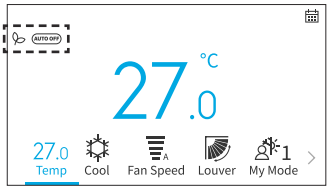
Step1. Press "∧" or "∨" to select "ECO mode with Auto-Off" on the "Functions for ECO mode" screen and press "OK".



Step2. Select "Yes" and press "OK" to enable ECO mode with Auto-Off.



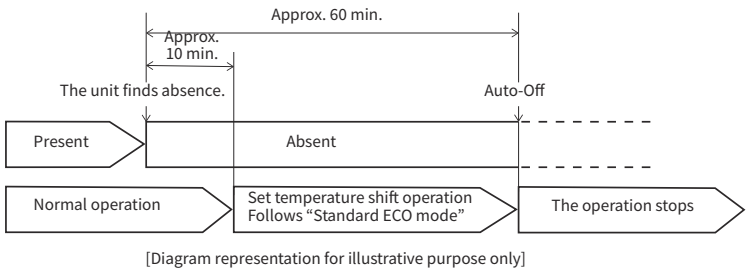
- After enabling this mode, "" and "AUTO OFF" are displayed on the home screen.
  The sensor starts to detect the presence of people in the room.
- If no people are detected for 20 minutes, the set temperature automatically adjusts for energy savings. In the absence of any occupants for 60 minutes, the unit will power off directly.
- The unit reverts to its regular operation when the sensor detects human movement.



NOTE:

- Please be aware that the air conditioner may shut off unexpectedly in the following scenarios. Therefore, recommend not to enable the "ECO mode with Auto-Off" setting in the situations as below:
  - When a person is present in an area where the human sensor cannot detect their presence.
  - When there is a sleeping person, especially an infant or young child.
  - When only a pet is present.

ECO mode with Auto-Off Control Diagram



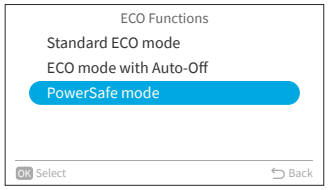
[Diagram representation for illustrative purpose only]

Function Menu Screen Display

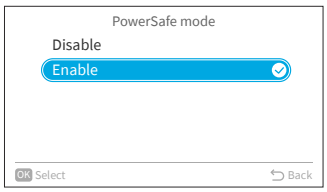
3. Set PowerSafe mode.

This function limit the maximum current during the operation of Air conditioner so it will help to avoid breaker trips if maximum current reaches to breaker limit. It limits the electrical current during operation.

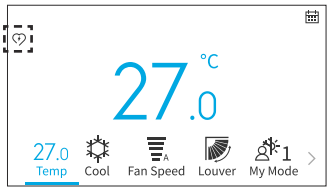
Step1. Press "∧" or "∨" to select "PowerSafe mode" on the "Functions for ECO mode" screen and press "OK".



Step2. Press "∧" or "∨" to select "Enable" and press "OK" to enable PowerSafe mode.



After enabling this mode, you will see a PowerSafe icon "♡" displayed on the home screen.



NOTES:

- PowerSafe mode icon will be visible in all modes if it is set. It is one time setting to use this function.
- This function will limits the maximum current drawn by air conditioner by reducing the speed of the compressor, you may feel less cooling or heating performance compare to normal mode. If you feel uncomfortable, please disable PowerSafe mode.
- At heating operation or cooling operation during PowerSafe setting, maximum capacity will decrease.

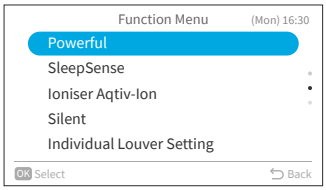
Function Menu Screen Display

Powerful

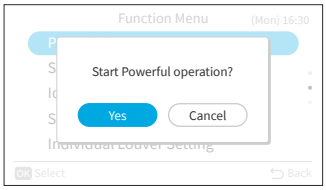
"Powerful" operation is set during operation (Auto, Heat, Cool, Dry, and Fan), the air conditioner performs at the maximum power.
During "Powerful" operation, cooler or warmer air will be blown out from indoor unit for Cool or Heat operation respectively.

1. Set Powerful operation.

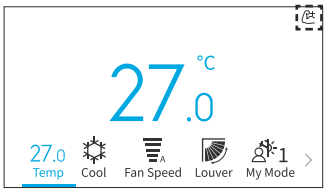
Step1. Select "Powerful" on the "Function Menu" screen and press "OK".



Step2. Select "Yes" and press "OK" to start powerful operation.
Powerful operation ends in 20 minutes. Then the system automatically operates with the previous settings used before powerful operation.



After powerful operation is started, you will see an icon "" displayed on the home screen.



NOTES:

- When "Leave Home", "Standard ECO mode", "ECO mode with Auto-Off, "SleepSense" or "Silent " operation is set or the unit is off, "Powerful" operation will be cancelled.
- In "GoodSleep Timer", "Leave Home" operation or the unit is off, "Powerful" operation cannot be set.
- During "Powerful" operation, capacity of the air conditioner will not increase,
  - if the air conditioner is already running at maximum capacity.
  - just before defrost operation (when the air conditioner is running in heating operation).
- For multi model connections, "Powerful" operation may not function depending on operation conditions.

Function Menu Screen Display

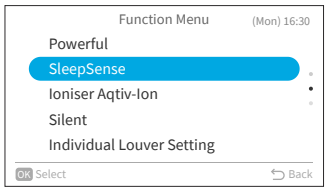
SleepSense

This function is to start/stop SleepSense function.

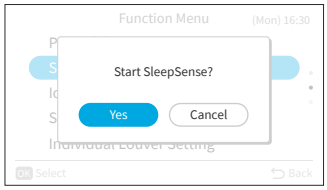
- At first, unit will operate cooling mode for 60 minutes at setting condition.
- With the motion sensor, the room air conditioner can monitor human movement. If no human movement is detected, then the temperature will increase by 1°C(in case of cooling operation) automatically and the fan speed will be changed to silent fan speed. Unit continues running for another 1 hour.
- If the condition of activity in the room is stable then the unit will continue running with the temperature increased by another 1°C(in case of cooling) respectively.
- During the SleepSense operation, if big activity /movement is detected, the temperature and Fan speed will resume back to previous setting.
- During the SleepSense operation, if small activity /movement is detected, the temperature will decreased by 1°C.

1. Set SleepSense.

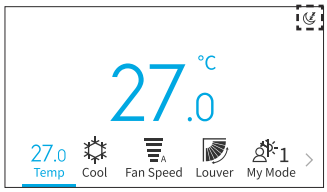
Step1. Select "SleepSense" on the "Function Menu" screen and press "OK".



Step2. Select "Yes" and press "OK" to start SleepSense.



After SleepSense operation is started, you will see an icon "" displayed on the home screen.



NOTES:

- In "GoodSleep Timer", "Leave home", "Auto"/"Fan"/"Dry" operation or the unit is off, "SleepSense" operation cannot be set.
- When "Powerful", "Leave Home", "Standard Eco mode" or "Eco mode with Auto-Off" is set or the unit is off, "SleepSense" operation will be cancelled.

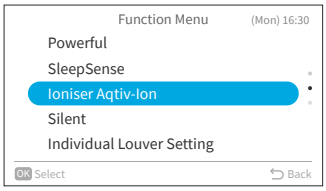
Function Menu Screen Display

Ioniser Aqtiv-Ion

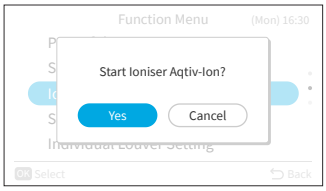
This function is to start / stop Ioniser connected with indoor unit.
Ionisers emit negatively charged particles that bind to airborne pollutants in the room and inactivate them. Ioniser Aqtiv-Ion can be operated in any mode.

1. Set Ioniser Aqtiv-Ion.

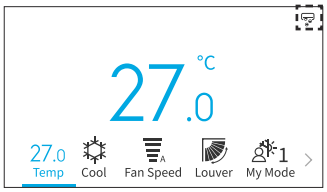
Step1. Select "Ioniser Aqtiv-Ion" on the "Function Menu" screen and press "OK".



Step2. Select "Yes" and press "OK" to start Ioniser Aqtiv-Ion.



After Ioniser Aqtiv-Ion is started, you will see an icon "" displayed on the home screen.



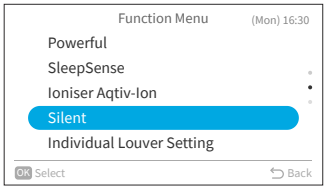
Function Menu Screen Display

Silent

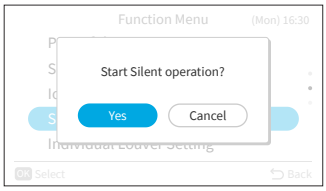
This function is to start/stop Silent mode of indoor unit.

1. Set Silent operation.

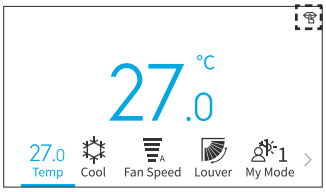
Step1. Select "Silent" on the "Function Menu" screen and press "OK".



Step2. Select "Yes" and press "OK" to start silent operation.



After silent operation is started, you will see an icon "" displayed on the home screen.



NOTES:

- In "GoodSleep Timer", "Leave home" operation or the unit is off, "Silent" operation cannot be set.
- When "Powerful" or "Leave Home" is set or the unit is off, "Silent" operation will be cancelled.
- After unit auto restart, "Silent" operation is cancelled.

Function Menu Screen Display

Individual Louver Setting

This function is to individually set the air direction of multiple air outlets on non-ducted ceiling cassette units.

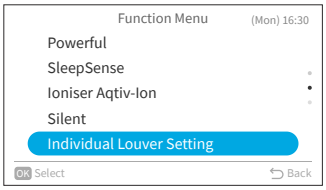
NOTES:

- This function is available when the indoor unit supports individual louver control.
- It cannot be set while the air conditioner is stopped.
- In "Leave Home" operation, it will be cancelled and cannot be set.

Individual Louver Setting

1. Individual louver setting

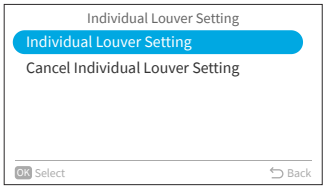
Step1. Select "Individual Louver Setting" on the "Function Menu" and press "OK".



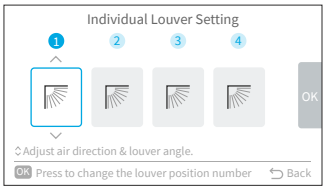
Step2. Select "Individual Louver Setting" and press "OK".

NOTE:

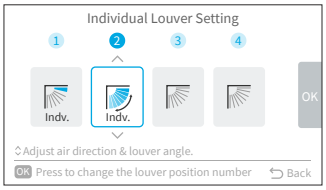
- If there is one indoor unit connected with the wired remote controller, Step3 is displayed.



Step3. Press "<" or ">" and select the louver from 1 to 4.
→The selected louver is opened while the unselected louvers are closed.

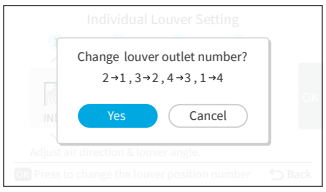


Step4. Press"∧" or "∨" to change the louver angle.
The louver angle is changed as follows.

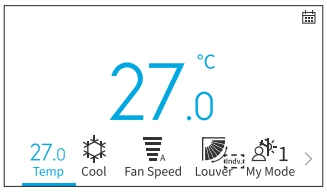


Function Menu Screen Display

Step5. Press "OK" and the selected louver will be set as "No.1" and the other louver No. will be changed clockwise automatically. A confirm screen shows up. Select "Yes" and press "OK". Then the screen will return to Step3.



