

Duct type

1. Specifications

Model			DC-12U	DC-18U	DC-24U
Power supply		Ph-V-Hz	L,220-240V,50Hz	1,220-240V,50Hz	1,220-240V,50Hz
Cooling	Capacity	3tu/h	12000	18,000	24,000
	Capacity	cW	3.5	5.3	7.1
	nput	N	1140	1900	2560
	Rated current	A	6	8.8	12.2
	EER	3tu/w.h	10.52	9.6	9.4
heating	Capacity	3tu/h	13000	20,500	27,300
	Capacity	cW	3.8	6	8
	nput	N	1200	1900	2500
	Rated current	A	6.8	8.8	11
	COP	3tu/w.h	11.1	10.7	11
Moisture Removal		/h	1.2	1.8	2.4
Max. input consumption		N	1950	2300	3300
Max. input current		A	8.9	11.7	15.3
Starting current		A	26	36.8	61
Compressor	Model		PA140X2C-4FT	PA225X2CS-4KU	PA290X3CS-4MU1
	Type		ROTARY	ROTARY	ROTARY
	Brand		MIDEA-TOSHIBA	MIDEA-TOSHIBA	MIDEA-TOSHIBA
	Supplier		MIDEA-TOSHIBA A (Guangdong)	MIDEA-TOSHIBA A (Guangdong)	MIDEA-TOSHIBA (Guangdong)
	Capacity	3tu/h	11567	18834	24498
	nput	N	1145	1870	2430
	Rated current (RLA)	A	5.3	8.75	11.4
	Locked rotor Amp (LRA)	A	26	36.8	61
	Thermal protector		INNER	INNER	INNER
	Capacitor	μF	35/370 μF/V	50/370 μF/V	50/400 μF/V
	Refrigerant oil	ml	RB68AF/T68/A6 8tf 480	ESTER OIL VG74 750	ESTER OIL VG74 950
Indoor fan motor	Model		RPS20D	YSK55-4D	YSK74-4C
	Brand		WELLING	WELLING	WELLING
	nput	N	24.5/30.5/24.3	117/110/101	170/150/133
	Capacitor	μF	1.0uF/450V	3.0uF/450V	6.5uF/450V
	Speed (hi/mid/lo)	/min	940/840/760	900/800/690	1100/1020/900
Indoor coil	Number of rows		2	2	3
	Tube pitch(a)x row pitch(b)	mm	21X13.37	25.4×22	25.4×22
	Fin spacing	mm	1.5	1.7	1.7
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia. and type	mm	Φ7 innergroove tube	Φ9.53, innergroove tube	Φ9.53,innergroove e innergroove
	Coil length x height x width	mm	700X350X26	800×254×44	800×254×66

	Number of circuits		4	3	3
Indoor air flow (Hi/Mid/Lo)	m ³ /h		580/490/420	1160/1100/1050	1460/1400/1350
Indoor external static pressure (Hi)	Pa		10	40	40
Indoor noise level (Hi/Mid/Lo)	dB(A)		44/39/35	44/38/35	44/38/35
Indoor unit	Dimension (W*H*D)	mm	955×385×210	1000×298×800	1000×298×800
	Packing (W*H*D)	mm	1114×469×277	1205×370×940	1205×370×940
	Net/Gross weight	kg	15/19	36/43	38/45
Outdoor fan motor	Model		YDK24-6F	YDK53-6K	YDK53-6H
	Brand		WELLING	WELING	WELLING
	Input	W	56	130	130
	Capacitor	μF	2.5μF/450V	2.5μF/450V	3μF/450V
	Speed	/min	800	750	800
Outdoor coil	Number of rows		2	2	2
	Tube pitch(a)× row pitch(b)	mm	25.4 ×22	25.4×22	25.4×22
	Fin spacing	mm	1.4	1.8	1.5
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ9.53×0.35 Innergroove tube	Φ9.53,innergroove tube	Φ9.53,innergroove tube
	Coil length x height x width	mm	651×559×44	775×660×44	850×810×44
	Number of circuits		2	3	4
Outdoor air flow	m ³ /h		2100	2400	3000
Outdoor noise level	dB(A)		43	48	55
Outdoor unit	Dimension (W*H*D)	mm	760×590×285	845×695×335	895×860×330
	Packing (W*H*D)	mm	887×655×355	970×770×395	1043×915×395
	Net/ Gross weight	kg	44/48	57/62	68/70
Refrigerant type/Quantity	kg		R410A/1120	R410A/2050	R410A/2600
Design pressure (high side/low side)	MPa		4.2/2.5	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	6.35 (1/4)	6.35 (1/4)	9.53 (3/8)
	Gas side	mm(inch)	12.7 (1/2)	12.7 (1/2)	16 (5/8)
	Max. pipe length	m	25	25	30
	Max. difference in level	m	15	15	15
Operation temp			17~30	17~30	17~30
Ambient temp			-7~45	-7~45	-7~45
Application area	m ²		18~26	34~49	40~56
Qty'per 20' /40' /40'HQ	set		68/144/216	34/76/94	34/76/94

Model			DC-30UT	DC-36UT
Power supply		Ph-V-Hz	3,380V,50Hz	3,380V,50Hz
Cooling	Capacity	Btu/h	30000	36,000
	Capacity	kW	8.8	10.5
	Input	W	3250	3700
	Rated current	A	5.5	6.5
	EER	Btu/w.h	9.3	9.7
Heating	Capacity	Btu/h	32000	39,000
	Capacity	kW	9.4	11.4
	Input	W	3250	3350
	Rated current	A	5.5	5.8
	COP	Btu/w.h	10	11.6
Moisture Removal		l/h	3	3.6
Max. input consumption		W	4620	4620
Max. input current		A	8.5	8.5
Starting current		A	61	61
Compressor	Model		C-SBN303H8D	C-SBN303H8D
	Type		SCROLL	SCROLL
	Brand		SANYO	SANYO
	Supplier		SANYO(Dalian)	SANYO(Dalian)
	Capacity	Btu/h	33438	33438
	Input	W	3650	3650
	Rated current (RLA)	A	6.58	6.58
	Locked rotor Amp (LRA)	A	61	61
	Thermal protector		INNER	INNER
	Capacitor	uF	/	/
	Refrigerant oil	ml	DAPHNE FV68S 1700	DAPHNE FV68S 1700
Indoor fan motor	Model		YSK59-4A	YSK59-4A
	Brand		WELLING	WELLING
	Input	W	118/108/101	118/108/101
	Capacitor	uF	2.5uF/450V	2.5uF/450V
	Speed (hi/mid/lo)	r/min	820/695/620	820/695/620
Indoor coil	Number of rows		3	3
	Tube pitch(a)x row pitch(b)	mm	25.4×22	25.4×22
	Fin spacing	mm	1.7	1.7
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia. and type	mm	Φ9.53 innergroove innergroove	Φ9.53 innergroove tube
	Coil length x height x width	mm	1150×254×44	1150×254×44

	Number of circuits		4	4
Indoor air flow (Hi/Mid/Lo)		m ³ /h	2070/1950/1860	2070/1950/1860
Indoor external static pressure (Hi)		Pa	70	70
Indoor noise level (Hi/Mid/Lo)		dB(A)	48/44/40	48/44/40
Indoor unit	Dimension (W*H*D)	mm	1350×298×800	1350×298×800
	Packing (W*H*D)	mm	1555×370×940	1555×370×940
	Net/Gross weight	kg	48/57	48/57
Outdoor fan motor	Model		YDK250-6D-WL	YDK250-6D-WL
	Brand		WELLING	WEILING
	Input	W	307	307
	Capacitor	uF	10uF/450V	10uF/450V
	Speed	r/min	740	740
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4×22	25.4×22
	Fin spacing	mm	1.7	1.7
	Fin type (code)		unhydrophilic aluminium	unhydrophilic aluminium
	Tube outside dia.and type	mm	Φ9.53,innergroove tube	Φ9.53, innergroove
	Coil length x height x width	mm	955×915×44	955×915×44
	Number of circuits		8	8
Outdoor air flow		m ³ /h	5000	5000
Outdoor noise level		dB(A)	57	57
Outdoor unit	Dimension (W*H*D)	mm	990×960×360	990×960×360
	Packing (W*H*D)	mm	1120×1090×435	1120×1090×435
	Net/ Gross weight	kg	90/102	90/102
Refrigerant type/Quantity		g	R410A/3100	R410A/3100
Design pressure (high side/low side)		MPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	12.7 (1/2)	12.7 (1/2)
	Gas side	mm(inch)	19 (3/4)	19 (3/4)
	Max. pipe length	m	30	30
	Max. difference in level	m	15	20
Operation temp			17~30	17~30
Ambient temp			-7~45	-7~45
Application area		m ²	50~75	60~85
Qty'per 20' /40' /40'HQ		set	24/52/62	24/52/62

Model			DC-48UT	DC-60UT
Power supply		Ph-V-Hz	3,380V,50Hz	3,380V,50Hz
Cooling	Capacity	Btu/h	48,000	60,000
	Capacity	kW	14	16
	Input	W	4700	6000
	Rated current	A	8.2	9.8
	EER	Btu/w.h	10.2	10
Heating	Capacity	Btu/h	52,000	68,000
	Capacity	kW	15.2	20,000
	Input	W	4900	6000
	Rated current	A	8.6	9.8
	COP	Btu/w.h	10.6	11.3
Moisture Removal		l/h	4.6	6
Max. input consumption		W	5870	7500
Max. input current		A	10.7	12.8
Starting current		A	66	67
Compressor	Model		C-SBN373H8D	C-SBN453H8D
	Type		SCROLL	SCROLL
	Brand		SANYO	SANYO
	Supplier		SANYO(Dalian)	SANYO(Dalian)
	Capacity	Btu/h	48109	55957
	Input	W	4750	5750
	Rated current (RLA)	A	8.22	9.77
	Locked rotor Amp (LRA)	A	66	67
	Thermal protector		INNER	INNER
	Capacitor	uF	/	/
	Refrigerant oil	ml	DAPHNE FV68S 1700	DAPHNE FV68S 1700
Indoor motor fan	Model		YSK59-4A	YSK160-4
	Brand		WELLING	WELLING
	Input	W	118/108/101	324/264/223/186
	Capacitor	uF	2.5uF/450V	10uF/450V
	Speed (hi/mid/lo)	r/min	820/695/620	870/770/700/630
Indoor coil	Number of rows		3	3
	Tube pitch(a)x row pitch(b)	mm	25.4×22	25.4×22
	Fin spacing	mm	1.7	1.7
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia. and type	mm	Φ9.53 innergroove tube	Φ9.53 innergroove tube
	Coil length x height x width	mm	1150×254×44	1150×305×66
	Number of circuits		4	4

Indoor air flow (Hi/Mid/Lo)		m ³ /h	2400/2300/2200	2800/2700/2600
Indoor external static pressure (Hi)		Pa	70	96
Indoor noise level (Hi/Mid/Lo)		dB(A)	50/46/42	50/47/43
Indoor unit	Dimension (W*H*D)	mm	1350×298×800	1350×320×800
	Packing (W*H*D)	mm	1555×370×940	1555×440×940
	Net/Gross weight	kg	50/59	70/80
Outdoor fan motor	Model		YDK65-6WL; YDK65-6F	YDK65-6WL; YDK65-6F
	Brand		WELLING	WELLING
	Input	W	138+156	138+156
	Capacitor	uF	3.5×2uF/450V	3.5×2uF/450V
	Speed	r/min	800	800
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4×22	25.4×22
	Fin spacing	mm	1.8	1.8
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	Φ9.53, innergroove	Φ9.53, innergroove
	Coil length x height x width	mm	715×1220×44	715×1220×44
	Number of circuits		4	4
Outdoor air flow		m ³ /h	6000	6000
Outdoor noise level		dB(A)	58	58
Outdoor unit	Dimension (W*H*D)	mm	940×1245×340	940×1245×340
	Packing (W*H*D)	mm	1020×1370×435	1020×1370×435
	Net/ Gross weight	kg	112/127	112/127
Refrigerant type/Quantity		g	R410A/4000	R410A/4200
Design pressure (high side/low side)		MPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	12.7 (1/2)	12.7 (1/2)
	Gas side	mm(inch)	19 (3/4)	19 (3/4)
	Max. pipe length	m	50	50
	Max. difference in level	m	30	30
Operation temp			17~30	17~30
Ambient temp			-7~45	-7~45
Application area		m ²	80~105	95~120
Qty'per 20' /40' /40'HQ		set	23/47/50	21/44/50

Notes: 1. Nominal cooling capacities are based on the following conditions:

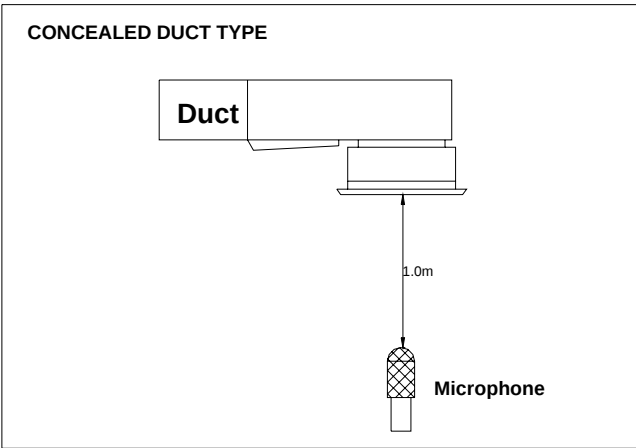
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;