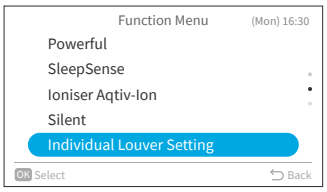
Step6. Individual "Indv." is turned on at the Louver on the home screen.



Cancel Individual Louver Setting

1. Cancel individual louver setting

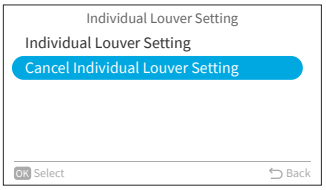
Step1. Select "Individual Louver Setting" on the "Function Menu" and press "OK".



Step2. Select "Cancel Individual Louver Setting" and press "OK".

NOTE:

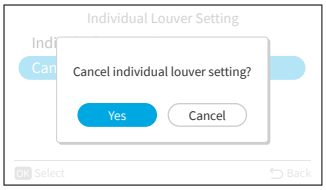
- If there is one indoor unit connected with the wired remote controller, Step3 is displayed.



Step3. Press "<" or ">" to select "Yes" and press "OK". Cancel the individual louver setting and return to Step2.

NOTE:

- All the individual louver settings are cancelled.



Function Menu Screen Display

Clean Operation

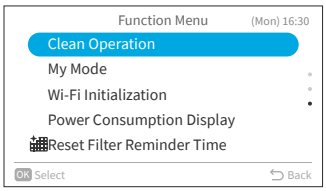
The dust and dirt adhering to indoor heat exchanger which is the cause of the smell. This function is to wash away dust and dirt by freezing and thawing of the heat exchanger.

NOTES:

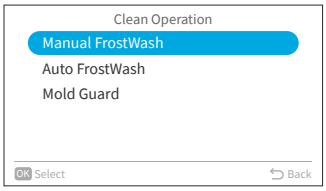
- Based on the temperature condition and etc., clean operation might not start. In case of that, the running display will not appear.
- When clean operation finishes, the unit will stop automatically.
- If Weekly Timer or Simple Timer is set, clean operation might stop at the middle point because of the timer setting.
- For multi connection :
  - When starts "Mold guard" operation, operation is limited to "Fan" operation.
  - When one room operates "Mold guard" operation first, other rooms can operate "Cool", "Dry" or "Fan" mode. However, when other rooms need to operate "Heat" operation, air conditioner in other rooms will be in STANDBY mode. After "Mold guard" operation finishes, "Heat" operation will start.
- Some indoor units may need some extra time till showing the running display.
- Manual FrostWash can not be set during the unit operation is on.

1. Set Manual FrostWash.

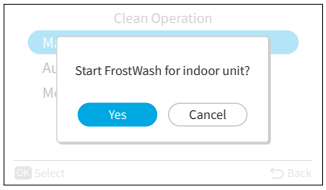
Step1. Select "Clean Operation" on the "Function Menu" screen and press "OK".



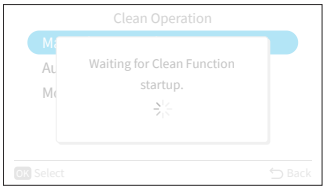
Step2. Select "Manual FrostWash" and press "OK".



Step3. Select "Yes" and press "OK" to start FrostWash for indoor unit.

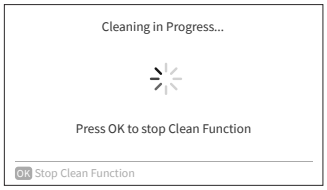


Clean operation is in startup.



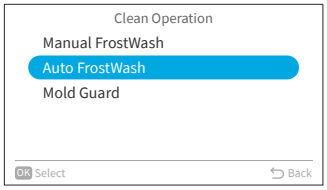
Function Menu Screen Display

Once the startup succeeds, the indoor unit is in cleaning progress.
Press "OK" in the progress will stop this function.
Once the progress is complete or stopped, return to home screen.

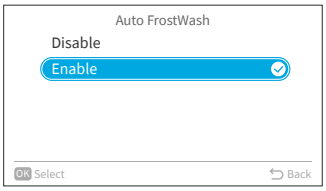


2. Set Auto FrostWash.

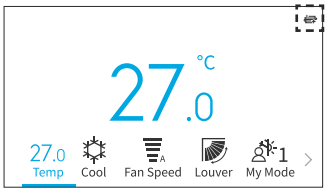
Step1. Press "∧" or "∨" to select "Auto FrostWash" on "Clean Operation" screen and press "OK".



Step2. Press "∨" to select "Enable" and press "OK" to enable the auto FrostWash.



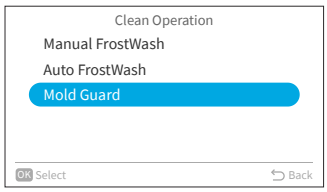
After auto FrostWash is enabled, you will see an icon "" displayed on the home screen.
Auto FrostWash starts if the air conditioner is stopped after running for more than 42 hours*. At this time, Indoor FrostWash monitors the temperature and humidity conditions, and also monitors whether the conditions are suitable for starting, and starts if the conditions are met.
*: The default time is 42 hours, it can be changed in Service Settings, please refer to **" FrostWash Time Setting"**.



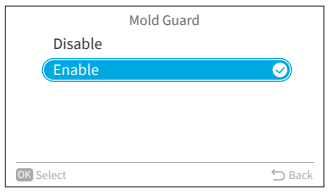
Function Menu Screen Display

3. Set Mold guard.

Step1. Press "∧" or "∨" to select "Mold guard" on "Clean Operation" screen and press "OK".

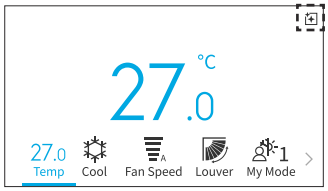


Step2. Press "∨" to select "Enable" and press "OK" to enable the mold guard.



Step3. After mold guard is enabled, you will see an icon "" displayed on the home screen.

If the air conditioner is operated in cooling or dry mode (or auto mode*) for more than 10 minutes and then put into off mode, the mold guard will start.
*: It depends on the indoor unit model.



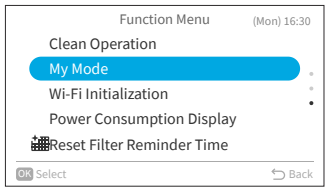
Function Menu Screen Display

My Mode Setting

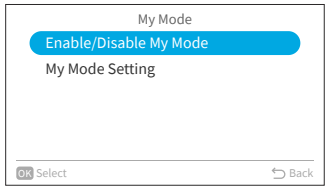
My Mode is used to enable or disable the feature and pre-set My Mode settings through the Function Menu. Users can select or switch between presets for My Mode 1, 2, and 3 on home screen.

1. Enable/Disable My Mode

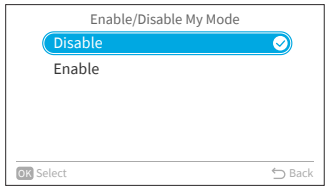
Step1. Select "My Mode" on the "Function Menu" screen and press "OK".



Step2. Select "Enable/Disable My Mode" and press "OK".

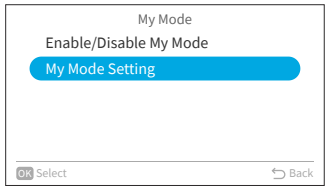


Step3. Press "∧" or "∨" to select "Disable"/"Enable" and press "OK" to disable/enable My Mode.
Disable: My Mode icon disappears from the home screen.
Enable: My Mode icon appear on the home screen and the mode can be adjusted.

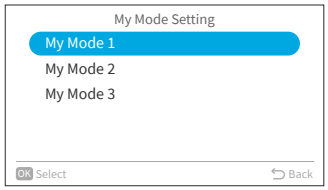


2. Set My Mode Setting

Step1. Press "∨" to select "My Mode Setting" on "My Mode" screen and press "OK".



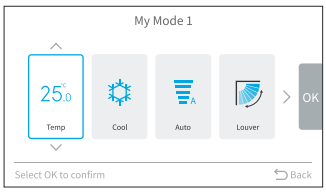
Step2. Press "∧" or "∨" to select desired mode and press "OK".



Function Menu Screen Display

Step3. Press "<" or ">" to select the setting item, then press "^" or "v" to change the setting of each item.

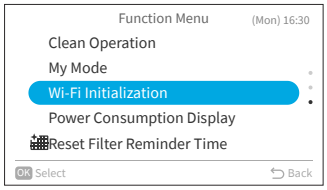
After all changes are completed, press ">" to select "OK" and press "OK" and return to Step2.



Wi-Fi Initialization

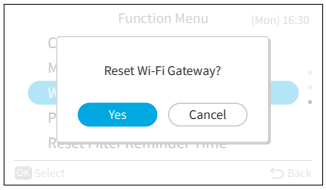
This function is used to reset Wi-Fi module settings when used with the "airCloud Go" application. Please note that executing this function will clear the configuration, and the Wi-Fi module will be restored to its factory settings.

Step1. Select "Wi-Fi Initialization" on the "Function Menu" screen and press "OK".



Step2. Select "Yes" and press "OK" to reset Wi-Fi gateway.

When the Wi-Fi settings are reset, the blue LED on the indoor unit front panel will flash 4 times (1 flash per second) for 10/20 seconds. Then the blue LED will flash 3 times (1 time per second), meaning the embedded gateway is reset and ready to be paired to a new Wi-Fi network.
This function is only available for indoor unit with embedded Wi-Fi adapter.



Power Consumption Display

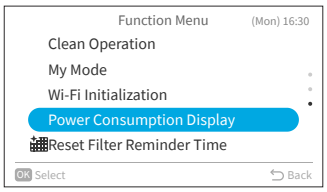
This function is to show power consumption history with trend graph and data table.

NOTE:

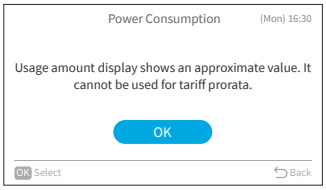
- Power consumption data is saved and draw trend graph always based on wired remote controller time, instead of indoor unit time.

1. Display power consumption

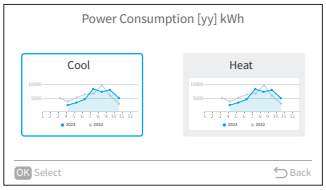
Step1. Select "Power Consumption Display" on the "Function Menu" screen and press "OK". If the current time is not set, the "Adjusting Date/ Time" setting screen is displayed.



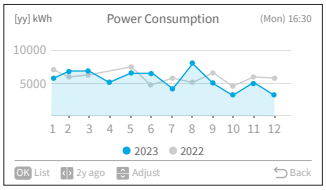
Step2. A reminder "Usage amount display shows an approximate value. It cannot be used for tariff prorata." pop upped. Then press "OK".



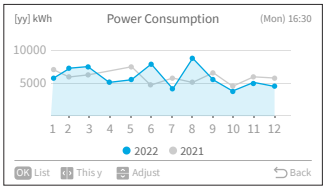
Step3. Press "<" or ">" to select "Cool" or "Heat" and press "OK".



Step4. The power consumption trend graph is displayed.



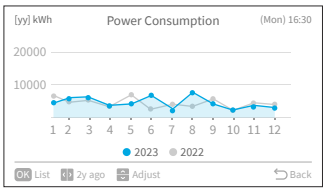
Step5. Press "<" or ">" to select the trend graph of different years, "this year" or "2 year ago".



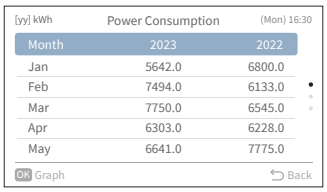
Function Menu Screen Display

Step6. Press ""△" or "▽" to adjust the scale of Y axis.
The range of Y axis is:

Max of Y 1000000 500000 200000 ... 10000 ... 1000 ... 100 ... 20 10



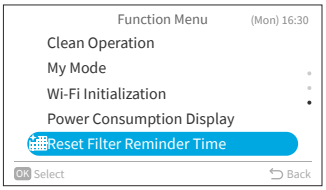
Step7. Press "OK" to show a power consumption table of each month.
Press "OK" to return to Step6. Or Press "⮌" to return to Step3.



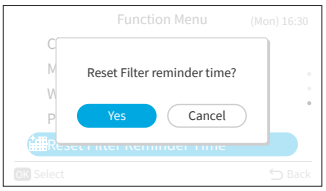
Reset Filter Reminder Time

This function is used to turn off the filter reminder indication and to reset the time of use for the filter.

Step1. Select "Reset Filter Reminder Time" on the "Function Menu" screen and press "OK".



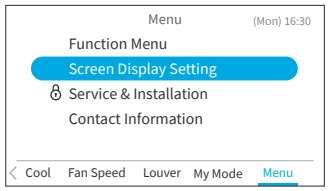
Step2. Select "Yes" and press "OK" to reset filter reminder time.
The default time is 200 hours, which can be changed in Service Settings, refer to **" Time for Filter Sign Display"**.



10.4 Screen Display Setting

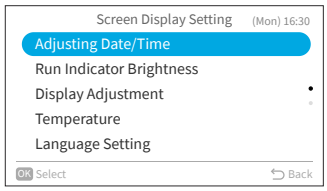
1. Screen display setting

Step1. Select "Screen Display Setting" on the "Menu" screen and press "OK".



Step2. Press "∧" or "∨" to select setting item and press "OK".
Press"⮌" to return to "Menu" screen.

- If there is no operation on the display setting screen for about 10 minutes, the screen automatically returns to the home screen.
- Various settings are saved even when the power supply is off.



Adjusting Date/Time

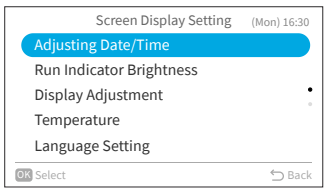
Function	Action
Adjusting Date/Time	Set Year/Month/Day/Hour/Minute.
Time Format	Change the time format to 12 hour/24 hour.
Daylight Saving Times	Adjusts time forward or backward an hour when daylight savings time starts or ends.

Adjusting Date/Time

- Periodic time setting is recommended. (Clock accuracy: difference within ±70 seconds by a month)
- In the event of a power supply disruption, the built-in capacitor will retain the settings including the time settings for up to 72 hours. Reset the date and time if the wired remote controller remains without power for longer than 72 hours or the main power supply is OFF for a long period of time.

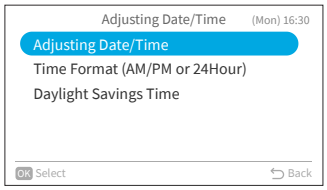
1. Adjusting Date/Time

Step1. Select "Adjusting Date/Time" on the "Screen Display Setting" screen and press "OK".

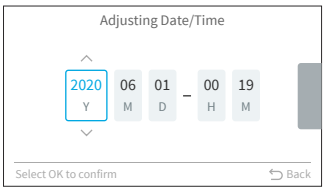


Screen Display Setting

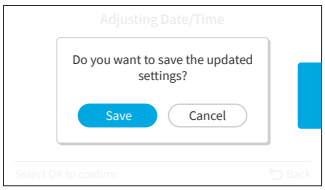
Step2. Press "∧" or "∨" to select "Adjusting Date/Time" and press "OK".



Step3. Press "<" or ">" to select "yyyy/mm/dd/hh/mm".
Press "∧" or "∨" to change the setting.



Step4. After making all settings,
If select "OK" and press "OK", the screen returns to Step2.
If press"⮌", the confirmation screen is displayed.
Select "Save" and press "OK" to confirm the setting and the screen returns to Step2.
Select "Not Save", it returns to Step2 without any setting changes.
If press "⮌" again, it returns to Step3.

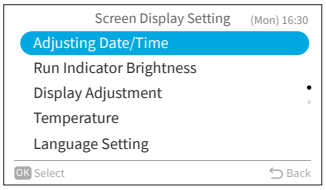


Screen Display Setting

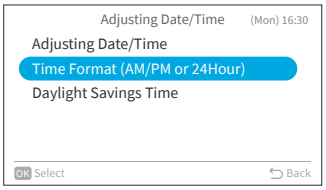
Time Format

1. Set time format

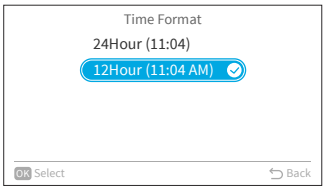
Step1. Select "Adjusting Date/Time" on the "Screen Display Setting" screen and press "OK".



Step2. Press "∧" or "∨" to select "Time Format" and press "OK".



Step3. Press "∧" or "∨" to select 24 hour or 12 hour and press "OK".
Press "⮌" to return to Step2.

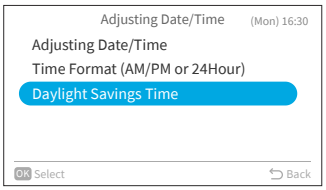


Daylight Savings Time

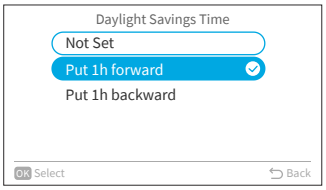
This function adjusts time forward or backward an hour when daylight savings time starts or ends.

1. Set daylight savings time

Step1. Select "Daylight Savings Time" on the "Adjusting Date/Time" screen and press "OK".



Step2. Press "∧" or "∨" to select the setting and press "OK".

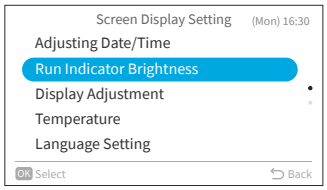


Run Indicator Brightness

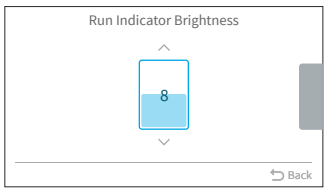
This function is to set the LED brightness of operation on/off indicator, the higher lever means greater brightness.

1. Set run indicator brightness

Step1. Select "Run Indicator Brightness" on the "Screen Display Setting" screen and press "OK".



Step2. Press "∧" or "∨" to change the brightness value. Select "OK" and press "OK", the screen returns to the "Screen Display Setting" screen.



NOTE:

- When the run indicator brightness is set to be 0, the backlight turns off after no operation for the set time. In this case, the current status is not indicated.

Display Adjustment

Function	Action
Backlight Brightness	Adjust the brightness of the backlight.
Backlight Dim Time	Change the time when the backlight turns dim after inactivity.
Backlight Off Time	Change the time when the backlight turns off after inactivity.

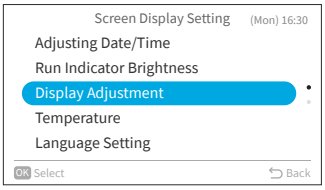
NOTE:

- Backlight Brightness: brightness level range depends on indoor unit model.

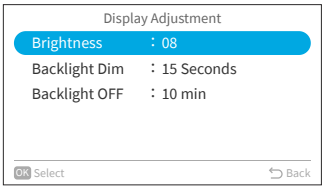
Backlight Brightness

1. Set backlight brightness

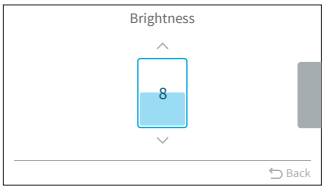
Step1. Select "Display Adjustment" on the "Screen Display Setting" screen and press "OK".



Step2. Select "Brightness" and press "OK".



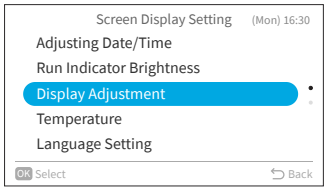
Step3. Press "∧" or "∨" to change the brightness value.
Select "OK" and press "OK", the screen returns to Step2.



Backlight Dim Time

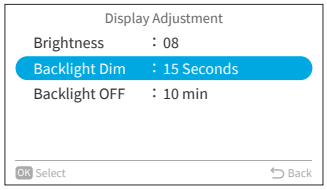
This function is used to set the time for the backlight to be dimmed to the lowest brightness. For example, if the backlight dim time is set to 15 seconds, the backlight will remain at selected brightness for 15 seconds and then dim.

Step1. Select "Display Adjustment" on the "Screen Display Setting" screen and press "OK".

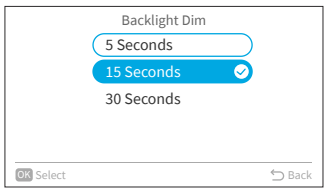


Screen Display Setting

Step2. Select "Backlight Dim" and press "OK".



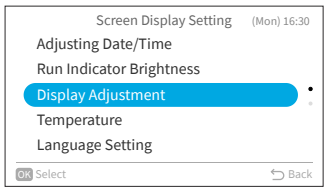
Step3. Press "∧" or "∨" to select the dim time intervals and press "OK". The item changes as follows:
"5 seconds" ↔ "15 seconds" ↔ "30 seconds".



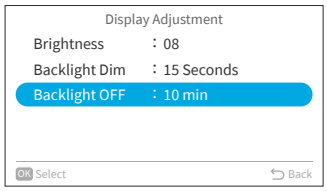
Backlight Off Time

1. Set backlight off time

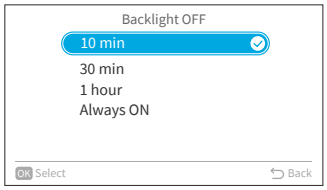
Step1. Select "Display Adjustment" on the "Screen Display Setting" screen and press "OK".



Step2. Select "Backlight OFF" and press "OK".



Step3. Press "∧" or "∨" to select the off time intervals and press "OK".
Press "⮌" to return to Step2.



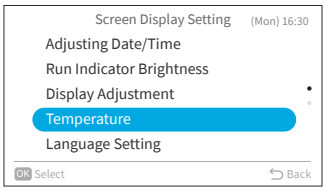
Temperature

Function	Action
Unit and Width	Change temperature unit and width.
Display of Thermistor Temperature	Show/hide the thermistor temperature display on the home screen.

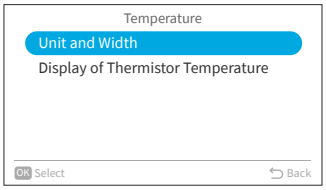
Temperature Unit and Width

1. Set temperature unit and width

Step1. Select "Temperature" on the "Screen Display Setting" screen and press "OK".



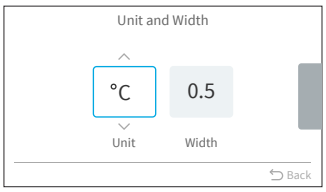
Step2. Press "∧" or "∨" to select "Unit and Width" and press "OK".



Step3. Press "<" or ">" to select unit or width.
Press "∧" or "∨" to change the setting.

- When the unit is selected, it changes as between: °F ↔ °C.
- When the width is selected, it changes as between: 0.5 ↔ 1.
  (The width can be set only when the unit is °C.)

After making all settings, select "OK" and press "OK", the screen returns to Step2.



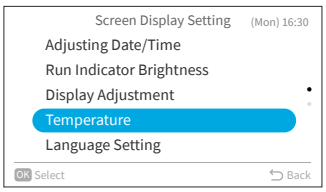
NOTE:

- Once the unit is changed, the preset temperature upper/lower limit will be invalid, please set it again(refer to **"Temperature Range Restriction"**).