2. Nominal heating capacities are based on the following conditions:

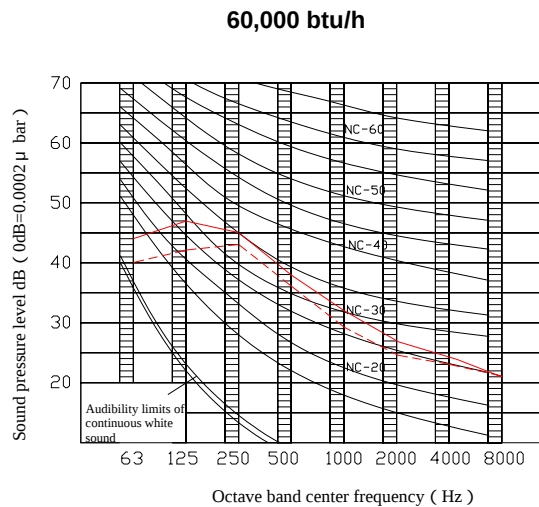
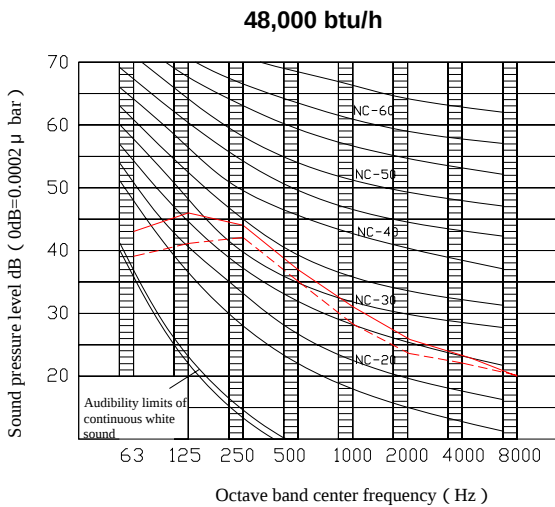
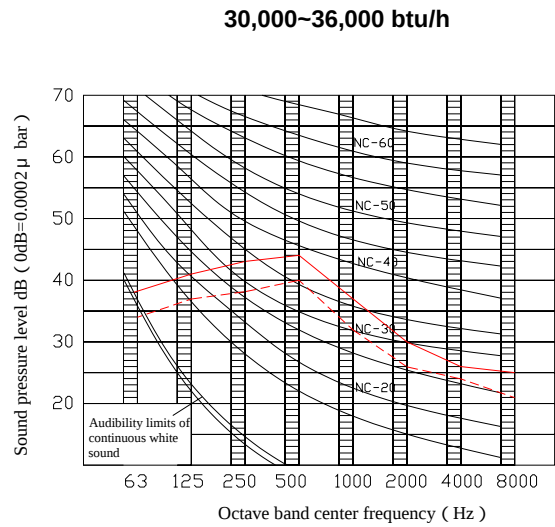
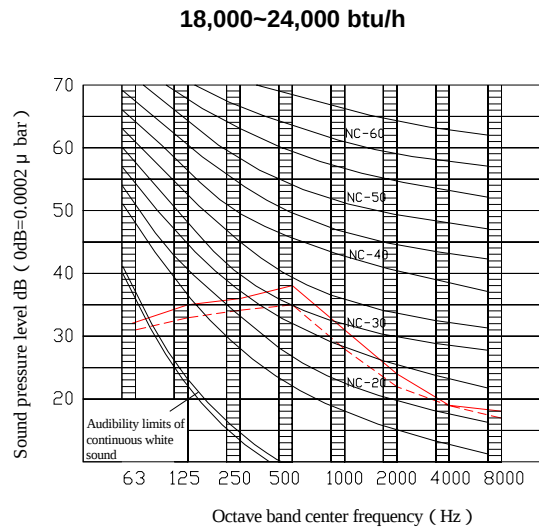
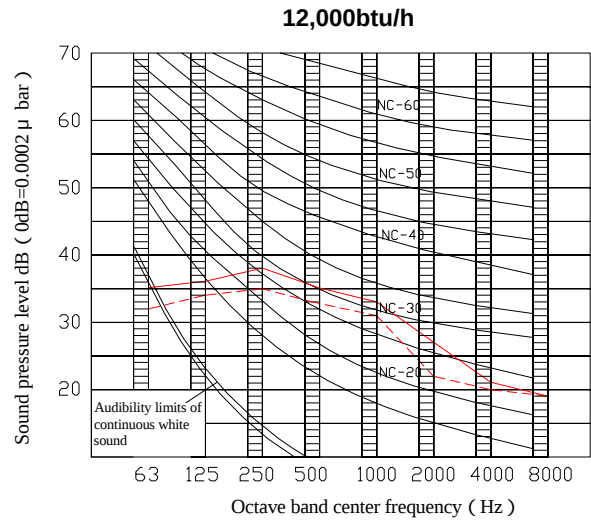
Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB;

3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

2. Noise level

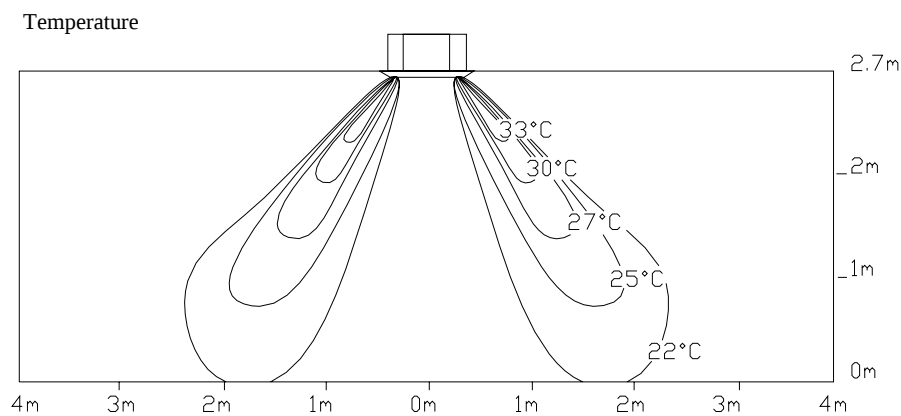
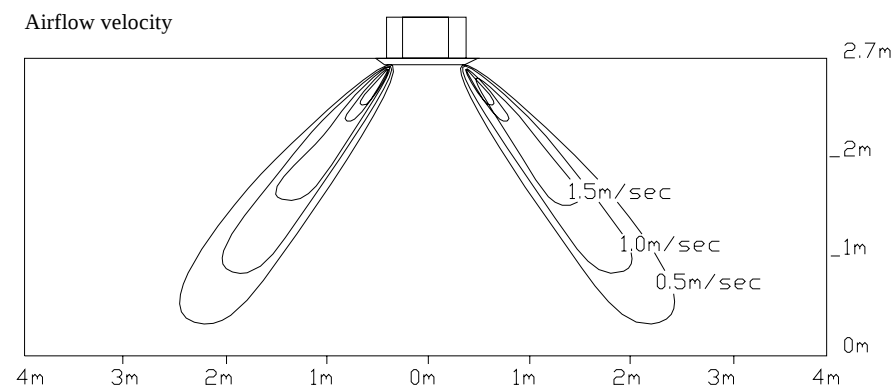


———— High speed
----- Low speed



3. Velocity & temperature distribution

Discharge angle 60°



4. Capacity table

Model: DC-12U

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	3.38	3.23	3.12	2.94	2.82	2.73
	Sensitive capacity kW	2.70	2.59	2.49	2.35	2.26	2.19
	Input kW.	0.72	0.82	0.92	1.03	1.13	1.23
24°C D 17°C W	Total capacity kW	3.70	3.54	3.41	3.22	3.09	2.99
	Sensitive capacity kW	2.96	2.83	2.73	2.58	2.47	2.40
	Input kW.	0.76	0.87	0.97	1.08	1.19	1.30
27°C D 19°C W	Total capacity kW	4.03	3.85	3.71	3.50	3.36	3.26
	Sensitive capacity kW	3.22	3.08	2.97	2.80	2.69	2.60
	Input kW.	0.80	0.91	1.03	1.14	1.25	1.37
32°C D 23°C W	Total capacity kW	4.63	4.43	4.27	4.03	3.86	3.74
	Sensitive capacity kW	3.70	3.54	3.41	3.22	3.09	2.99
	Input kW.	0.92	1.05	1.18	1.31	1.44	1.57

Model: DC-12U

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	6.56	5.24	4.37	3.93	3.71	3.28	3.06	2.84
	Input kW.	2.07	1.66	1.38	1.31	1.24	1.17	1.10	0.97
18°C	Capacity kW	6.16	4.92	4.10	3.69	3.49	3.08	2.87	2.67
	Input kW.	1.94	1.56	1.30	1.23	1.17	1.10	1.04	0.91
20°C	Capacity kW	5.70	4.56	3.80	3.42	3.23	2.85	2.66	2.47
	Input kW.	1.80	1.44	1.20	1.14	1.08	1.02	0.96	0.84
22°C	Capacity kW	5.24	4.20	3.50	3.15	2.97	2.62	2.45	2.27
	Input kW.	1.66	1.32	1.10	1.05	0.99	0.94	0.88	0.77
27°C	Capacity kW	4.56	3.65	3.04	2.74	2.58	2.28	2.13	1.98
	Input kW.	1.44	1.15	0.96	0.91	0.86	0.82	0.77	0.67

Model: DC-18U

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	5.12	4.90	4.72	4.45	4.27	4.14
	Sensitive capacity kW	4.10	3.92	3.78	3.56	3.42	3.31
	Input kW.	1.20	1.37	1.54	1.71	1.88	2.05
24°C D 17°C W	Total capacity kW	5.61	5.36	5.17	4.88	4.68	4.53
	Sensitive capacity kW	4.49	4.29	4.13	3.90	3.74	3.63
	Input kW.	1.26	1.44	1.62	1.81	1.99	2.17
27°C D 19°C W	Total capacity kW	6.10	5.83	5.62	5.30	5.09	4.93
	Sensitive capacity kW	4.88	4.66	4.49	4.24	4.07	3.94
	Input kW.	1.33	1.52	1.71	1.90	2.09	2.28
32°C D 23°C W	Total capacity kW	7.01	6.70	6.46	6.10	5.85	5.67
	Sensitive capacity kW	5.61	5.36	5.17	4.88	4.68	4.53
	Input kW.	1.53	1.75	1.97	2.19	2.40	2.62

Model: DC-18U

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	10.35	8.28	6.90	6.21	5.87	5.18	4.83	4.49
	Input kW.	3.28	2.62	2.19	2.08	1.97	1.86	1.75	1.53
18°C	Capacity kW	9.72	7.78	6.48	5.83	5.51	4.86	4.54	4.21
	Input kW.	3.08	2.46	2.05	1.95	1.85	1.74	1.64	1.44
20°C	Capacity kW	9.00	7.20	6.00	5.40	5.10	4.50	4.20	3.90
	Input kW.	2.85	2.28	1.90	1.81	1.71	1.62	1.52	1.33
22°C	Capacity kW	8.28	6.62	5.52	4.97	4.69	4.14	3.86	3.59
	Input kW.	2.62	2.10	1.75	1.66	1.57	1.49	1.40	1.22
27°C	Capacity kW	7.20	5.76	4.80	4.32	4.08	3.60	3.36	3.12
	Input kW.	2.28	1.82	1.52	1.44	1.37	1.29	1.22	1.06

Model: DC-24U

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	6.86	6.56	6.32	5.96	5.73	5.55
	Sensitive capacity kW	5.49	5.25	5.06	4.77	4.58	4.44
	Input kW.	1.61	1.84	2.07	2.30	2.53	2.76
24°C D 17°C W	Total capacity kW	7.51	7.19	6.92	6.53	6.27	6.07
	Sensitive capacity kW	6.01	5.75	5.54	5.23	5.02	4.86
	Input kW.	1.70	1.95	2.19	2.43	2.68	2.92
27°C D 19°C W	Total capacity kW	8.17	7.81	7.53	7.10	6.82	6.60
	Sensitive capacity kW	6.53	6.25	6.02	5.68	5.45	5.28
	Input kW.	1.79	2.05	2.30	2.56	2.82	3.07
32°C D 23°C W	Total capacity kW	9.39	8.98	8.65	8.17	7.84	7.59
	Sensitive capacity kW	7.51	7.19	6.92	6.53	6.27	6.07
	Input kW.	2.06	2.36	2.65	2.94	3.24	3.53

Model: DC-24U

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	13.80	11.04	9.20	8.28	7.82	6.90	6.44	5.98
	Input kW.	4.31	3.45	2.88	2.73	2.59	2.44	2.30	2.01
18°C	Capacity kW	12.96	10.37	8.64	7.78	7.34	6.48	6.05	5.62
	Input kW.	4.05	3.24	2.70	2.57	2.43	2.30	2.16	1.89
20°C	Capacity kW	12.00	9.60	8.00	7.20	6.80	6.00	5.60	5.20
	Input kW.	3.75	3.00	2.50	2.38	2.25	2.13	2.00	1.75
22°C	Capacity kW	11.04	8.83	7.36	6.62	6.26	5.52	5.15	4.78
	Input kW.	3.45	2.76	2.30	2.19	2.07	1.96	1.84	1.61
27°C	Capacity kW	9.60	7.68	6.40	5.76	5.44	4.80	4.48	4.16
	Input kW.	3.00	2.40	2.00	1.90	1.80	1.70	1.60	1.40

Model: DC-30UT

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	8.50	8.13	7.84	7.39	7.10	6.87
	Sensitive capacity kW	6.80	6.50	6.27	5.91	5.68	5.50
	Input kW.	2.05	2.34	2.63	2.93	3.22	3.51
24°C D 17°C W	Total capacity kW	9.31	8.91	8.58	8.10	7.77	7.53
	Sensitive capacity kW	7.45	7.12	6.87	6.48	6.22	6.02
	Input kW.	2.16	2.47	2.78	3.09	3.40	3.71
27°C D 19°C W	Total capacity kW	10.12	9.68	9.33	8.80	8.45	8.18
	Sensitive capacity kW	8.10	7.74	7.46	7.04	6.76	6.55
	Input kW.	2.28	2.60	2.93	3.25	3.58	3.90
32°C D 23°C W	Total capacity kW	11.64	11.13	10.73	10.12	9.72	9.41
	Sensitive capacity kW	9.31	8.91	8.58	8.10	7.77	7.53
	Input kW.	2.62	2.99	3.36	3.74	4.11	4.49

Model: DC-30UT

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	16.22	12.97	10.81	9.73	9.19	8.11	7.57	7.03
	Input kW.	5.61	4.49	3.74	3.55	3.36	3.18	2.99	2.62
18°C	Capacity kW	15.23	12.18	10.15	9.14	8.63	7.61	7.11	6.60
	Input kW.	5.27	4.21	3.51	3.33	3.16	2.98	2.81	2.46
20°C	Capacity kW	14.10	11.28	9.40	8.46	7.99	7.05	6.58	6.11
	Input kW.	4.88	3.90	3.25	3.09	2.93	2.76	2.60	2.28
22°C	Capacity kW	12.97	10.38	8.65	7.78	7.35	6.49	6.05	5.62
	Input kW.	4.49	3.59	2.99	2.84	2.69	2.54	2.39	2.09
27°C	Capacity kW	11.28	9.02	7.52	6.77	6.39	5.64	5.26	4.89
	Input kW.	3.90	3.12	2.60	2.47	2.34	2.21	2.08	1.82

Model: DC-36UT

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	10.14	9.70	9.35	8.82	8.47	8.20
	Sensitive capacity kW	8.11	7.76	7.48	7.06	6.77	6.56
	Input kW.	2.33	2.66	3.00	3.33	3.66	4.00
24°C D 17°C W	Total capacity kW	11.11	10.63	10.24	9.66	9.27	8.98
	Sensitive capacity kW	8.89	8.50	8.19	7.73	7.42	7.19
	Input kW.	2.46	2.81	3.16	3.52	3.87	4.22
27°C D 19°C W	Total capacity kW	12.08	11.55	11.13	10.50	10.08	9.77
	Sensitive capacity kW	9.66	9.24	8.90	8.40	8.06	7.81
	Input kW.	2.59	2.96	3.33	3.70	4.07	4.44
32°C D 23°C W	Total capacity kW	13.89	13.28	12.80	12.08	11.59	11.23
	Sensitive capacity kW	11.11	10.63	10.24	9.66	9.27	8.98
	Input kW.	2.98	3.40	3.83	4.26	4.68	5.11