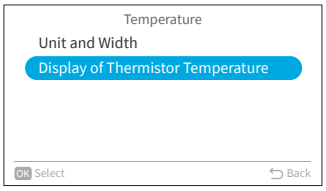
Display of Thermistor Temperature

1. Set thermistor temperature display

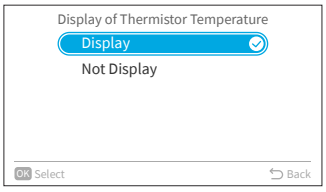
Step1. Select "Temperature" on the "Screen Display Setting" screen and press "OK".

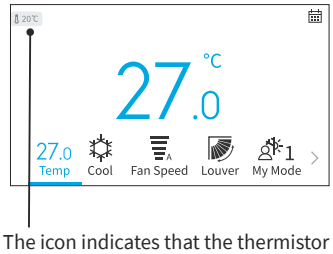


Step2. Press "∧" or "∨" to select "Display of Thermistor Temperature" and press "OK".



Step3. Press "∧" or "∨" to select the setting and press "OK".
Press "⮌" to return to Step2.





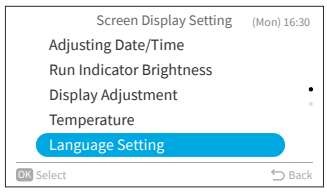
The icon indicates that the thermistor temperature is set to be displayed.

Language Setting

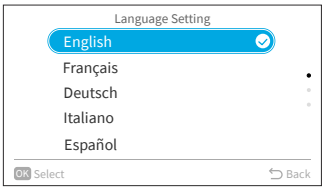
This function is to change the displayed language.
Selectable language: English, French, Dutch, Italian, Spanish, Portuguese, German, Danish, Greek, Croatian, Czech, Polish, Romanian.

1. Set display language

Step1. Select "Language Setting" on the "Screen Display Setting" screen and press "OK".



Step2. Press "∧" or "∨" to select the language and press "OK".
Press "⮌" to return to "Screen Display Setting" screen.

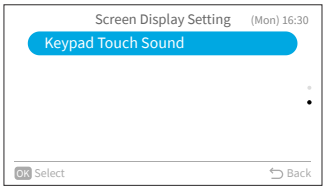


Keypad Touch Sound

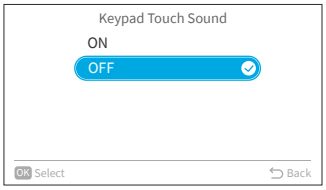
This function is to turn ON/OFF the touch sound of keypad on wired remote controller.

1. Set keypad touch sound

Step1. Select "Keypad Touch Sound" on the "Screen Display Setting" screen and press "OK".



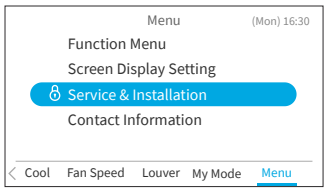
Step2. Press "∧" or "∨" to select the sound volume and press "OK".
Press "⮌" to return to "Screen Display Setting" screen.



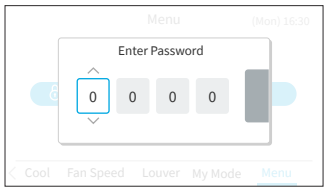
10.5 Service & Installation Screen

Service & Installation menu is protected by a password.

Step1. Select "Service & Installation" on "Menu" screen and press "OK".



Step2. Press "^", "v", "<", or ">" to input the password.
Press ">" to select "OK" and press "OK" to enter Service & Installation menu screen.

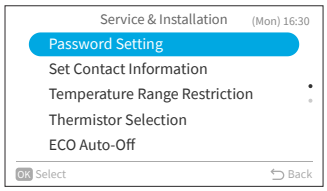


Password Setting

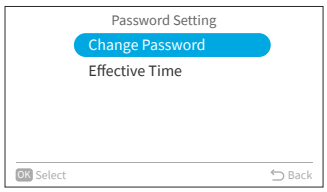
The default user password can be changed. If you forget the changed user password, a supervisor password can be used to reset the user password again. The supervisor password is "5567".
The password input effective time can be set also.
If the password input effective time has been set, then the password is required to be entered only once during the password effective time.

1. Change Password

Step1. Select "Password Setting" on "Service & Installation" screen and press "OK".

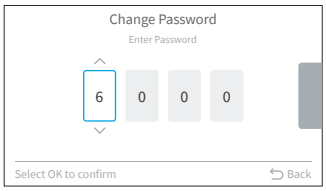


Step2. Select "Change Password" and press "OK".

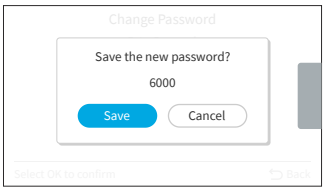


Service & Installation Screen

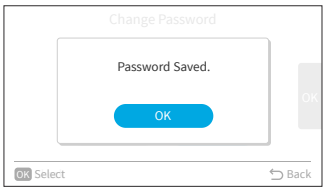
Step3. Press "∧", "∨", "<", or ">" to set the password, select "OK" and press "OK".



Step4. Press "<"or ">" to select "Save" and press "OK" to save password.

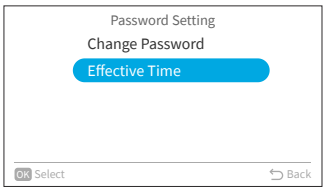


Press "OK", the new password is saved.

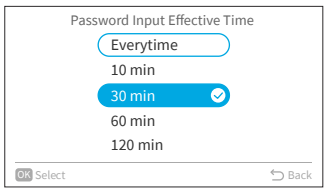


2. Set Password Input Effective Time

Step1. Select "Effective Time" on "Password Setting" screen and press "OK".



Step2. Press "∧" or "∨" to select the setting item and press "OK" to confirm the setting. The item changes as follows:
"Everytime" ↔ "10 min" ↔ "30 min" ↔ "60 min" ↔ "120 min".
Press "⮌" and it returns to Step3.



NOTES:

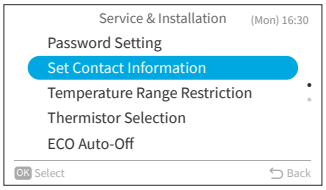
- In order to enhance the security protection, please be sure to change the default password.
- If you enter the wrong password more than 5 times, you will not be able to enter the password within 1 minute.
- The default password is "0000", and the supervisor code is "5567".
- If you forget the password, use the supervisor code to change the password.
- The supervisor code can't be changed.

Set Contact Information

Register a service contact (service address and service telephone number are recommended).

1. Register Contact Information

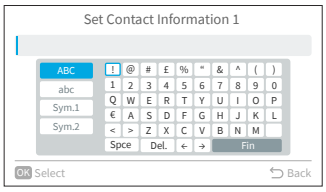
Step1. Select "Set Contact Information" on the Service & Installation screen and press "OK".



Step2. " Set Contact Information1" screen is displayed. Press "〈" to move cursor to font type. Press "∧" or "∨" to select the font type.
*Each time you want to change the font type, press "〈" to move the cursor back to font type.

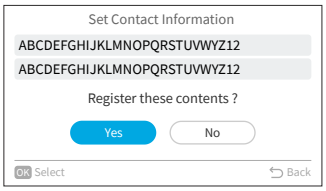
Step3. Press "〉" to move cursor to the keypad. Press "∧", "∨", "〈", or "〉" to select the font and press "OK" to register it.(Up to 60 characters can be used for each contact information.)

Step4. After all the characters have been set, select "Fin" and press "OK".



Step5. "Set Contact Information2" screen is displayed, repeat Step2, Step3 and Step4.

Step6. Select "Yes" and press "OK" to confirm the setting and Step1 is displayed.
If "No" is selected , the screen returns to Step2.

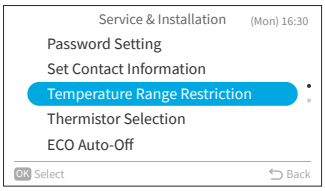


Temperature Range Restriction

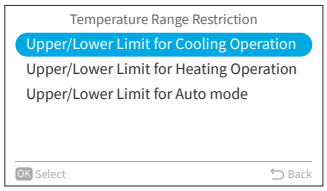
The temperature range can be set by the wired remote controller.

1. Set Temperature Range

Step1. Select "Temperature Range Restriction" on the Service & Installation screen and press "OK".

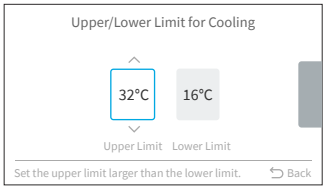


Step2. Select "Upper/Lower Limit for Cooling Operation"/"Upper/Lower Limit for Heating Operation"/ "Upper/Lower Limit for Auto mode" and press "OK".



Step3. Press "<", ">" to select the setting limit, then press "^", "v" to change the temperature value.

Step4. After value setting, select "OK" and press "OK". Press "⮌" to return to Step2.



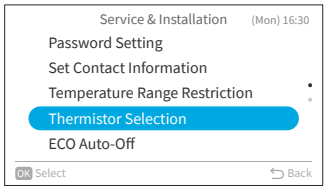
NOTE:

- Please make sure that the upper limit value is equal to or greater than the lower limit value.

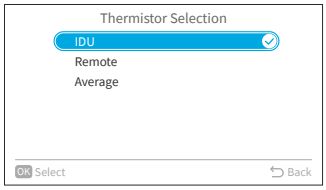
Thermistor Selection

This function is to select wired remote controller thermistor or indoor unit thermistor as the room temperature.

Step1. Select "Thermistor Selection" on the Service & Installation screen and press "OK".



Step2. Select the desired item and press "OK".



NOTE:

- If one of indoor unit or wired remote controller thermistor is broken, the other normal thermistor is selected automatically.

ECO Auto-Off

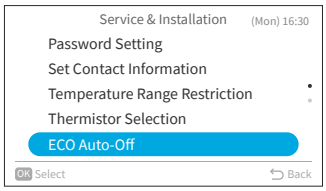
The default Auto-off time is set at 20min, it can be changed from 20min to 120min as described below. When the timer defined by "Auto-Off Timing" elapsed, wired remote controller will turn off indoor unit.

NOTE:

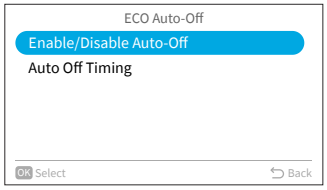
- "ECO Auto-Off" maybe not available depending on the indoor unit.

1. Enable/Disable Auto-Off

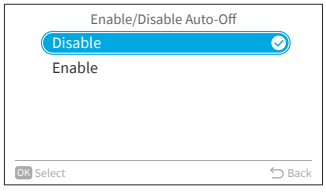
Step1. Select "ECO Auto-Off" on the Service & Installation screen and press "OK".



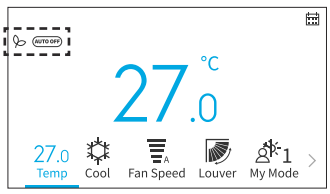
Step2. Select "Enable/Disable Auto-Off" and press "OK".



Step3. Press "∧" or "∨" to select "Disable"/"Enable" and press "OK" to enable/disable Auto-Off.

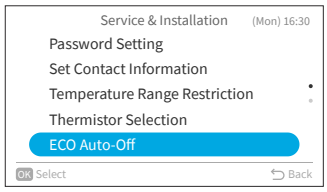


When "ECO Auto-Off" is enabled and "Standard ECO mode" is started(refer to Page 27), "" and "AUTO OFF" are displayed on home screen.

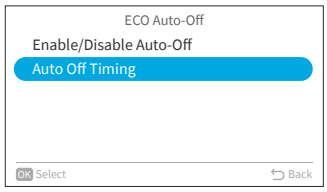


2. Set Auto-Off Timing

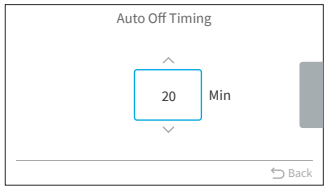
Step1. Select "ECO Auto-Off" on the Service & Installation screen and press "OK".



Step2. Press "﹀" to select "Auto-Off Timing" and press "OK".



Step3. Press "∧" or "﹀" to change the time from 20min to 120min, then press "›" to select "OK" and press "OK".

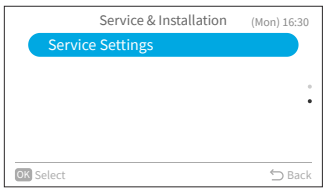


10.6 Service Settings

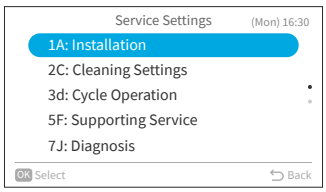
- The service setting items displayed in list depend on indoor unit model.
- When no operation for 2 hours on Service settings or sub settings screen, it returns to home screen.
- When the air conditioner is turned on, service setting is disabled.
- When entering each setting screen, "Please wait for a moment" screen would appear for several seconds.
- For more information of service settings, please refer to service manual of the wired remote controller.

Installation

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".



Step2. Select "1A: Installation" and press "OK".

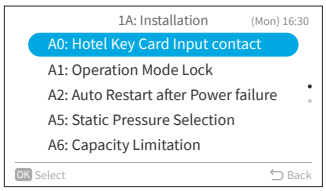


NOTE:

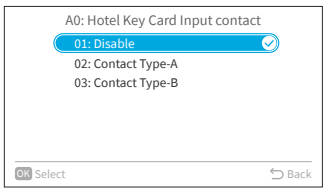
- Once the setting in 1A is changed, it may take some time to reconnect with the indoor unit.

Hotel Key Card Input contact

Step1. Select "A0: Hotel Key Card Input contact" on "1A: Installation" screen and press "OK".



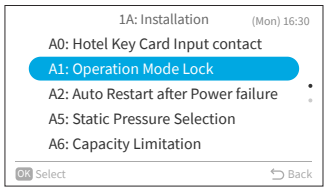
Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.



Service Settings

Operation Mode Lock

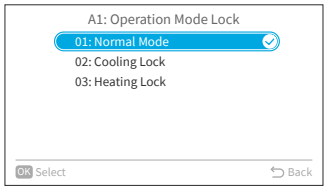
Step1. Select "A1: Operation Mode Lock" on "1A: Installation" screen and press "OK".



Step2. Press "∧" or "∨" to select the desired item and press "OK".
The lock result of each item is as follow.

●: Selectable + Default value ○: Selectable -: Unselectable

Setting item	Auto	Heat	Dry	Cool	Fan
01: Normal Mode	●	○	○	○	○
02: Cooling Lock	-	-	○	●	○
03: Heating Lock	-	●	-	-	○



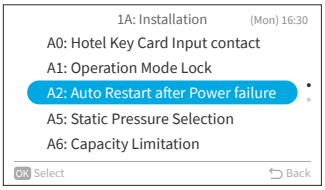
Press "⮌" to return to Step1 after reconnection.

NOTE:

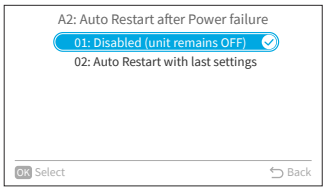
- The operation lock setting will remain unchanged after the unit is turned off.

Auto Restart after Power failure

Step1. Select "A2: Auto Restart after Power failure" on "1A: Installation" screen and press "OK".

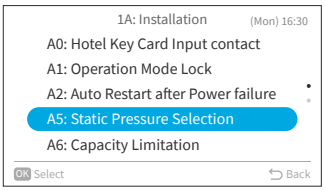


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.

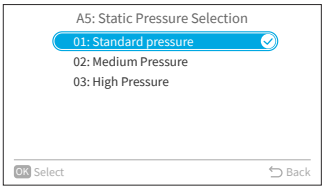


Static Pressure Selection

Step1. Select "A5: Static Pressure Selection" on "1A: Installation" screen and press "OK".

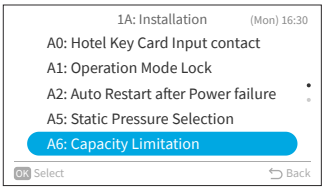


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.

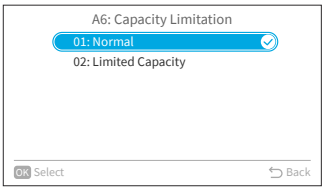


Capacity Limitation

Step1. Select "A6: Capacity Limitation" on "1A: Installation" screen and press "OK".

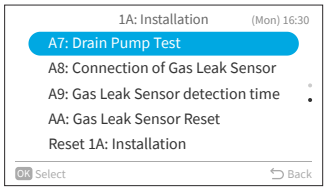


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.

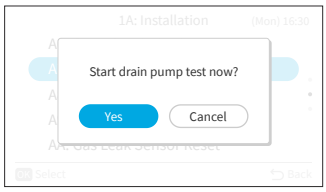


Drain Pump Test

Step1. Select "A7: Drain Pump Test" on "1A: Installation" screen and press "OK".

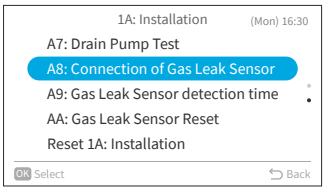


Step2. Select "Yes" and press "OK" to start drain pump test.
Press "⮌" to return to Step1 after reconnection.

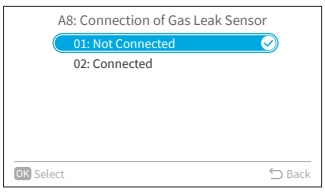


Connection of Gas Leak Sensor

Step1. Select "A8: Connection of Gas Leak Sensor" on "1A: Installation" screen and press "OK".

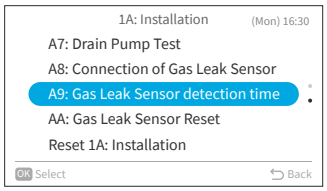


Step2. Press "⩓" or "⩔" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.

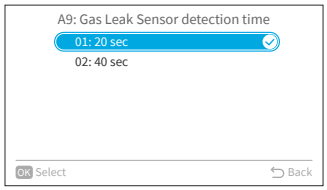


Gas Leak Sensor detection time

Step1. Select "A9: Gas Leak Sensor detection time" on "1A: Installation" screen and press "OK".

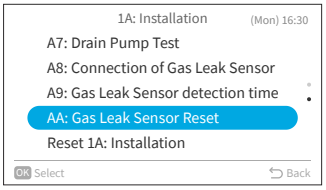


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1 after reconnection.

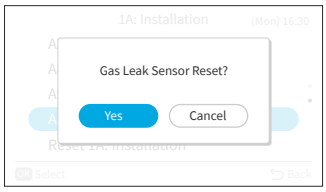


Gas Leak Sensor Reset

Step1. Select "AA: Gas Leak Sensor Reset" on "1A: Installation" screen and press "OK".



Step2. Select "Yes" and press "OK" to reset gas leak sensor.
Press "⮌" to return to Step1 after reconnection.

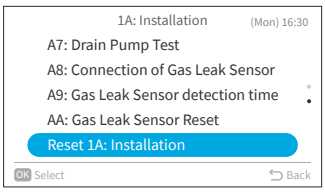


NOTE:

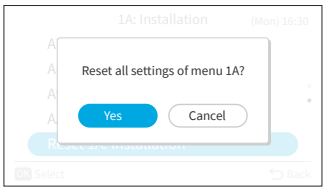
- This setting is only available when the indoor unit reports Alarm Code 041(Gas Leak Error), in other case, it is unavailable to set and displays with an icon "⃠".

Reset 1A: Installation

Step1. Select "Reset 1A: Installation" on "1A: Installation" screen and press "OK".

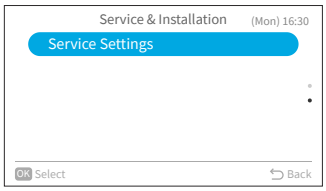


Step2. Select "Yes" and press "OK" to reset all settings of menu 1A. After settings are initialized, it turns to home screen.

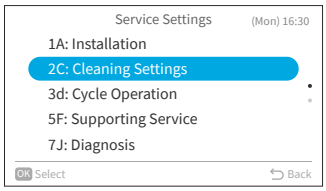


Cleaning Settings

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

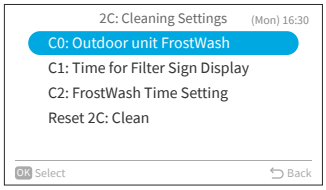


Step2. Select "2C: Cleaning Settings" and press "OK".

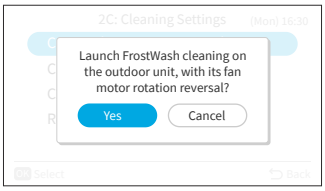


Outdoor unit FrostWash

Step1. Select "C0: Outdoor unit FrostWash" on "2C: Cleaning Settings" screen and press "OK".

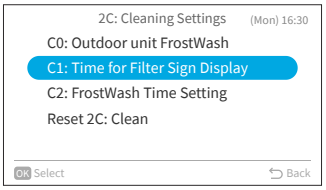


Step2. Select "Yes" and press "OK" to launch Frostwash cleaning of outdoor unit. Then it returns to Step1.

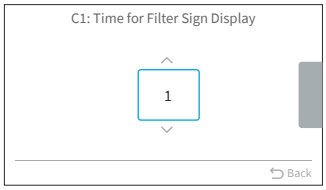


Time for Filter Sign Display

Step1. Select "C1: Time for Filter Sign Display" on "2C: Cleaning Settings" screen and press "OK".



Step2. Press "∧" or "∨" to change the cumulative amount of time the air conditioner takes to display the filter cleaning recommendation sign, then press ">" to select "OK" and press "OK". Then it returns to Step1.
The cumulative time of adjustment value is as follow:

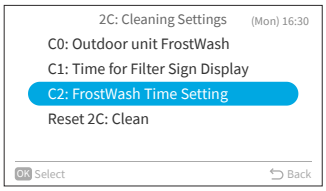


Adjustment value	Time to display filter sign
-1	100Hr
0	200Hr (default)
1	300Hr
2	400Hr

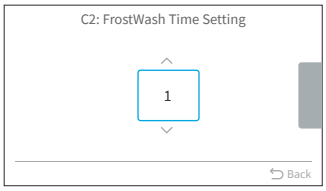
Service Settings

FrostWash Time Setting

Step1. Select "C2: FrostWash Time Setting" on "2C: Cleaning Settings" screen and press "OK".



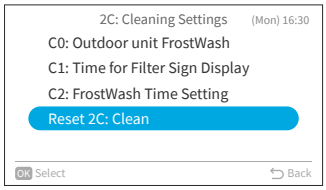
Step2. Press "∧" or "∨" to change the indoor unit auto FrostWash startup time, then press ">" to select "OK" and press "OK". Then it returns to Step1. Adjustment value of cumulative air conditioner time until execution of indoor unit auto FrostWash is as follow.



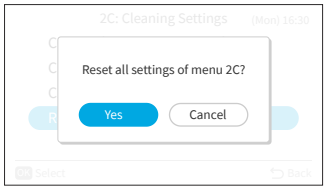
Adjustment value	Time to do auto FrostWash
1	2 Hr
2	6 Hr
3	10 Hr
4	20 Hr
5	42 Hr(Default)
6	60 Hr
7	84 Hr
8	90 Hr
9	100 Hr
10	120 Hr
11	140 Hr
12	160 Hr
13	180 Hr
14	200 Hr
15	250 Hr

Reset 2C: Clean

Step1. Select "Reset 2C: Clean" on "2C: Cleaning Settings" screen and press "OK".