Model: DC-36UT

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	20.70	16.56	13.80	12.42	11.73	10.35	9.66	8.97
	Input kW.	5.78	4.62	3.85	3.66	3.47	3.27	3.08	2.70
18°C	Capacity kW	19.44	15.55	12.96	11.66	11.02	9.72	9.07	8.42
	Input kW.	5.43	4.34	3.62	3.44	3.26	3.08	2.89	2.53
20°C	Capacity kW	18.00	14.40	12.00	10.80	10.20	9.00	8.40	7.80
	Input kW.	5.03	4.02	3.35	3.18	3.02	2.85	2.68	2.35
22°C	Capacity kW	16.56	13.25	11.04	9.94	9.38	8.28	7.73	7.18
	Input kW.	4.62	3.70	3.08	2.93	2.77	2.62	2.47	2.16
27°C	Capacity kW	14.40	11.52	9.60	8.64	8.16	7.20	6.72	6.24
	Input kW.	4.02	3.22	2.68	2.55	2.41	2.28	2.14	1.88

Model: DC-48UT

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	13.52	12.94	12.47	11.76	11.29	10.94
	Sensitive capacity kW	10.82	10.35	9.97	9.41	9.03	8.75
	Input kW.	2.96	3.38	3.81	4.23	4.65	5.08
24°C D 17°C W	Total capacity kW	14.81	14.17	13.65	12.88	12.36	11.98
	Sensitive capacity kW	11.85	11.33	10.92	10.30	9.89	9.58
	Input kW.	3.13	3.57	4.02	4.47	4.91	5.36
27°C D 19°C W	Total capacity kW	16.10	15.40	14.84	14.00	13.44	13.02
	Sensitive capacity kW	12.88	12.32	11.87	11.20	10.75	10.42
	Input kW.	3.29	3.76	4.23	4.70	5.17	5.64
32°C D 23°C W	Total capacity kW	18.52	17.71	17.07	16.10	15.46	14.97
	Sensitive capacity kW	14.81	14.17	13.65	12.88	12.36	11.98
	Input kW.	3.78	4.32	4.86	5.41	5.95	6.49

Model: DC-48UT

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	26.22	20.98	17.48	15.73	14.86	13.11	12.24	11.36
	Input kW.	8.45	6.76	5.64	5.35	5.07	4.79	4.51	3.94
18°C	Capacity kW	24.62	19.70	16.42	14.77	13.95	12.31	11.49	10.67
	Input kW.	7.94	6.35	5.29	5.03	4.76	4.50	4.23	3.70
20°C	Capacity kW	22.80	18.24	15.20	13.68	12.92	11.40	10.64	9.88
	Input kW.	7.35	5.88	4.90	4.66	4.41	4.17	3.92	3.43
22°C	Capacity kW	20.98	16.78	13.98	12.59	11.89	10.49	9.79	9.09
	Input kW.	6.76	5.41	4.51	4.28	4.06	3.83	3.61	3.16
27°C	Capacity kW	18.24	14.59	12.16	10.94	10.34	9.12	8.51	7.90
	Input kW.	5.88	4.70	3.92	3.72	3.53	3.33	3.14	2.74

Model: DC-60UT

COOLING		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		21°C	25°C	30°C	35°C	40°C	45°C
21°C D 15°C W	Total capacity kW	15.46	14.78	14.25	13.44	12.90	12.50
	Sensitive capacity kW	12.36	11.83	11.40	10.75	10.32	10.00
	Input kW.	3.78	4.32	4.86	5.40	5.94	6.48
24°C D 17°C W	Total capacity kW	16.93	16.19	15.60	14.72	14.13	13.69
	Sensitive capacity kW	13.54	12.95	12.48	11.78	11.30	10.95
	Input kW.	3.99	4.56	5.13	5.70	6.27	6.84
27°C D 19°C W	Total capacity kW	18.40	17.60	16.96	16.00	15.36	14.88
	Sensitive capacity kW	14.72	14.08	13.57	12.80	12.29	11.90
	Input kW.	4.20	4.80	5.40	6.00	6.60	7.20
32°C D 23°C W	Total capacity kW	21.16	20.24	19.50	18.40	17.66	17.11
	Sensitive capacity kW	16.93	16.19	15.60	14.72	14.13	13.69
	Input kW.	4.83	5.52	6.21	6.90	7.59	8.28

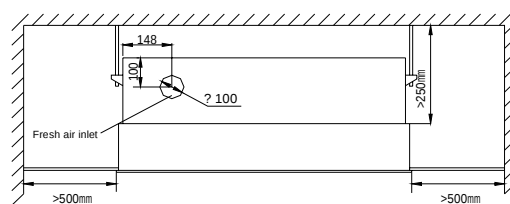
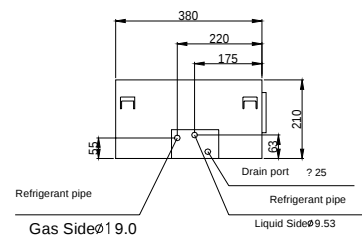
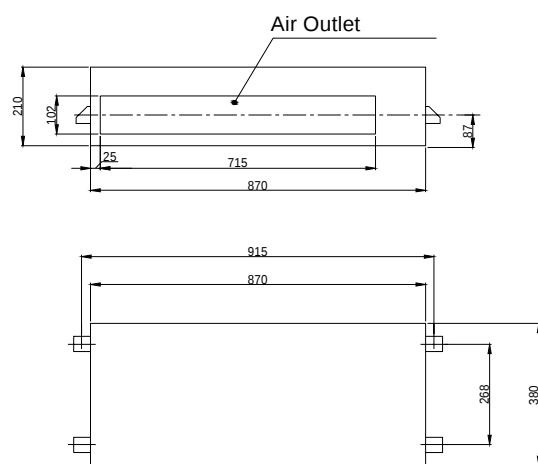
Model: DC-60UT

HEATING		OUTDOOR CONDITIONS							
Indoor Conditions		24°C D 18°C W	12°C D 11°C W	7°C D 6°C W	4°C D 3°C W	0°C D -1°C W	-5°C D -6°C W	-7°C D -8°C W	-15°C D -16°C W
15°C	Capacity kW	34.50	27.60	23.00	20.70	19.55	17.25	16.10	14.95
	Input kW.	10.35	8.28	6.90	6.56	6.21	5.87	5.52	4.83
18°C	Capacity kW	32.40	25.92	21.60	19.44	18.36	16.20	15.12	14.04
	Input kW.	9.72	7.78	6.48	6.16	5.83	5.51	5.18	4.54
20°C	Capacity kW	30.00	24.00	20.00	18.00	17.00	15.00	14.00	13.00
	Input kW.	9.00	7.20	6.00	5.70	5.40	5.10	4.80	4.20
22°C	Capacity kW	27.60	22.08	18.40	16.56	15.64	13.80	12.88	11.96
	Input kW.	8.28	6.62	5.52	5.24	4.97	4.69	4.42	3.86
27°C	Capacity kW	24.00	19.20	16.00	14.40	13.60	12.00	11.20	10.40
	Input kW.	7.20	5.76	4.80	4.56	4.32	4.08	3.84	3.36