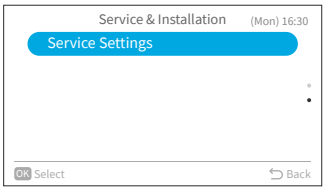


Step2. Select "Yes" and press "OK" to reset all settings of menu 2C. After settings are initialized, it turns to home screen.

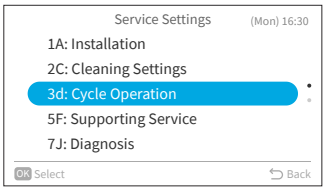


Cycle Operation

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

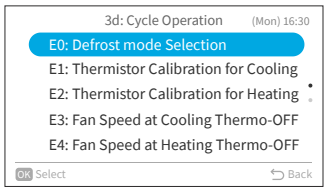


Step2. Select "3d: Cycle Operation" and press "OK".

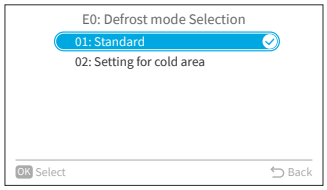


Defrost mode Selection

Step1. Select "E0: Defrost mode Selection" on "3d: Cycle Operation" screen and press "OK".

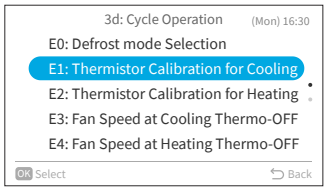


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1.

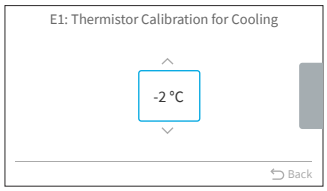


Thermistor Calibration for Cooling

Step1. Select "E1: Thermistor Calibration for Cooling" on "3d: Cycle Operation" screen and press "OK".

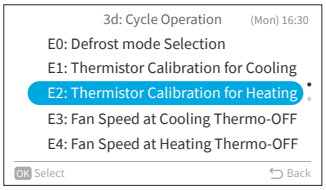


Step2. Press "∧" or "∨" to change the thermistor calibration for cooling, then press ">" to select "OK" and press "OK". Then it returns to Step1.

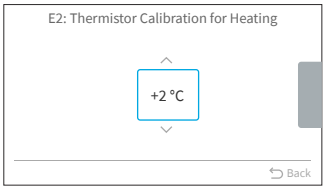


Thermistor Calibration for Heating

Step1. Select "E2: Thermistor Calibration for Heating" on "3d: Cycle Operation" screen and press "OK".

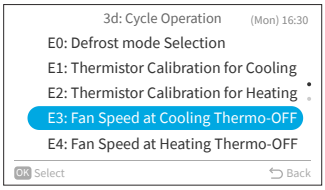


Step2. Press "∧" or "∨" to change the thermistor calibration for heating, then press ">" to select "OK" and press "OK". Then it returns to Step1.

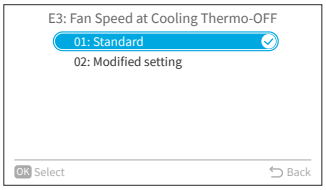


Fan Speed at Cooling Thermo-OFF

Step1. Select "E3: Fan Speed at Cooling Thermo-OFF" on "3d: Cycle Operation" screen and press "OK".

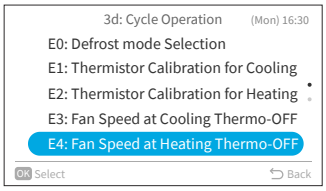


Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1.

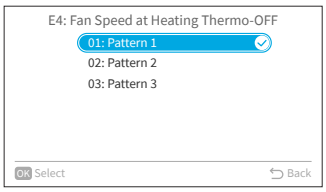


Fan Speed at Heating Thermo-OFF

Step1. Select "E4: Fan Speed at Heating Thermo-OFF" on "3d: Cycle Operation" screen and press "OK".



Step2. Press "∧" or "∨" to select the desired item and press "OK".
Press "⮌" to return to Step1.

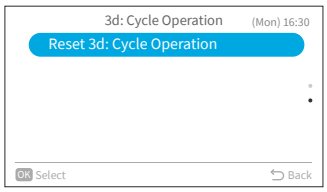


NOTE:

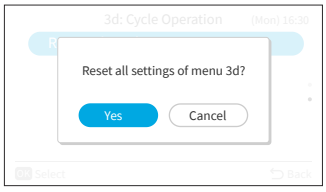
- This setting is available only for multi-model, and it needs to take a long time to get information from indoor unit. If the setting is not displayed on "3d: Cycle Operation" screen, please press "⮌" to return to "Service Setting" screen, wait for a while and go to "3d: Cycle Operation" screen again.

Reset 3d: Cycle Operation

Step1. Select "Reset 3d: Cycle Operation" on "3d: Cycle Operation" screen and press "OK".

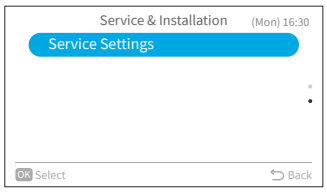


Step2. Select "Yes" and press "OK" to reset all settings of menu 3d. After settings are initialized, it turns to home screen.

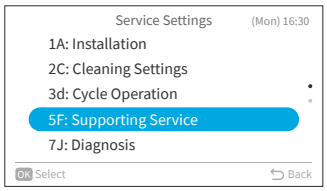


Supporting Service

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".



Step2. Select "5F: Supporting Service" and press "OK".

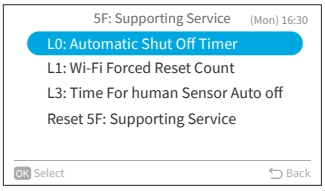


Automatic Shut Off Timer

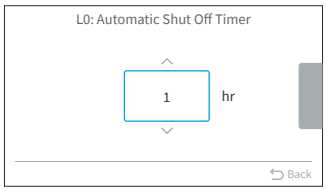
"Automatic Shut Off Timer" is the same feature that was previously referred to as the "Run On Timer" in some of wired remote controllers and indoor unit manuals.

This function is used to automatically shut off indoor unit after a predetermined period of time has elapsed since indoor unit started operation, to prevent forgetting to stop indoor unit operation and reduce power consumption.

Step1. Select "L0: Automatic Shut Off Timer" on "5F: Supporting Service" screen and press "OK".

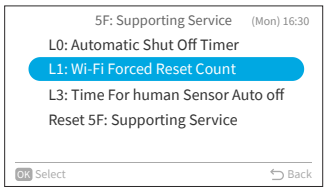


Step2. Press "∧" or "∨" to change the timer value, then press ">" to select "OK" and press "OK". Then it returns to Step1.

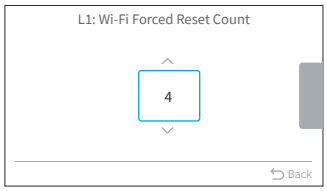


Wi-Fi Forced Reset Count

Step1. Select "L1: Wi-Fi Forced Reset Count" on "5F: Supporting Service" screen and press "OK".

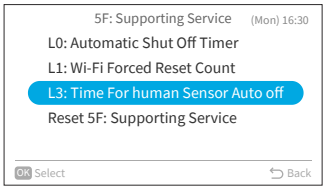


Step2. Press "∧" or "∨" to change the reset count, then press ">" to select "OK" and press "OK". Then it returns to Step1.

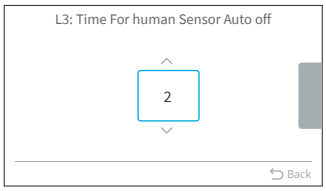


Time For human Sensor Auto off

Step1. Select "L3: Time For human Sensor Auto off" on "5F: Supporting Service" screen and press "OK".



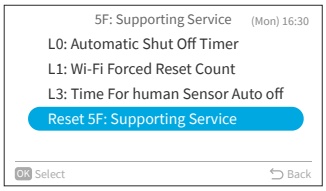
Step2. Press "∧" or "∨" to change the human absence detection time, then press ">" to select "OK" and press "OK". Then it returns to Step1.
Adjustment value of absence time until Auto off execution is as follow.



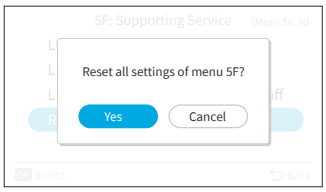
Adjustment value	Time to do Auto off
-3	20 min
-2	30 min
-1	40 min
±0	50 min(default)
+1	60 min
+2	90 min
+3	120 min

Reset 5F: Supporting Service

Step1. Select "Reset 5F: Supporting Service" on "5F: Supporting Service" screen and press "OK".

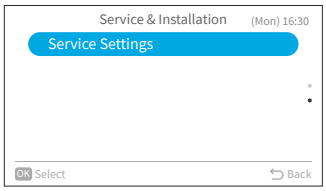


Step2. Select "Yes" and press "OK" to reset all settings of menu 5F. After settings are initialized, it turns to home screen.

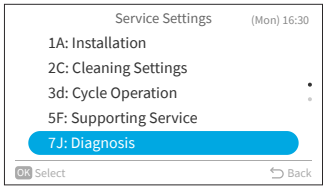


Diagnosis

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

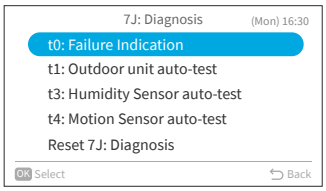


Step2. Select "7J: Diagnosis" and press "OK".

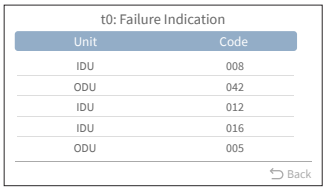


Failure Indication

Step1. Select "t0: Failure Indication" on "7J: Diagnosis" screen and press "OK".

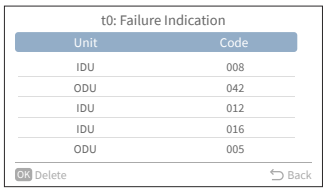


Step2. The failure indication screen is shown.

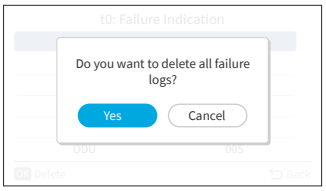


NOTE:

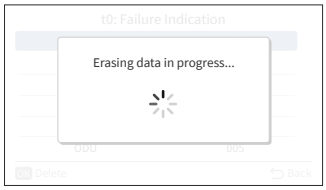
- Second time to go to t0 after indoor unit and wired remote controller is powered on: Failure indication screen with a "Delete".



Step3. Press "OK" and a reminder shows up. Select "Yes" and press "OK" to delete all failure logs.

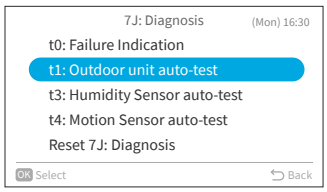


Step4. After completing erasing, it turns to home screen.

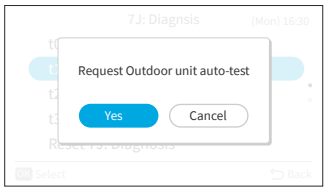


Outdoor unit auto-test

Step1. Select "t1: Outdoor unit auto-test" on "7J: Diagnosis" screen and press "OK".

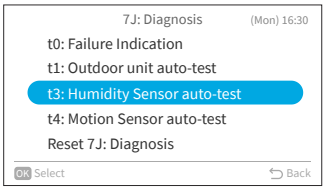


Step2. Select "Yes" and press "OK" to request outdoor unit auto-test. Then it returns to Step1.

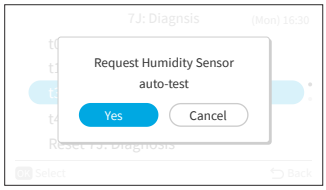


Humidity Sensor auto-test

Step1. Select "t3: Humidity Sensor auto-test" on "7J: Diagnosis" screen and press "OK".

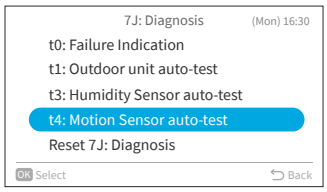


Step2. Select "Yes" and press "OK" to request humidity sensor auto-test. Then it returns to Step1.

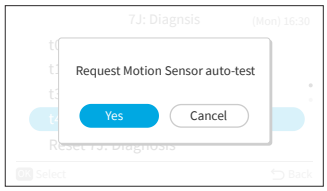


Motion Sensor auto-test

Step1. Select "t4: Motion Sensor auto-test" on "7J: Diagnosis" screen and press "OK".

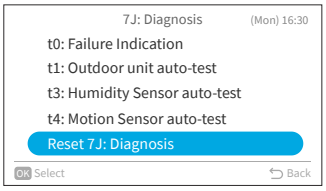


Step2. Select "Yes" and press "OK" to request motion sensor auto-test. Then it returns to Step1.

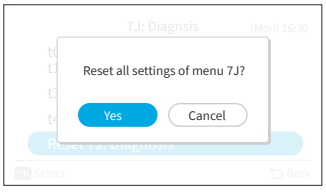


Reset 7J: Diagnosis

Step1. Select "Reset 7J: Diagnosis" on "7J: Diagnosis" screen and press "OK".

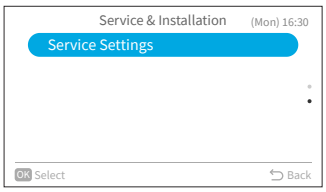


Step2. Select "Yes" and press "OK" to reset all settings of menu 7J. After settings are initialized, it turns to home screen.

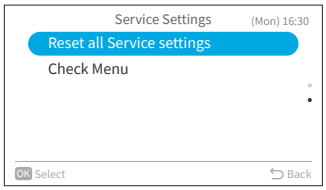


Reset All Service Settings

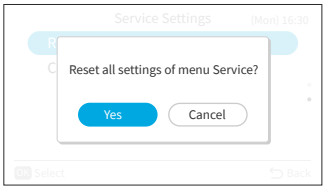
Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".



Step2. Select "Reset all Service settings" and press "OK".



Step3. Select "Yes" and press "OK" to reset all service settings. After settings are initialized, it turns to home screen.



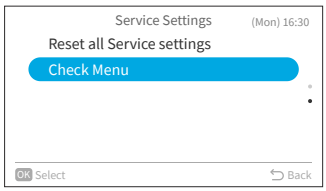
10.7 Contact Information

Check Menu

This menu displays various statuses of the air conditioner.

1. Enter Check Menu

Step1. Select "Check Menu" on the "Service Settings" screen and press "OK".



Each "Check Menu" item and its function is explained in the following table.

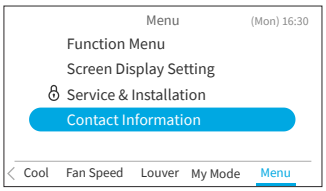
Item	Function
Remote controller auto-test	The wired remote controller checkout process begins and various settings initialize.
Alarm History Display *	Previous alarm history data including date, time, indoor unit number, and alarm code is displayed. (30 Max) The alarm history can be deleted.*

* Press "OK" while the alarm history is displayed, the confirmation screen for deleting the alarm history is displayed. Select "Yes" and press "OK" to delete the alarm history.

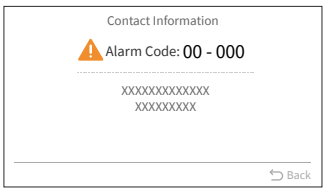
Contact Information

The screen displays service contact information and the latest alarm code.

Step1. Select "Contact Information" on the "Menu" screen and press "OK".



→Display service contact information and the latest alarm code.
Press "⮌" to return to the "Menu" screen.



11. H-LINK ADAPTOR – PSC 6RAD

11.1 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.

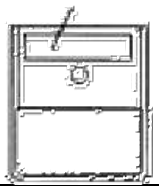
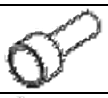
CAUTION:

– 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.

11.2 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	 **ϕ3.0 x 10mm**
2 screws for attaching to wooden wall	 **ϕ3.1 x 16mm**

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.

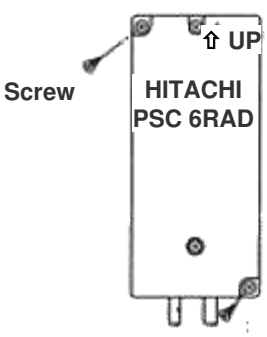
Upper side

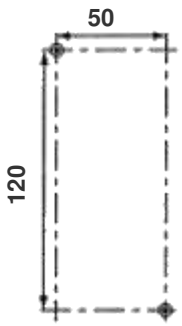
Mark "⇧ UP"

Wiring outlet

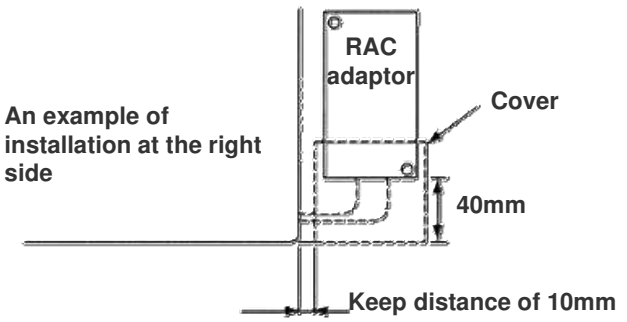
Bottom side

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.

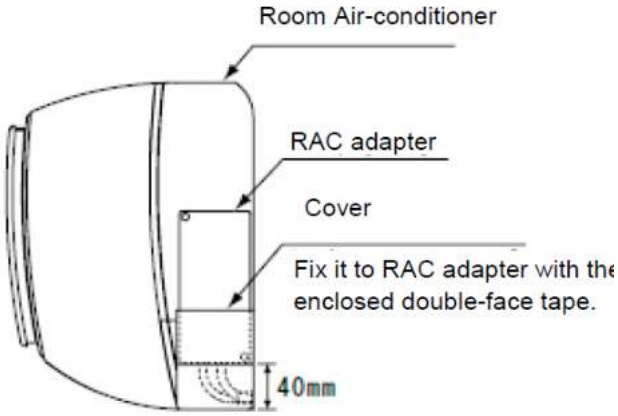




      ii) When using the cover
      It can be installed at the right and left side of room air conditioner. Fix the cover and RAC adaptor with the two-sided tape (accessory).



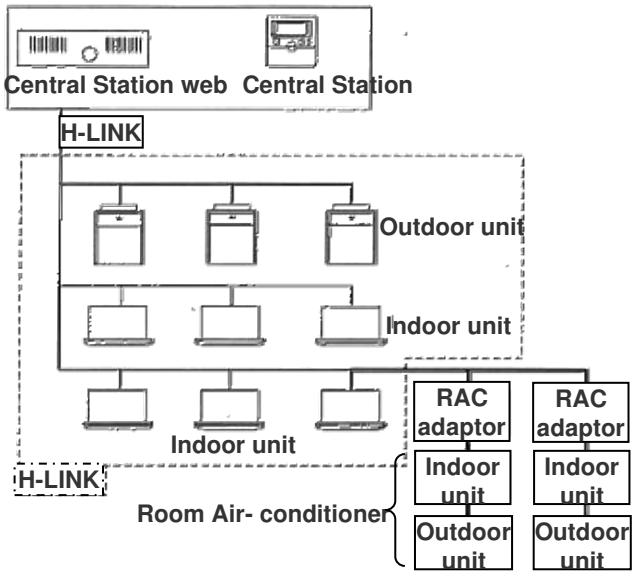
b) When installing on the room air-conditioner
In case that it cannot be installed to the wall due to the space or material problem, install the RAC adaptor with the two-sided tape (accessory) on the room air-conditioner.
   i) Confirm if the piping cover of the unit can be removed when performing the 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)
   ii) 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.

11.3 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
  i) Remove the front cover of the room air-conditioner and the cover of electrical box.
  ii) 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.

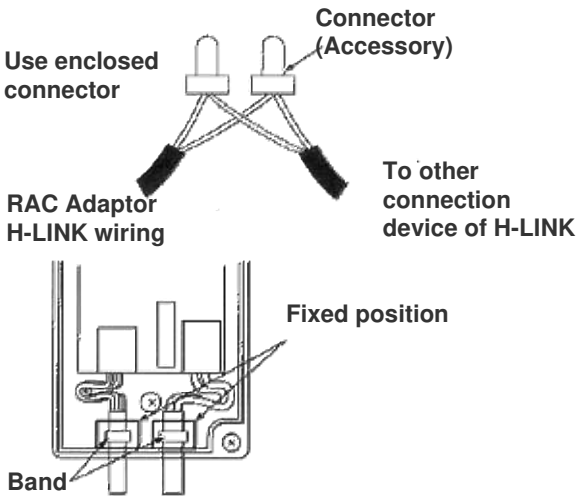
CAUTION:

– 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.

11.4 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.

1) 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.

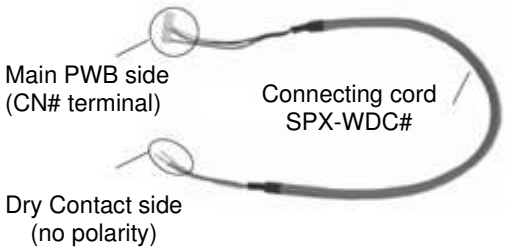
2) Registration
   Confirm if the RAC adaptor connection is recognized.

3) 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.

12. DRY CONTACT (SPX-WDC3) APPLICATION (SETTING BASED ON HHRC)

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.

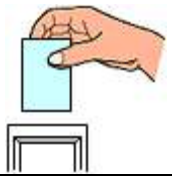
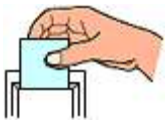
Table 1 (Applicable models and related information)

Optional Connecting cord Accessory SPX-WDC#		Model	DIP SW Label	CN#
	SPX-WDC3	RAK-XJ09PHAA RAK-XJ12PHAA RAK-XJ18PHAA RAK-XJ24PHAA	-	CN6

- Please decide A or B type of dry contact, you can use HHRC method and more details you can refer to page 24.

Function name	Value	Layer 1	Layer 2	Layer 3
		Category	Function	Value
CardKey	Disable	1A	A0	01
	Card Key Input – A Enable			02
	Card Key Input – B Enable			03
	Reserve			04 ~ 99

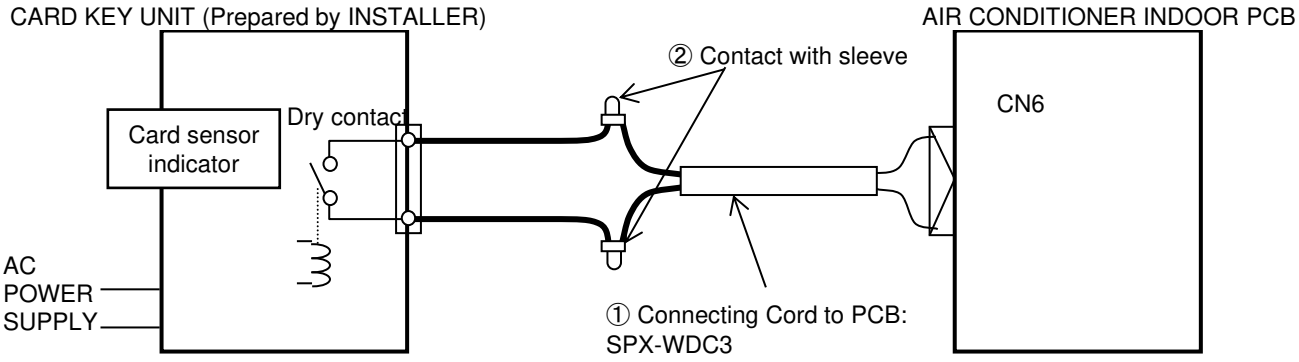
[1] CHECK DRY CONTACT OF CARD KEY UNIT

	AIR CONDITIONER Standby	**AIR CONDITIONER Operating**
CARD KEY (Door Switch)	REMOVE 	INSERT 
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.