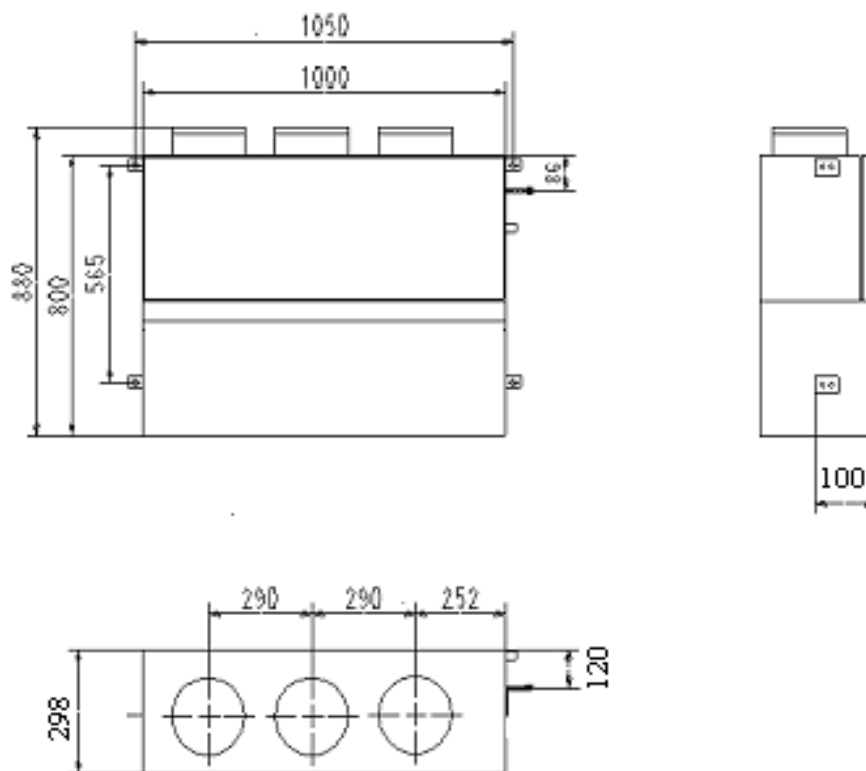
5. Outline & dimension

Indoor units

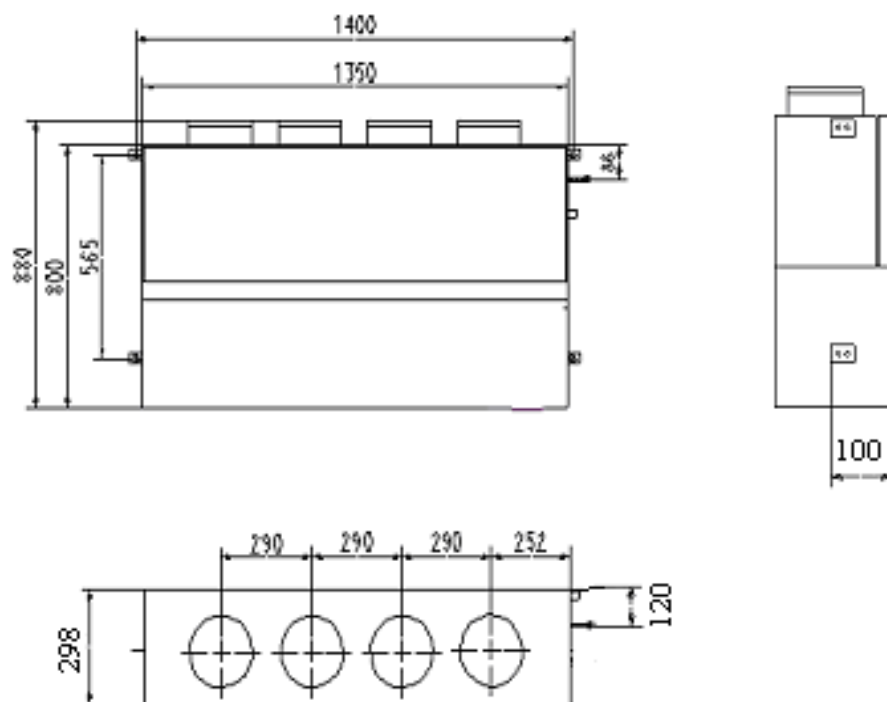
1.DC-12U



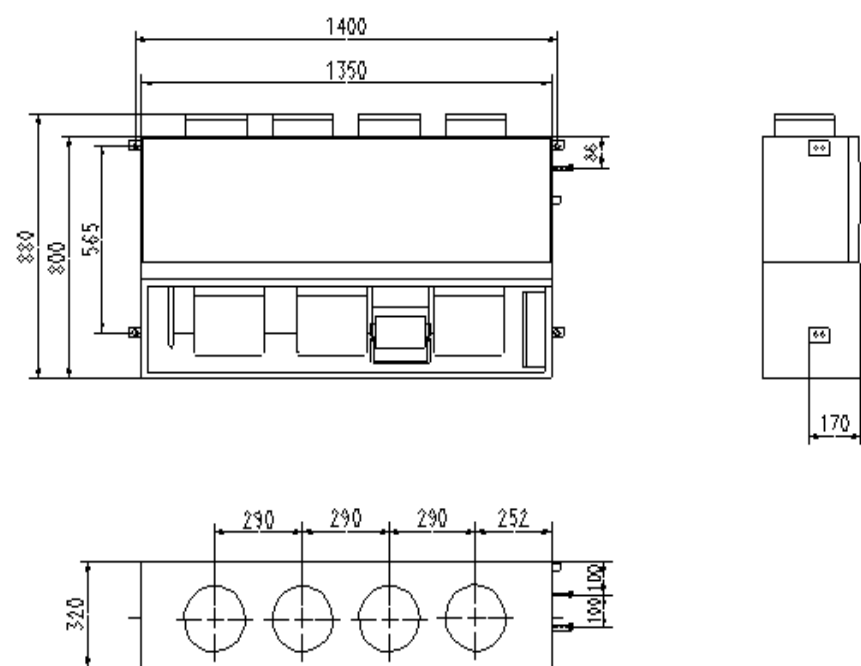
2. DC-18U y DC-24U



3. DC-30UT, DC-36UT y DC-48UT



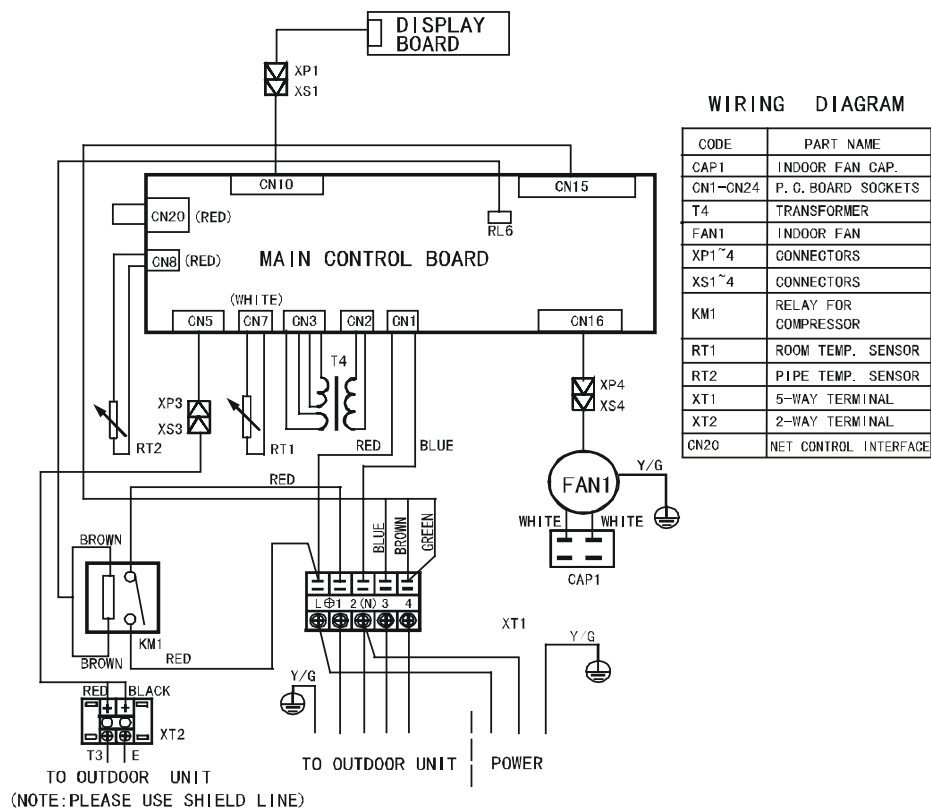
4. DC-60UT



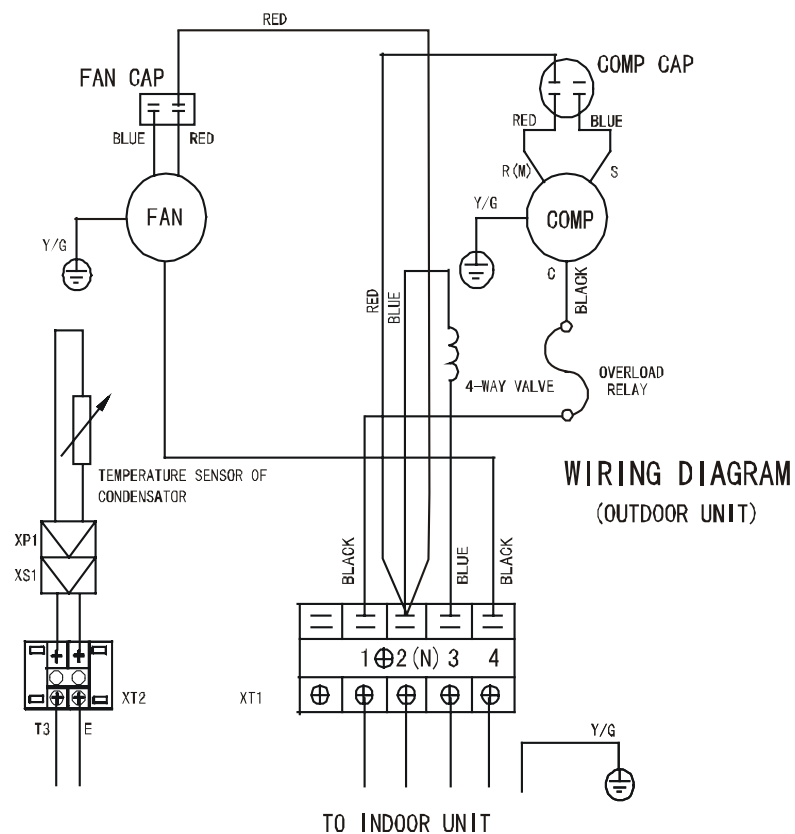
6. Wiring diagram

1. DC-12U

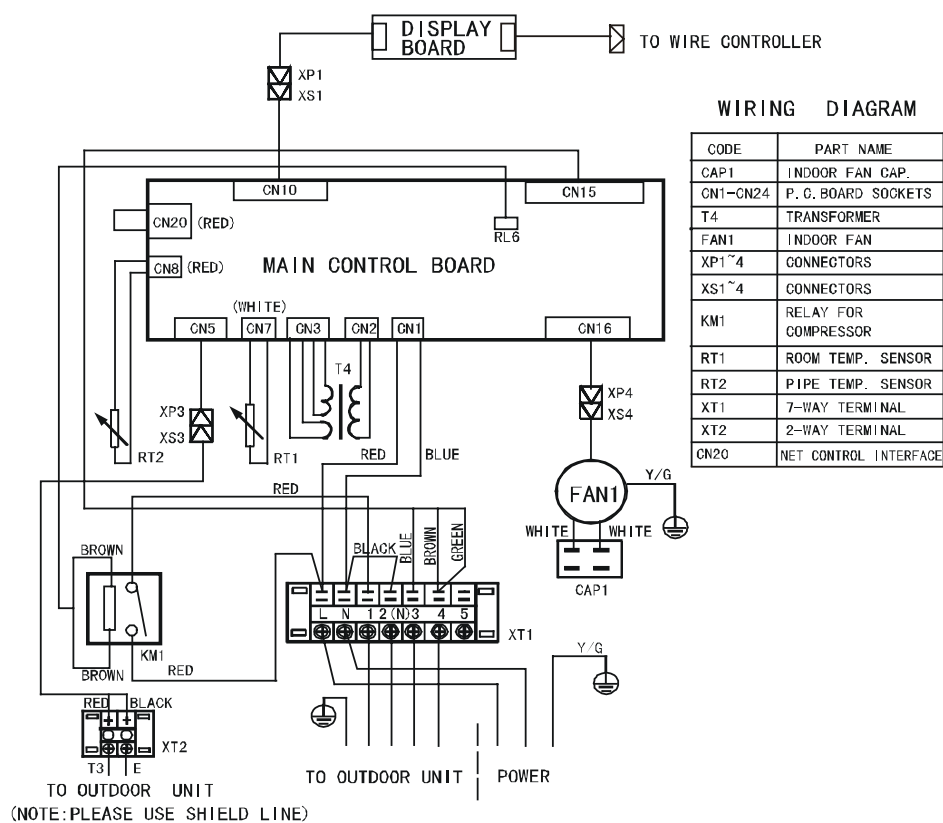
Indoor unit:



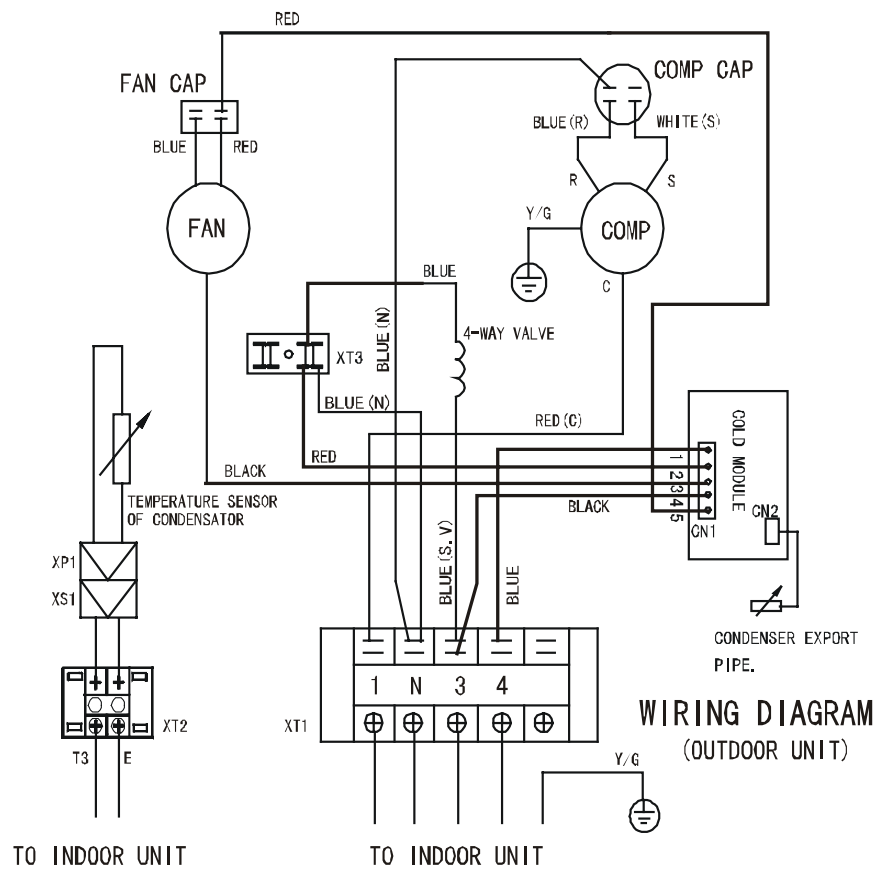
Outdoor unit:



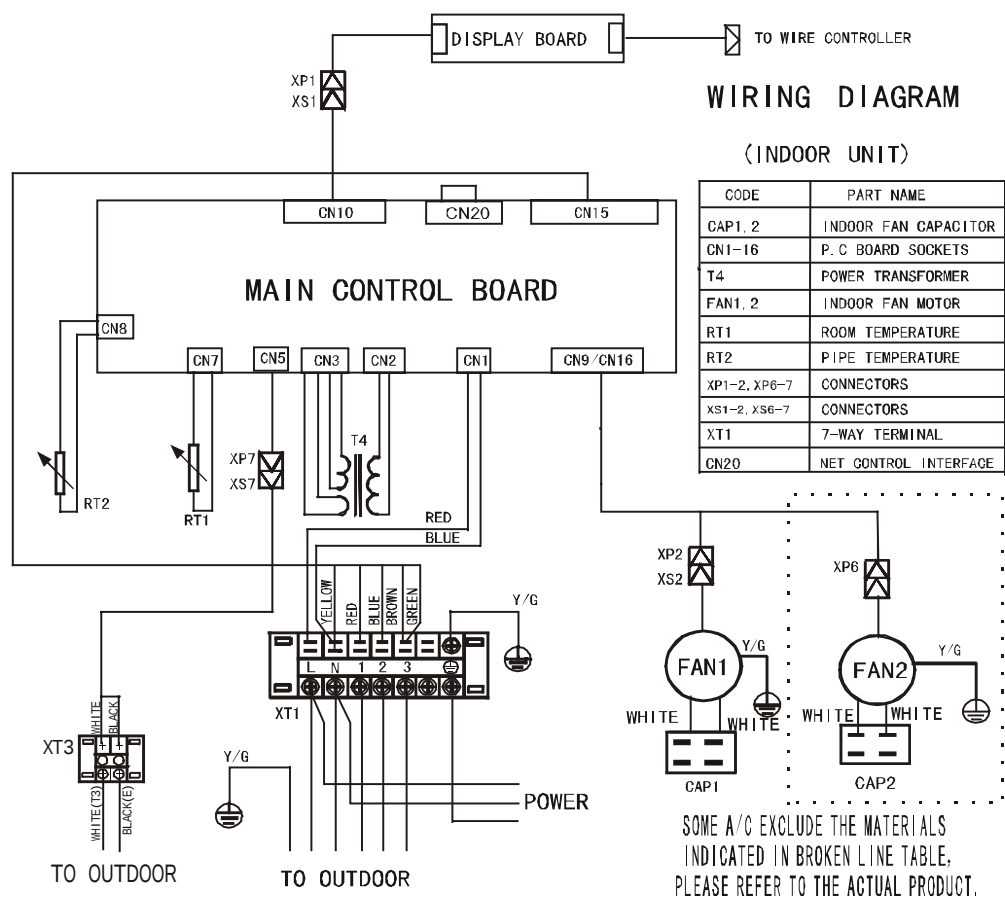
2. DC-18U
Indoor unit:



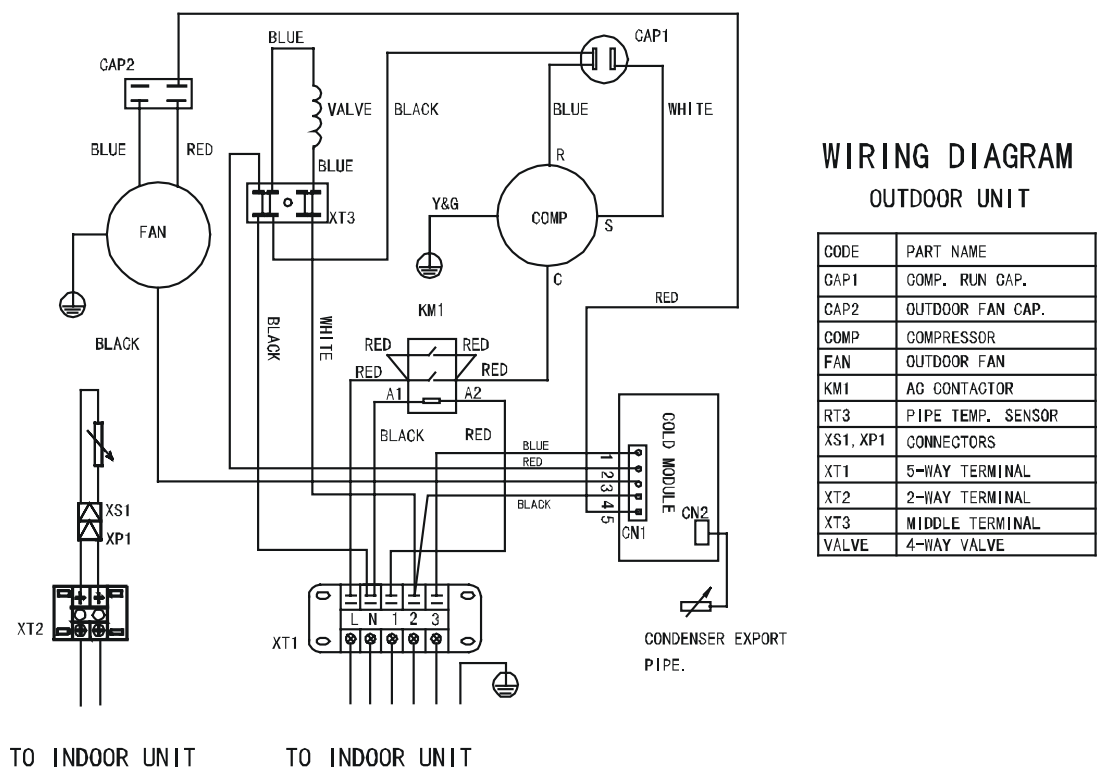
Outdoor unit:



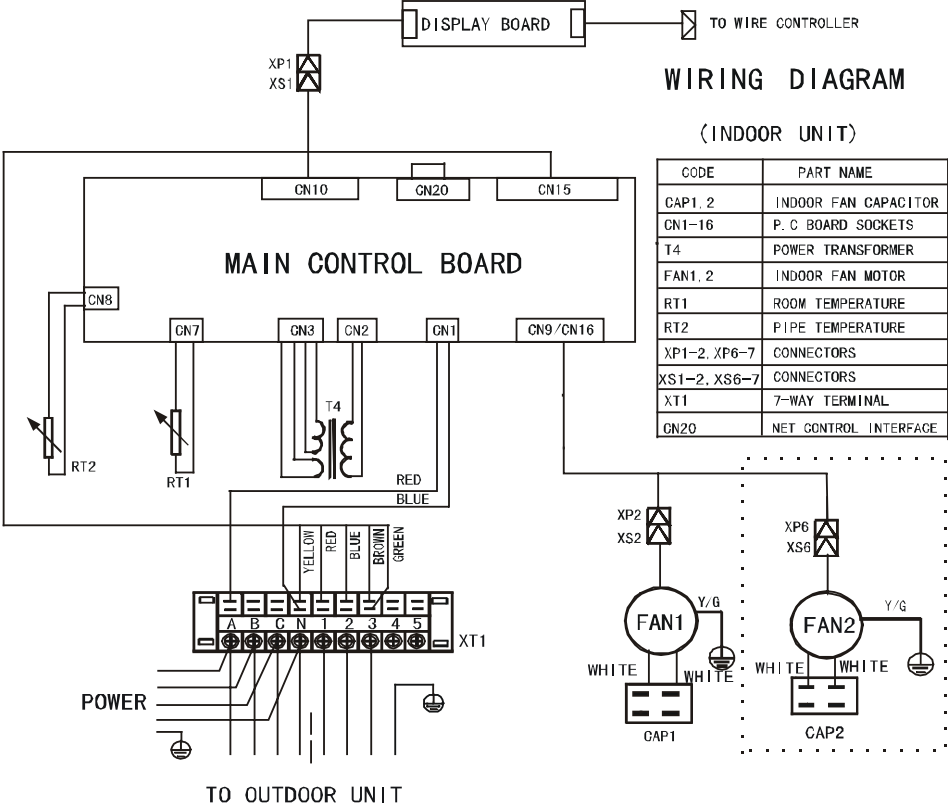
3. DC-24U
Indoor unit:



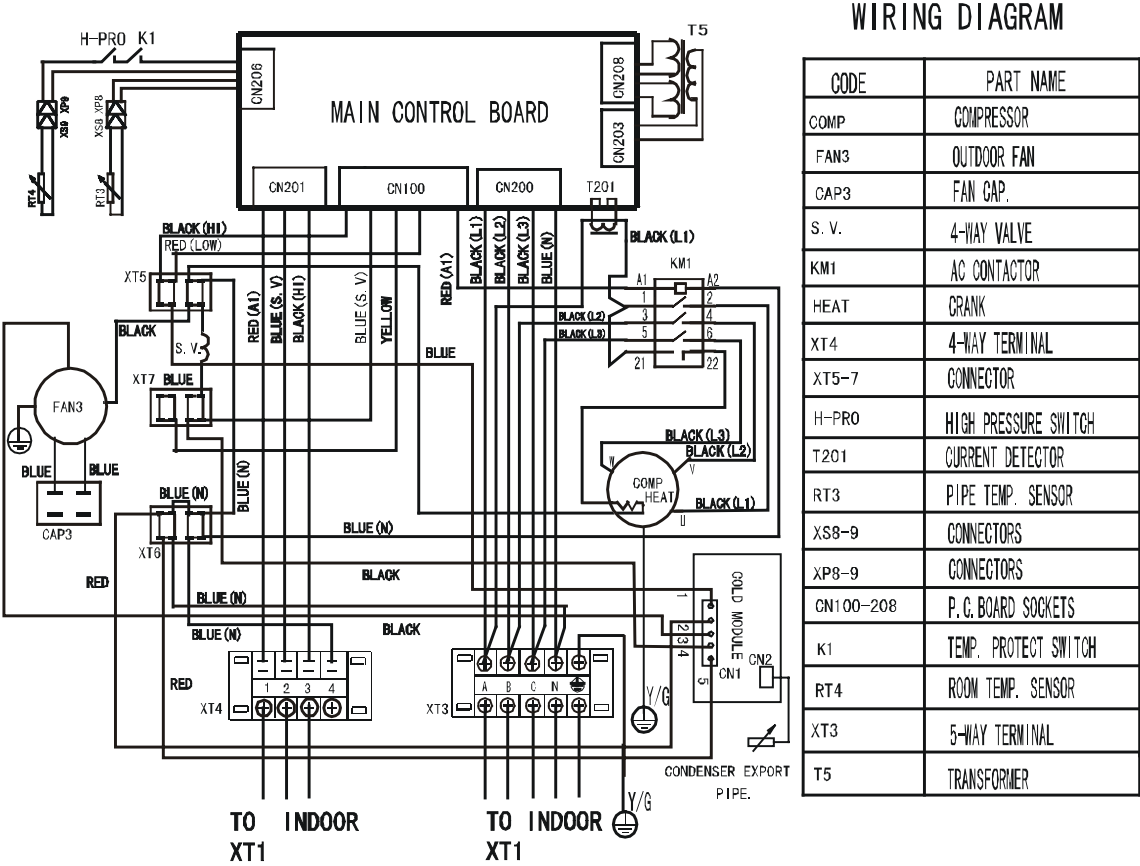
Outdoor unit:



4. DC-30UT, DC-36UT
Indoor unit:



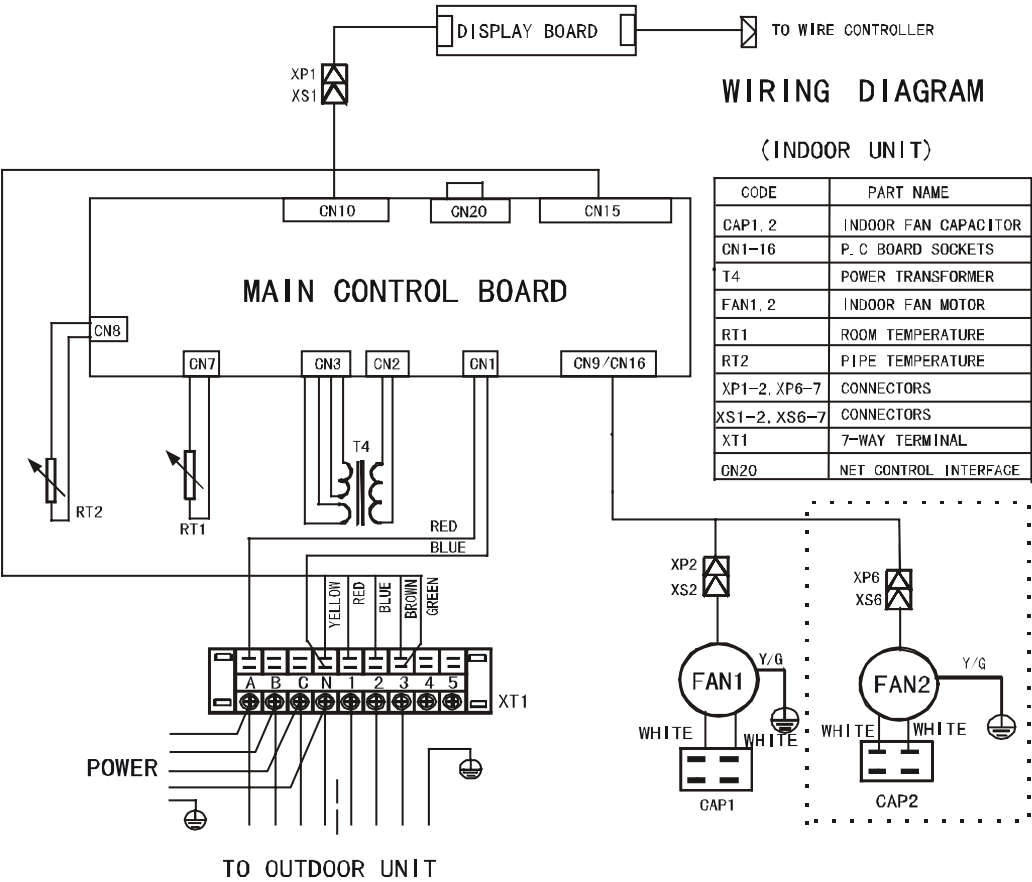
Outdoor unit:



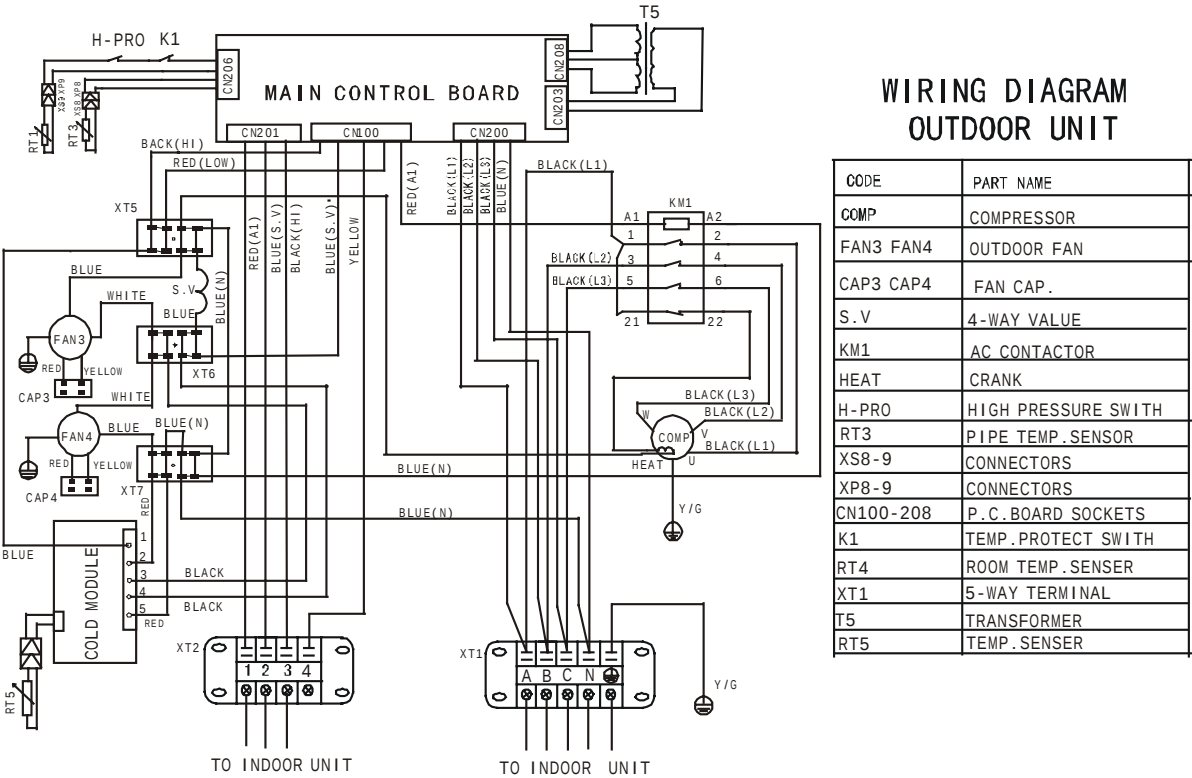
Indoor unit:



6. DC-60UT
Indoor unit:

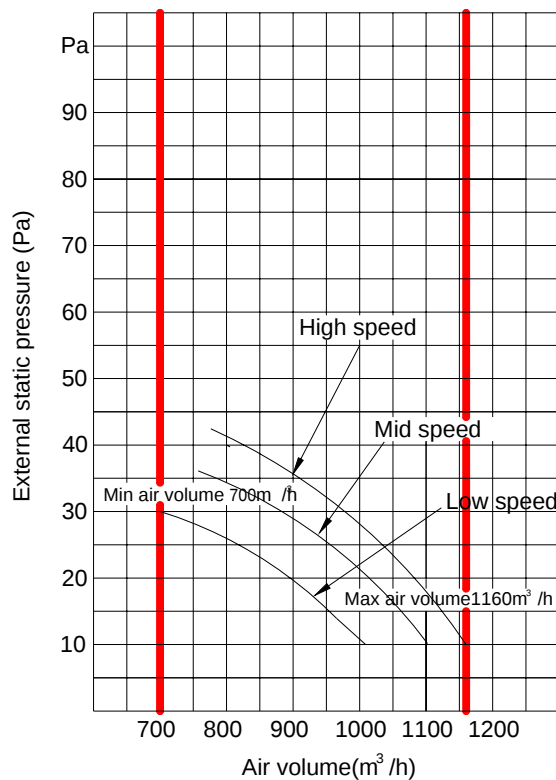


Outdoor unit:

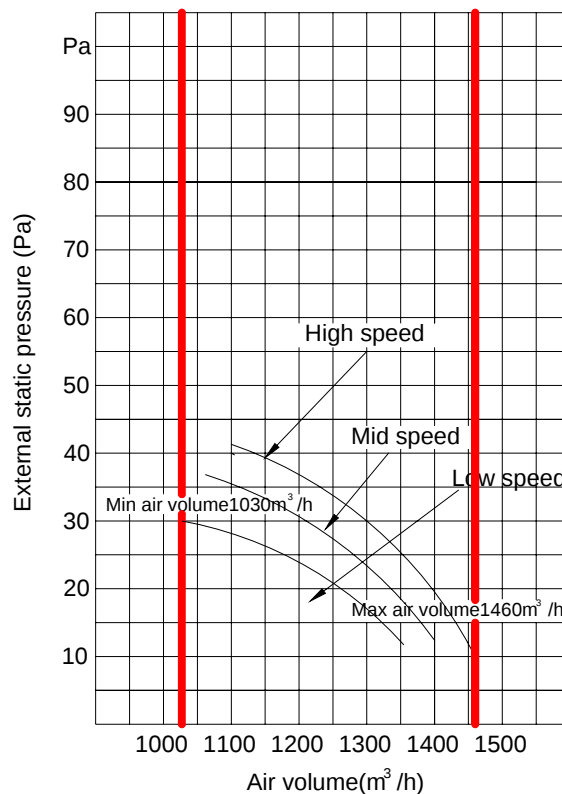


7. Static pressure

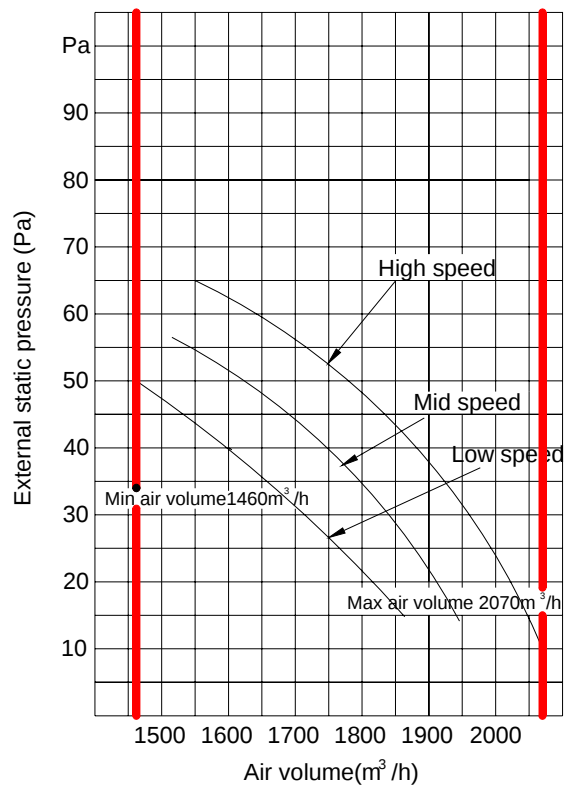
DC-18U



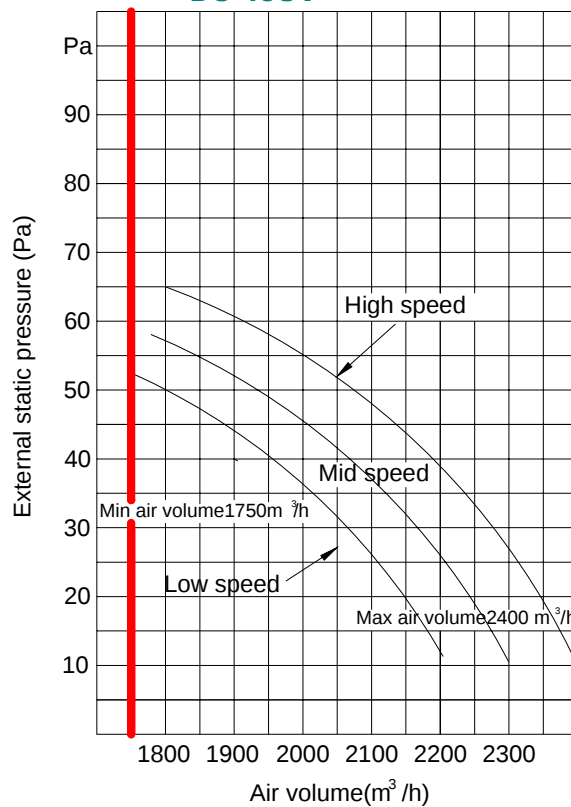
DC-24U

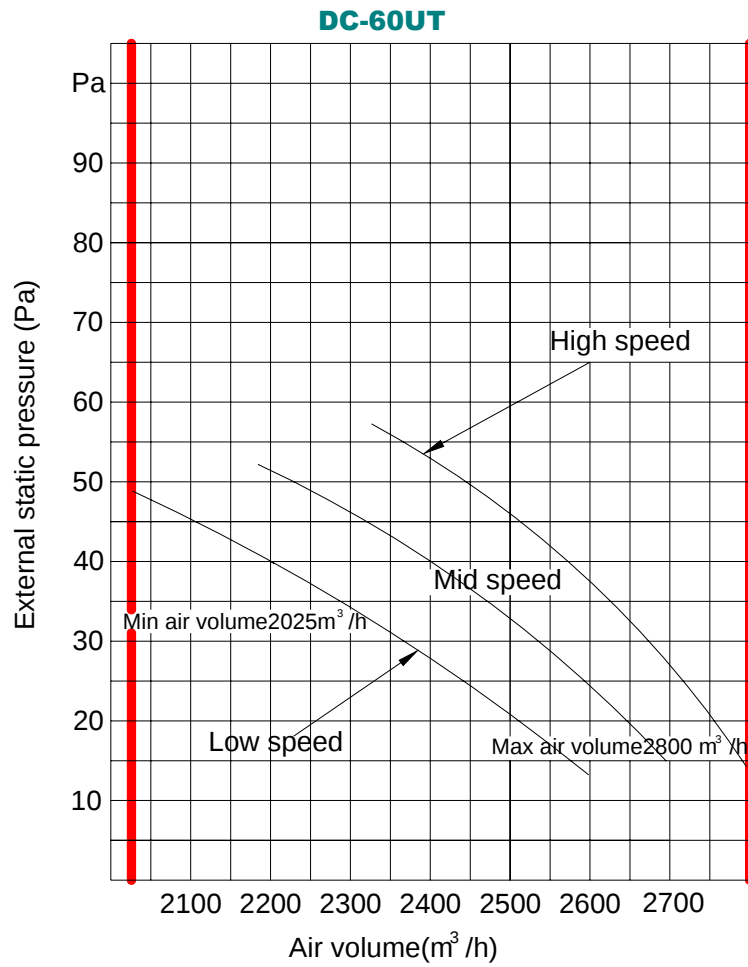


DC-30UT DC-36UT



DC-46UT

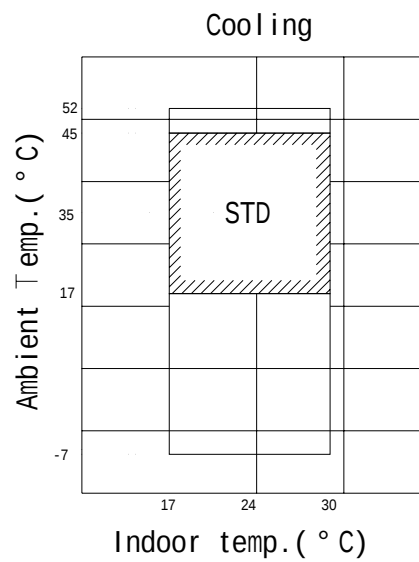
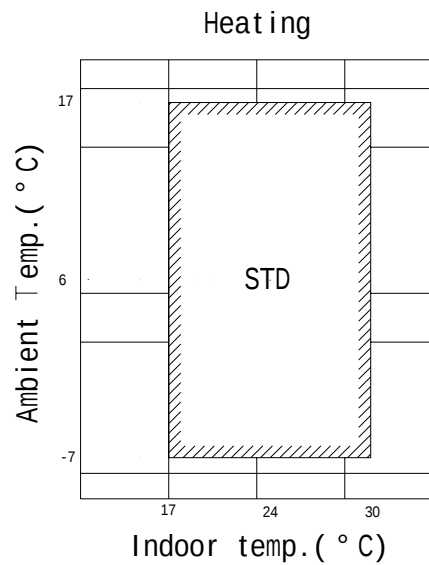




Chapter III Outdoor units

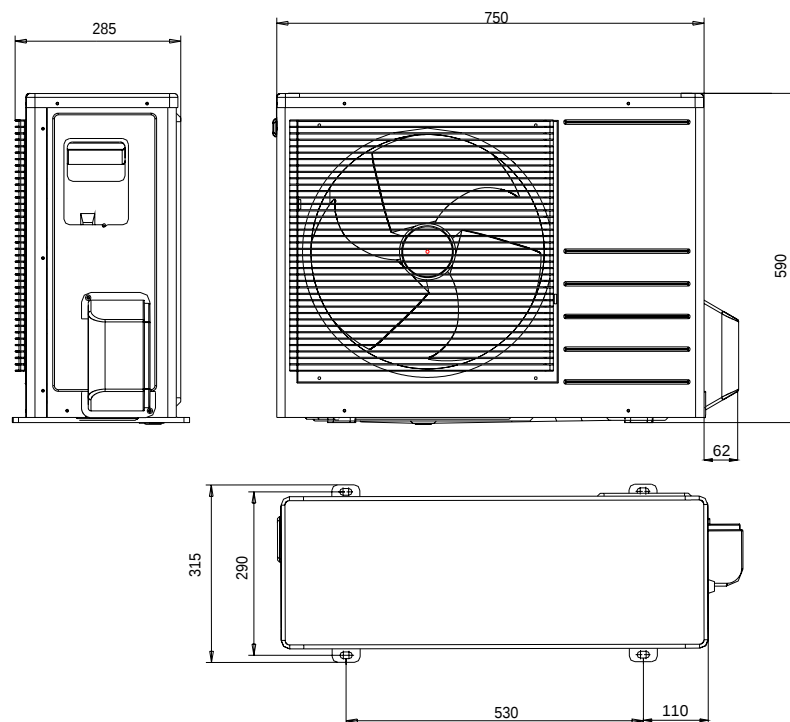
Part 1 Operation range

Ensure the operating temperature is in allowable range.

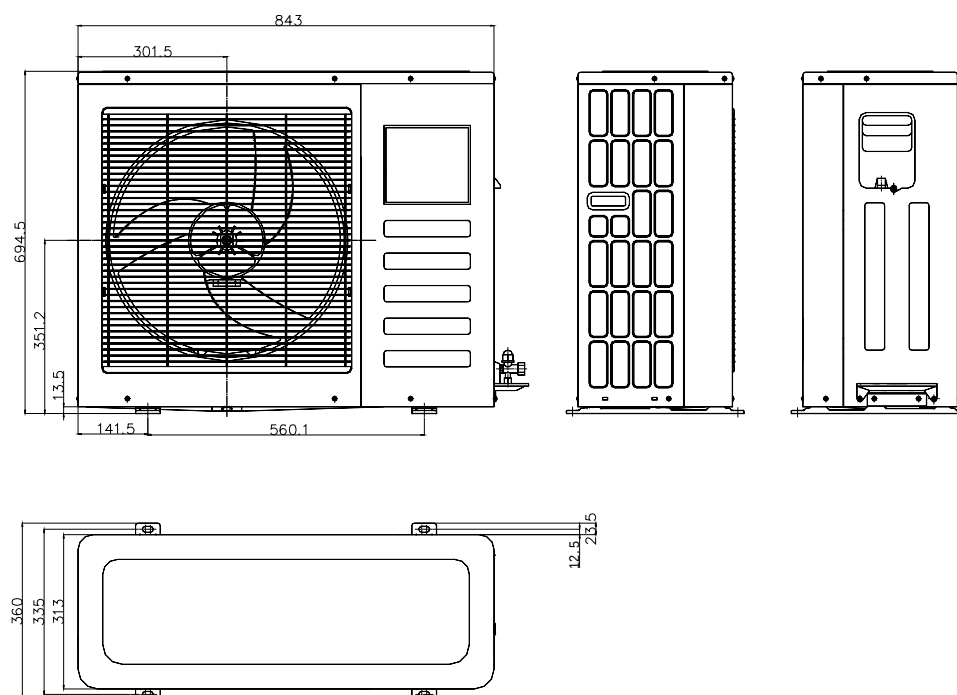


Outline & dimension

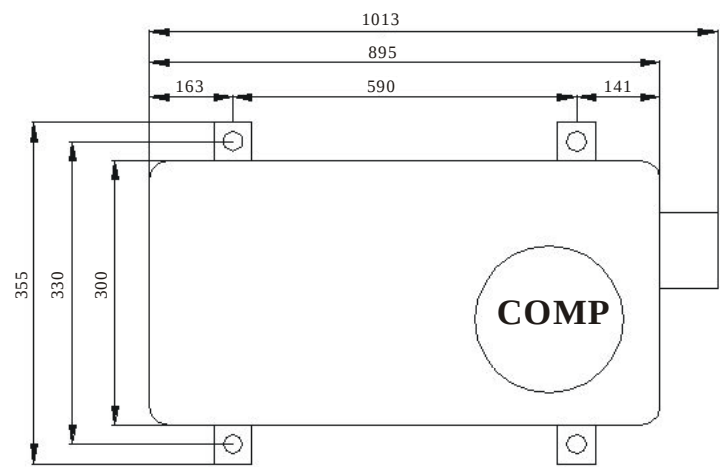
1. DOC-12U



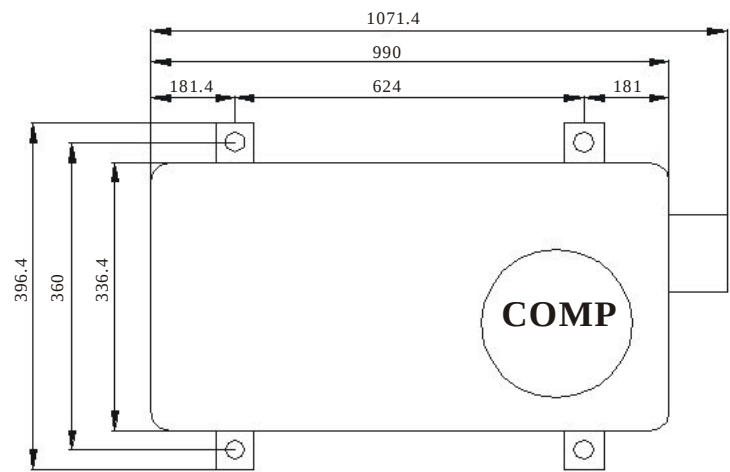
2. DOC-18U



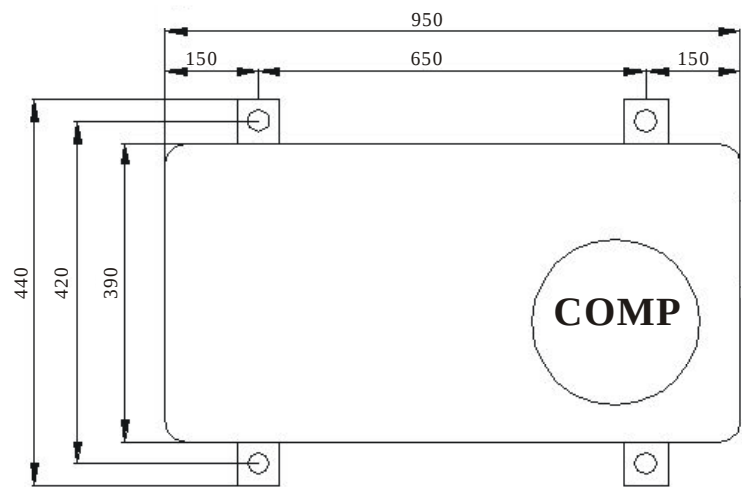
3. DOC-24U



4. DOC-30UT DOC-36UT



5. DOC-48UT DOC-60UT



Part 2 Self-diagnosis and troubleshooting

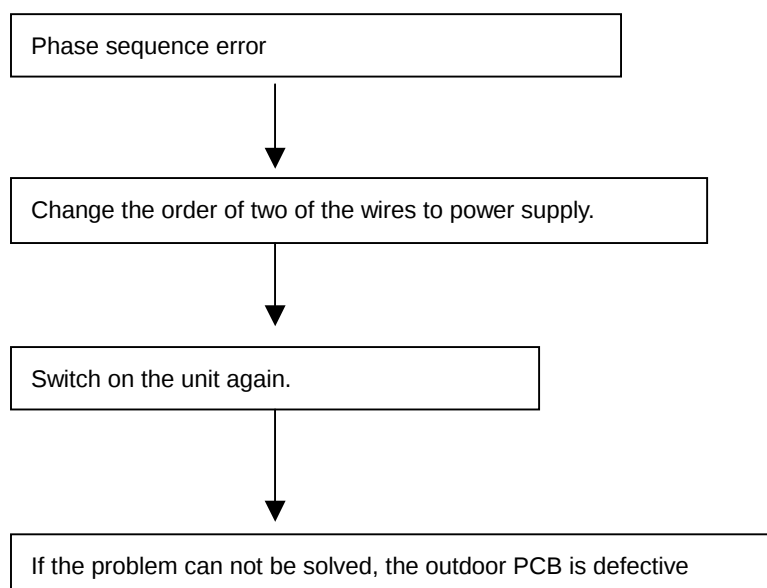
2.1 Indoor unit

No.	Type	Contents	LED Flashing	Remark
1	protection	Over current protection of the compressor occurs 4 times in 1h	Lamps of operation, timer, defrosting (only fan) flashing simultaneously at 5Hz.	Whole unit is shut down. It cannot recover unless power is cut off
2	protection	Outdoor protection (absent phase, phase sequence and temperature protection)	All lamps flashing at 5Hz	Recover automatically after errors are eliminated (For T3 malfunction of 5HP, can't recover automatically)
3	error	Room temperature sensor checking channel is abnormal	Timer lamp flashing at 5Hz	
4	error	Evaporator sensor checking channel is abnormal	Operation lamp flashing at 5Hz	
5	error	Condenser sensor checking channel is abnormal	Defrosting lamp flashing at 5Hz	
6	error	Temperature fuse is melt(reserved)	Operation lamp and timer lamp flashing at 5Hz	