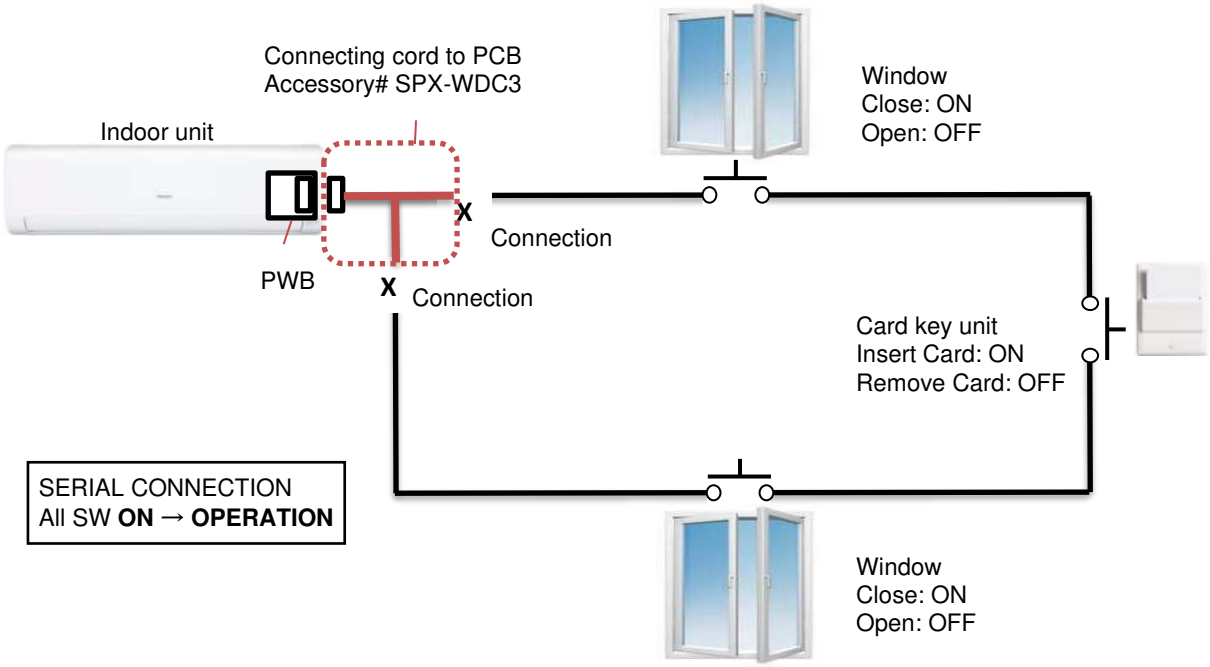
- When the CARD KEY is in insert condition, the air conditioner operation is allowable by remote controller.
- When the dry contact switch on the Card Key Unit is open (refer to diagram below for contact type a), the unit stops to operate (it takes 10 seconds to stop the unit operation after the dry 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)

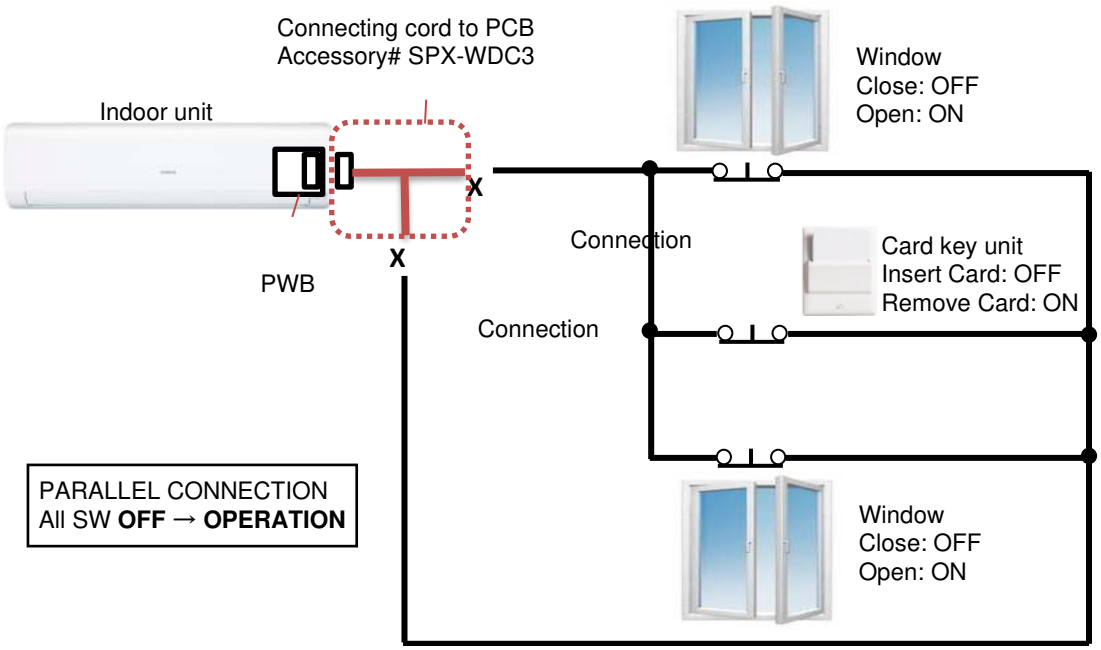


- CONNECTION EXAMPLE

i. HHRC for Dry Contact Type A



ii. HHRC for Dry Contact Type B

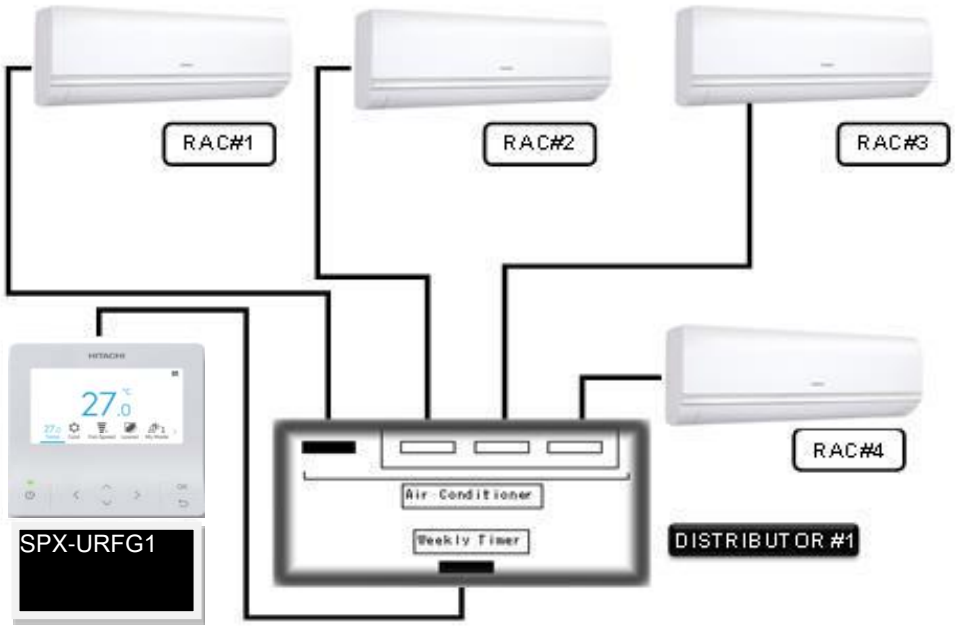


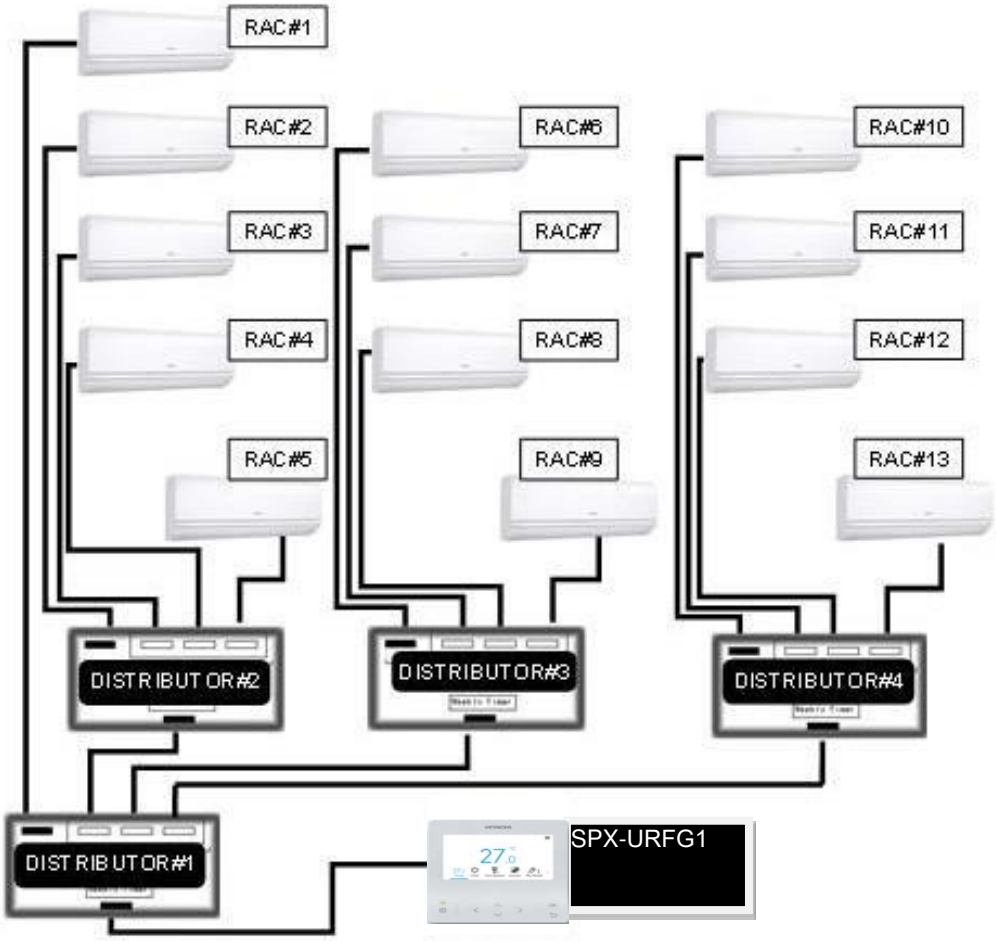
Please refer to the actual manual supplied with the optional connecting cords SPX-WDC3 for more details.

13. DISTRIBUTOR – SPX-DST1

The optional distributor is to be used together with the wired remote controller when there is a need to centralize the control of multiple indoor units using only a single wired remote controller.

A single distributor could be connected further to 3 separate distributors so that up to 13 units of indoor could be controlled by a single wired remote controller.





Specification in this document are subject to change without notice, in order that Johnson Controls Hitachi Air Conditioning Malaysia Sdn. Bhd. may bring the latest innovations to their customers.

Johnson Controls Hitachi Air Conditioning Malaysia Sdn. Bhd.

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