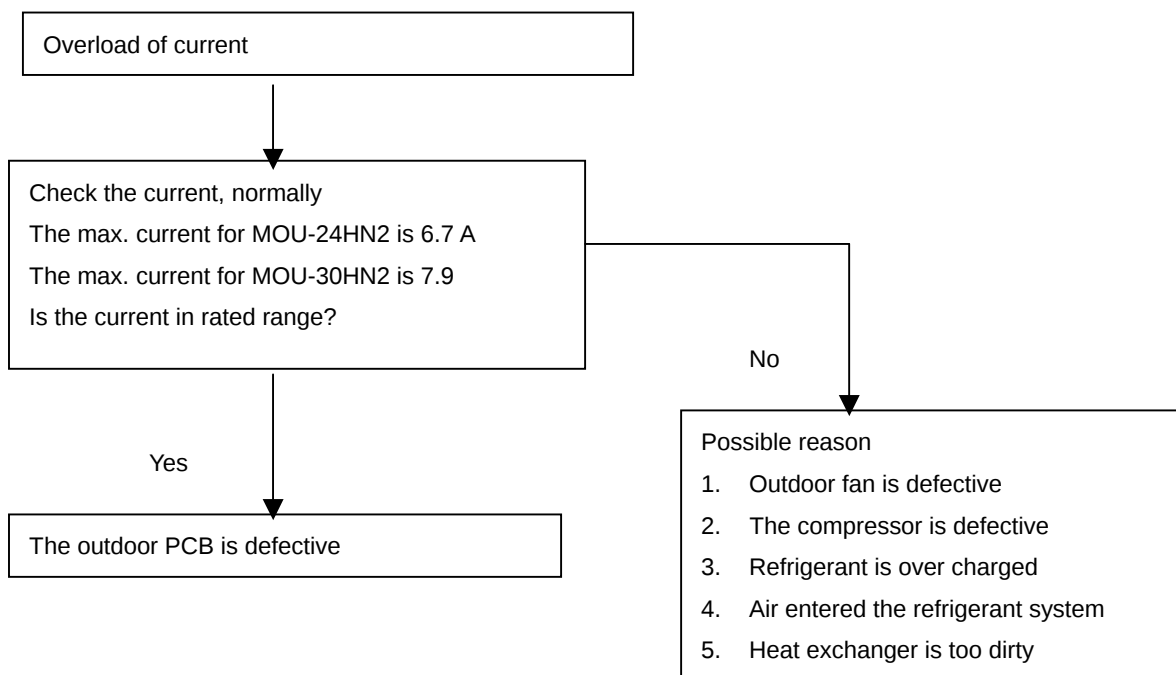
2.2 LEDs' for the indication of outdoor trouble(3 phase type, 3~3.5HP)

Type	Contents	LED1	LED2	LED3
Normal	Ok	Off	Off	On
Trouble	Phase sequence	On	Off	On
Trouble	Overload of current	Off	On	On
Trouble	Lack of phase	On	On	On
Trouble	Protection of pressure	On	On	On

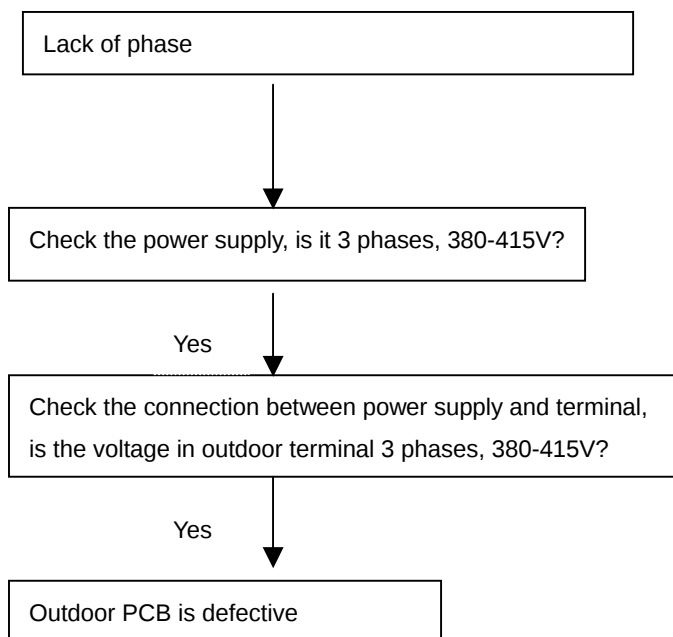
2.2.1 Phase sequence error:



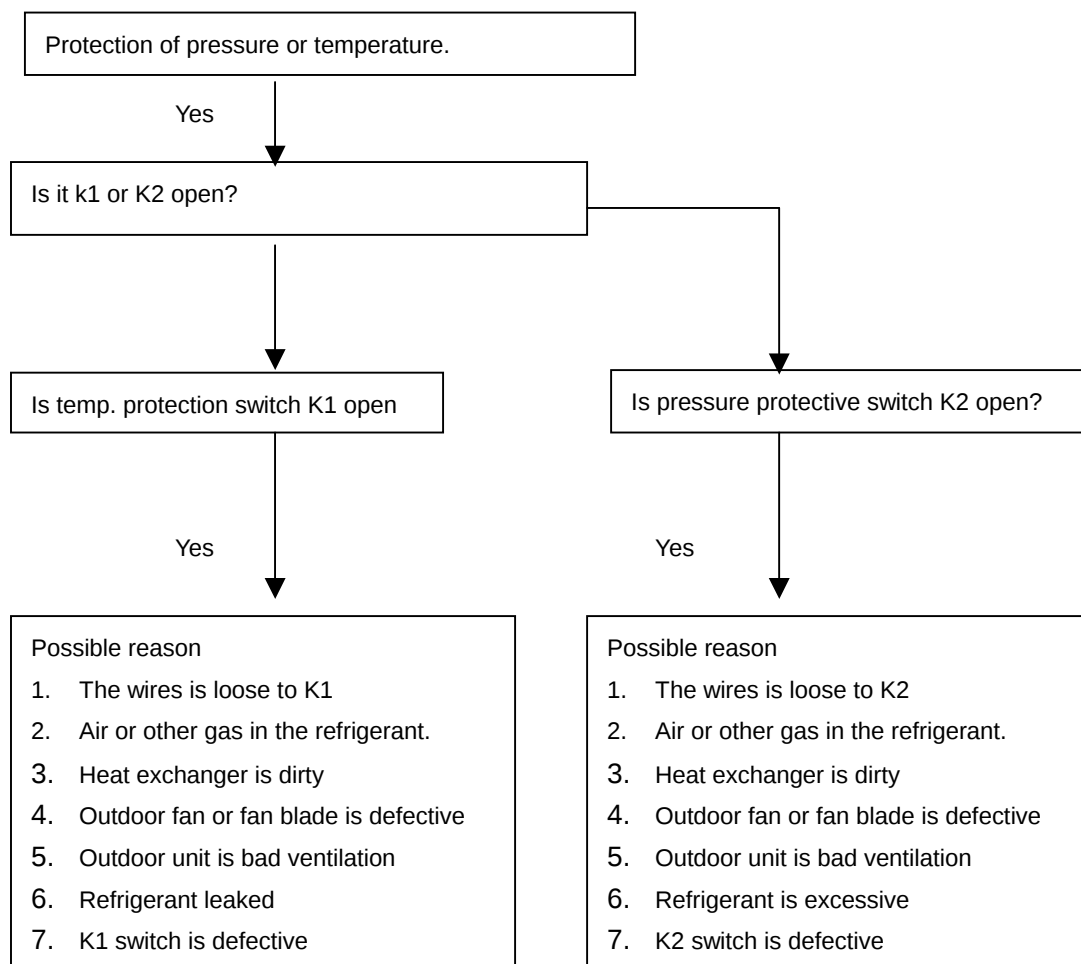
2.2.2 Overload of current



2.2.3 Lack of phase



2.2.4 Protection of pressure or temperature.

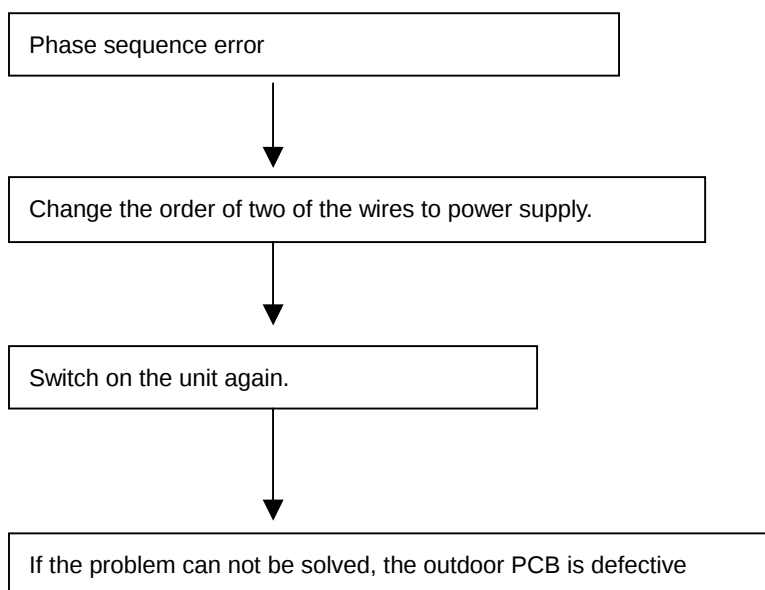


2.3 LEDs' for the indication of outdoor trouble(3 phase type, 4~7HP)

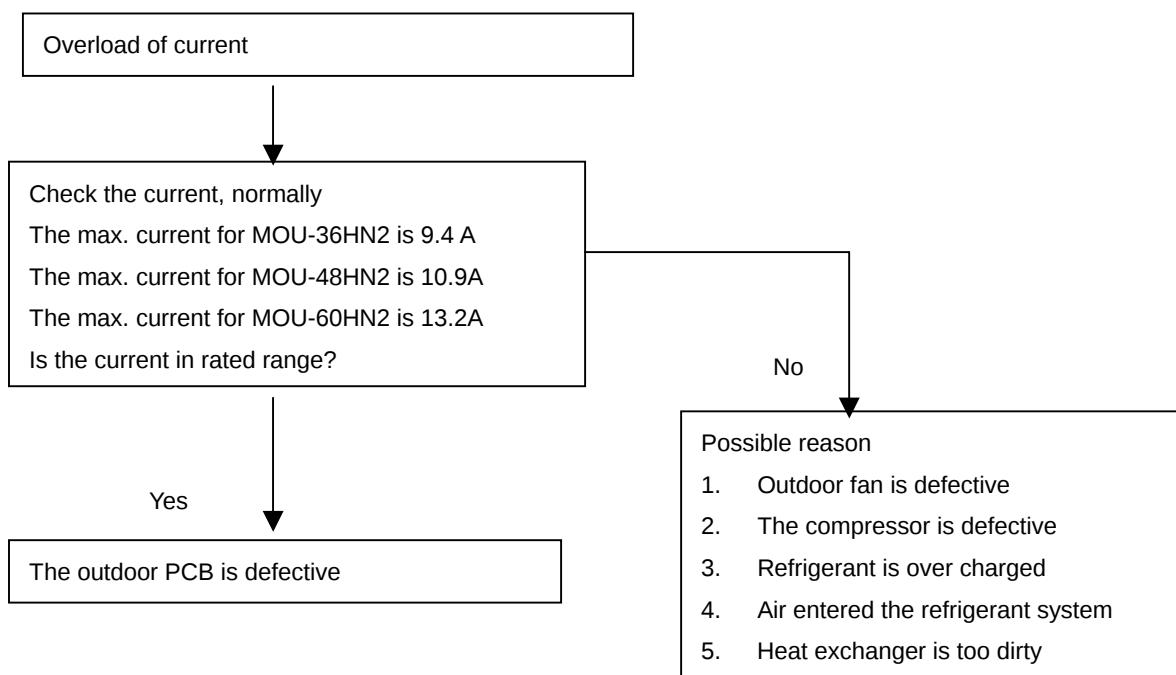
Type	Contents	LED1	LED2	LED3
Trouble	Phase sequence	Flash	Off	Off
Trouble	Lack of phase	Flash	Off	Off
Trouble	Protection of pressure	Flash	Flash	Off
Trouble	Overload of current	Off	Off	Flash
Trouble	Open-circuit and short-circuit trouble of T3	Off	Flash	Flash
Trouble	Open-circuit and short-circuit trouble of T4	Off	Flash	Off

Trouble	High temperature protection of condenser	Flash	Flash	Flash
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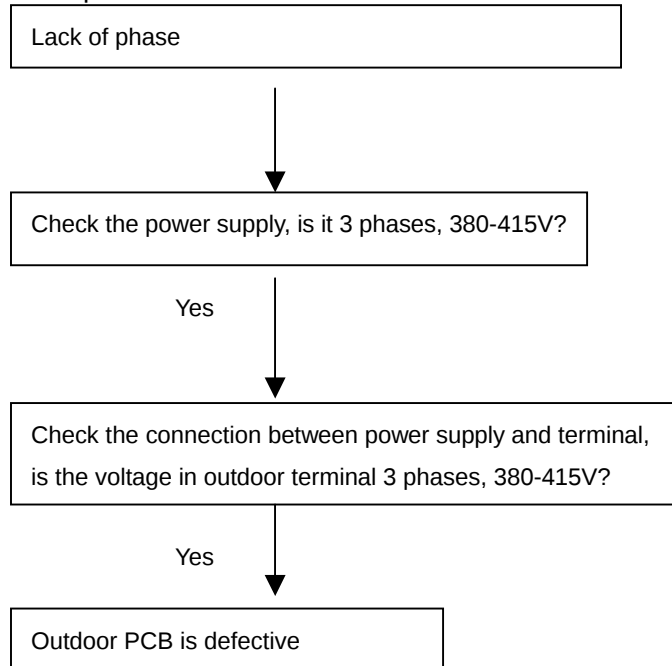
2.3.1 Phase sequence error:



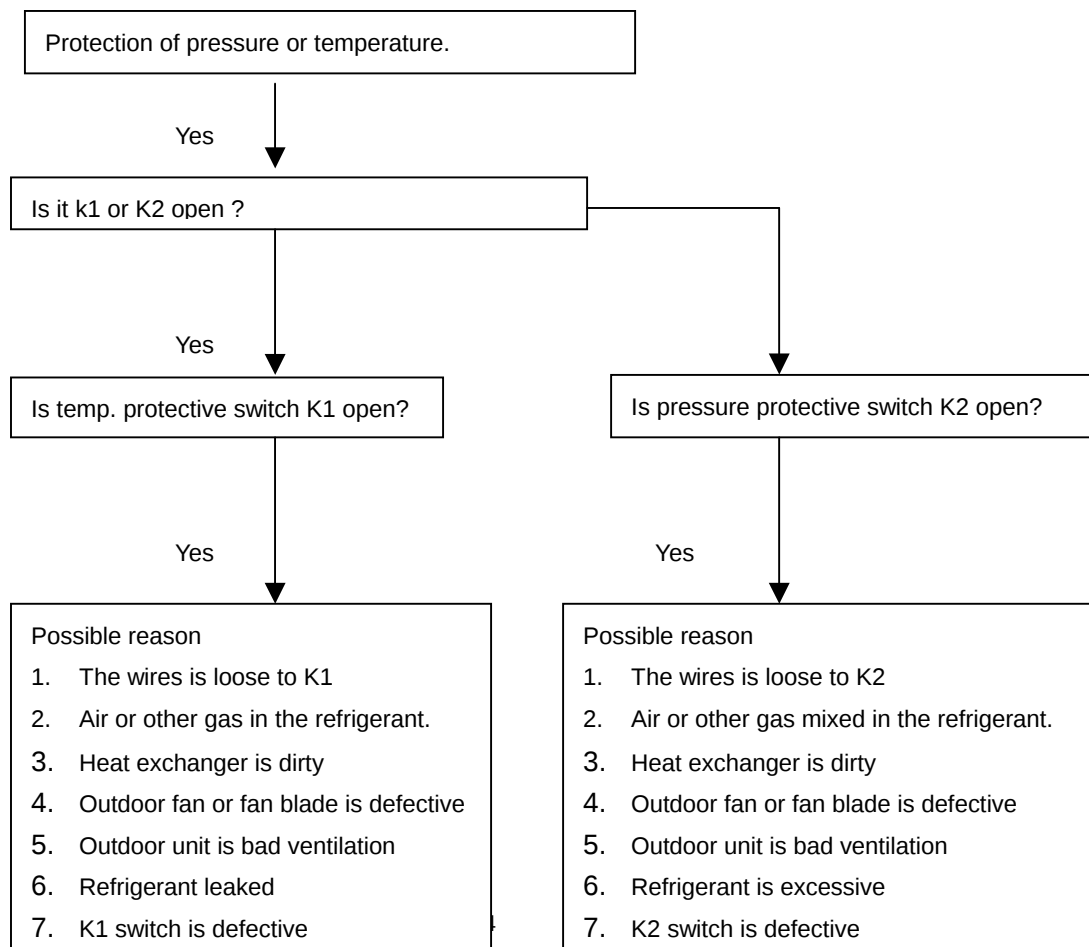
2.3.2 Overload of current



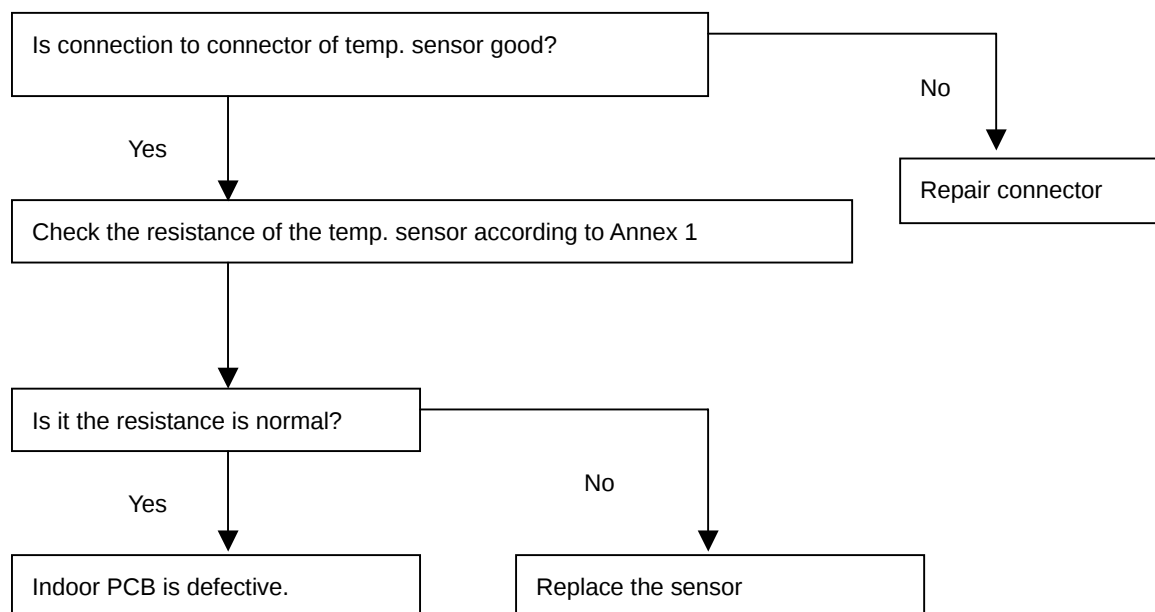
2.3.3 Lack of phase



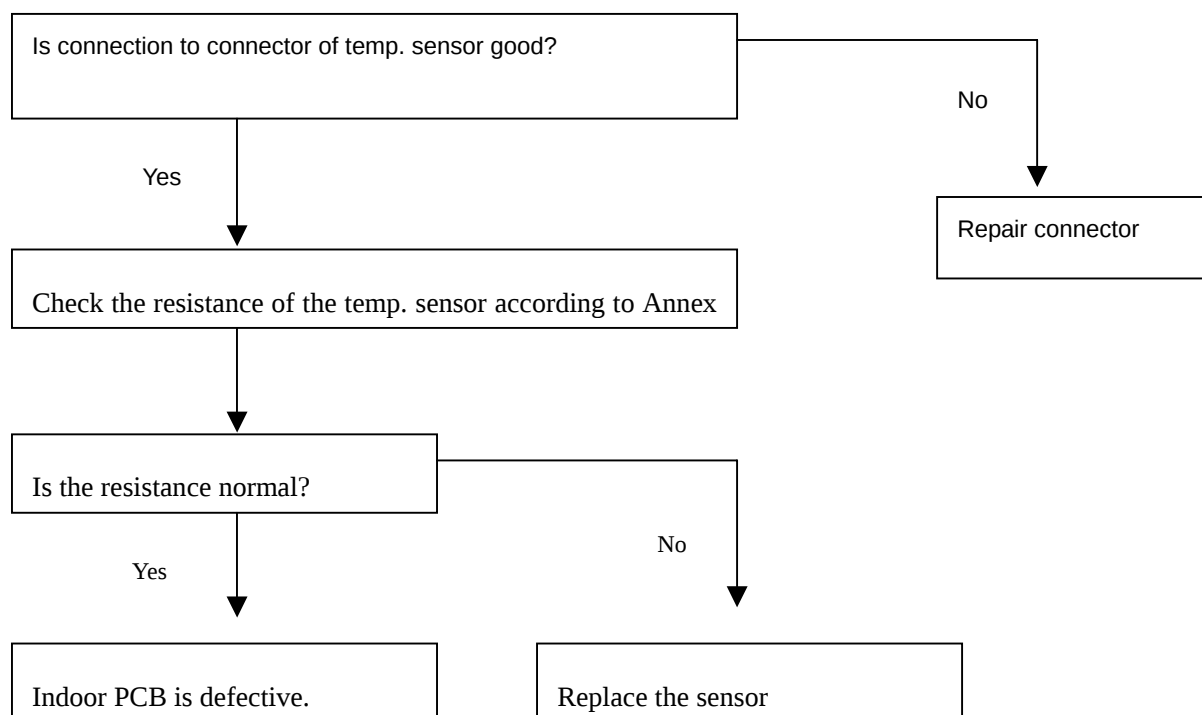
2.3.4 Protection of pressure or temperature.



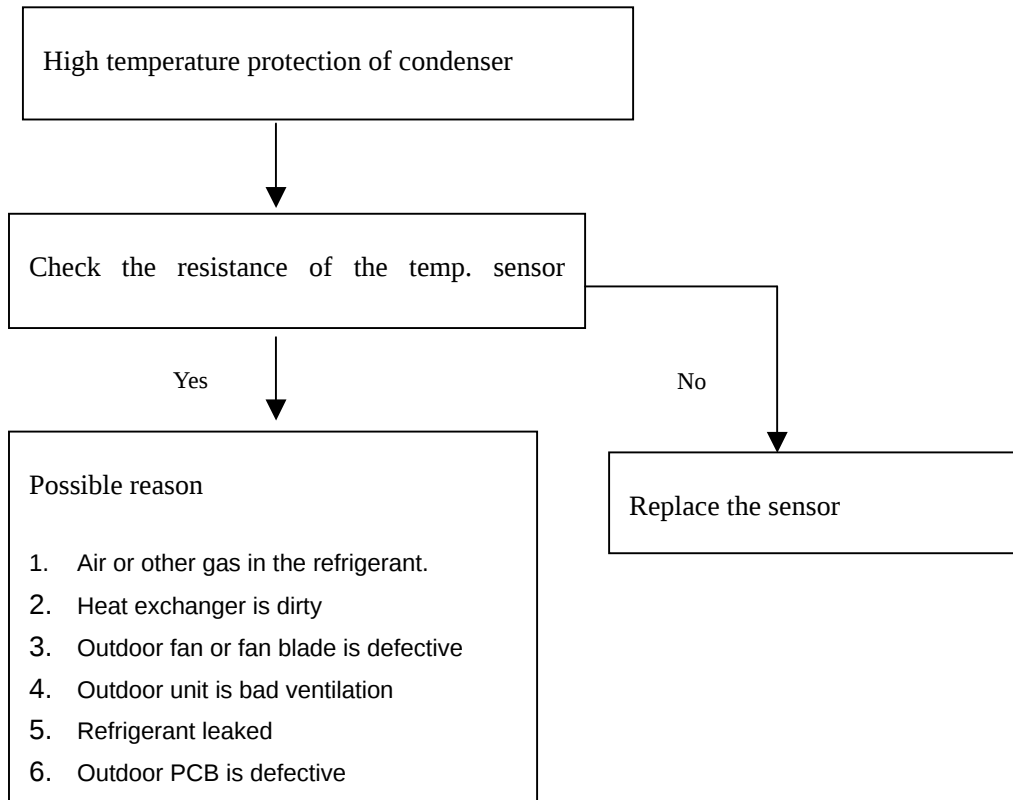
2.3.5 Open-circuit and short-circuit trouble of T3



2.3.6 Open-circuit and short-circuit trouble of T4



2.3.7 High temperature protection of condenser



Appendix 1 Indoor Temp. and Pipe Temp. Sensor Resistance Value Table

Indoor Temp. and Pipe Temp. Sensor Resistance Value (--K)

-20	115.266	20	12.6431	60	2.35774	100	0.62973
-19	108.146	21	12.0561	61	2.27249	101	0.61148
-18	101.517	22	11.5000	62	2.19073	102	0.59386
-17	96.3423	23	10.9731	63	2.11241	103	0.57683
-16	89.5865	24	10.4736	64	2.03732	104	0.56038
-15	84.2190	25	10.000	65	1.96532	105	0.54448
-14	79.3110	26	9.55074	66	1.89627	106	0.52912
-13	74.5360	27	9.12445	67	1.83003	107	0.51426
-12	70.1698	28	8.71983	68	1.76647	108	0.49989
-11	66.0898	29	8.33566	69	1.70547	109	0.48600
-10	62.2756	30	7.97078	70	1.64691	110	0.47256
-9	58.7079	31	7.62411	71	1.59068	111	0.45957
-8	56.3694	32	7.29464	72	1.53668	112	0.44699
-7	52.2438	33	6.98142	73	1.48481	113	0.43482
-6	49.3161	34	6.68355	74	1.43498	114	0.42304
-5	46.5725	35	6.40021	75	1.38703	115	0.41164
-4	44.0000	36	6.13059	76	1.34105	116	0.40060
-3	41.5878	37	5.87359	77	1.29078	117	0.38991
-2	39.8239	38	5.62961	78	1.25423	118	0.37956
-1	37.1988	39	5.39689	79	1.21330	119	0.36954
0	35.2024	40	5.17519	80	1.17393	120	0.35982
1	33.3269	41	4.96392	81	1.13604	121	0.35042
2	31.5635	42	4.76253	82	1.09958	122	0.3413
3	29.9058	43	4.57050	83	1.06448	123	0.33246
4	28.3459	44	4.38736	84	1.03069	124	0.32390
5	26.8778	45	4.21263	85	0.99815	125	0.31559
6	25.4954	46	4.04589	86	0.96681	126	0.30754
7	24.1932	47	3.88673	87	0.93662	127	0.29974
8	22.5662	48	3.73476	88	0.90753	128	0.29216
9	21.8094	49	3.58962	89	0.87950	129	0.28482
10	20.7184	50	3.45097	90	0.85248	130	0.27770
11	19.6891	51	3.31847	91	0.82643	131	0.27078
12	18.7177	52	3.19183	92	0.80132	132	0.26408
13	17.8005	53	3.07075	93	0.77709	133	0.25757
14	16.9341	54	2.95896	94	0.75373	134	0.25125
15	16.1156	55	2.84421	95	0.73119	135	0.24512
16	15.3418	56	2.73823	96	0.70944	136	0.23916
17	14.6181	57	2.63682	97	0.68844	137	0.23338
18	13.9180	58	2.53973	98	0.66818	138	0.22776
19	13.2631	59	2.44677	99	0.64862	139	0.22231