

Ceiling & floor type

1. Specifications

Model			DB12U_DOB12U	DB18U_DOB18U
Power supply		Ph-V-Hz	1,220-240V,50Hz	1,220-240V,50Hz
Cooling	Capacity	Btu/h	12000	18000
	Capacity	kW	3.5	5.3
	Input	W	1140	1900
	Rated current	A	6	8.8
	EER	Btu/W.h	10.52	9.6
Heating	Capacity	Btu/h	13000	20500
	Capacity	kW	3.8	6
	Input	W	1200	1900
	Rated current	A	6.8	8.8
	COP	Btu/W.h	11.1	10.7
Moisture Removal		L/h	1.2	1.8
Max. input consumption		W	1950	2300
Max. current		A	8.9	11.7
Starting current		A	26	36.8
Compressor	Model		PA140X2C-4FT	PA225X2CS-4KU
	Type		ROTARY	ROTARY
	Brand		MIDEA-TOSHIBA	MIDEA-TOSHIBA
	Supplier		MIDEA-TOSHIBA (Guangdong)	MIDEA-TOSHIBA (Guangdong)
	Capacity	Btu/h	11567	18834
	Input	W	1145	1870
	Rated current(RLA)	A	5.3	8.75
	Locked rotor Amp(LRA)	A	26	36.8
	Thermal protector		INNER	INNER
	Capacitor	uF	35/370 μF/V	50/370 μF/V
	Refrigerant oil	ml	RB68AF/T68/A68tf 480	ESTER OIL VG74 750
Indoor fan motor	Model		YSK55-4L	YSK55-4L
	Brand		WELING	WELING
	Input	W	110/104/98	110/104/98
	Capacitor	uF	2.5uF/450V	2.5uF/450V
	Speed(hi/lo)	r/min	1280/ 1190/1000	1280/ 1190/1000
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	804*254*66	804*254*66
Indoor air flow(Hi/Mid/Lo)		m ³ /h	600/480/400	800/600/500
Indoor noise level (Hi/Mid/Lo)		dB(A)	40/36/30	40/38/30
Indoor unit	Dimension (W*H*D)(body)	mm	995*660*198	995*660*198
	Packing (W*H*D)(body)	mm	1075*760*278	1075*760*278
	Net/Gross weight(body)	kg	30/37	30/37
Outdoor fan motor	Model		YDK24-6F	YDK53-6K
	Brand		WELLING	WELLING
	Input	W	56	130
	Capacitor	uF	2.5uF/450V	2.5 uF/450V
	Speed	r/min	800	750
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4 x22	25.4×22
	Fin spacing	mm	1.4	1.8
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ9.53x0.35 Innergroove tube	Φ9.53, innergroove tube
	Coil length x height x width	mm	651x559x44	775×660×44
	Number of circuits		2	3
Outdoor air flow		m ³ /h	2100	2400
Outdoor noise level		dB(A)	43	48
Outdoor unit	Dimension(W*H*D)	mm	760×590×285	845×695×335
	Packing (W*H*D)	mm	887×655×355	970×770×395
	Net/ Gross weight	kg	44/48	57/62
Refrigerant type/Quantity		g	R410A/1120	R410A/2050
Design pressure (high side/low side)		MPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	6.35 (1/4)	6.35 (1/4)
	Gas side	mm(inch)	12.7 (1/2)	12.7 (1/2)
	Max. pipe length	m	25	25
	Max. difference in level	m	15	15
Operation temp		°C	17~30	17~30
Ambient temp		°C	-7~45	-7~45
Application area		m ²	18~26	34~49
Qty'per 20' & 40'Fcl		Pieces	68/144/216	68/144/216

Model			DB24U_DOB24U	DB30UT_DOB30UT
Power supply		Ph-V-Hz	1,220-240V,50Hz	3,380V,50Hz
Cooling	Capacity	Btu/h	24000	30000
	Capacity	kW	7.1	8.8
	Input	W	2560	3250
	Rated current	A	12.2	5.5
	EER	Btu/W.h	9.6	9.3
Heating	Capacity	Btu/h	27300	32000
	Capacity	kW	8	9.4
	Input	W	2500	3250
	Rated current	A	11	5.5
	COP	Btu/W.h	10.9	10.9
Moisture Removal		L/h	2.4	3
Max. input consumption		W	3300	4620
Max. current		A	15.3	8.5
Starting current		A	61	61
Compressor	Model		PA290X3CS-4MU1	C-SBN303H8D
	Type		ROTARY	SCROLL
	Brand		MIDEA- TOSHIBA	SANYO
	Supplier		MIDEA-TOSHIBA (Guangdong)	SANYO(Dalian)
	Capacity	Btu/h	24498	33438
	Input	W	2430	3650
	Rated current(RLA)	A	11.4	6.58
	Locked rotor Amp(LRA)	A	61	61
	Thermal protector		INNER	INNER
	Capacitor	uF	50/400 µF/V	/
	Refrigerant oil	ml	ESTER OIL CG74 950	DAPHNE FV68S 1700
Indoor fan motor	Model		YSK55-4L	YSK80-4A
	Brand		WELING	WELING
	Input	W	110/104/98	142/134/132
	Capacitor	uF	2.5uF/450V	3.5uF/450V
	Speed(hi/lo)	r/min	1280/ 1190/1000	1310/1200/1000
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 aluminum
	Tube outside dia.and type	mm	Φ9.53 innergroove tube	Φ9.53, inner groove tube
	Coil length x height x width	mm	804*254*66	905*203*66
Indoor air flow (Hi/Mid/Lo)		m³/h	1000/900/700	1200/1000/800

Indoor noise level (Hi/Mid/Lo)		dB(A)	40/36/32	41/37/33
Indoor unit	Dimension (W*H*D)(body)	mm	995*660*198	1285*660*198
	Packing (W*H*D)(body)	mm	1075*760*278	1365*760*278
	Net/Gross weight(body)	kg	30/37	42/34
Outdoor fan motor	Model		YDK53-6H	YDK250-6D-WL
	Brand		WELLING	WELLING
	Input	W	130	307
	Capacitor	uF	3μF/450V	10μF/450V
	Speed	r/min	800	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	1.5	1.7
	Fin type (code)		Hydrophilic aluminium	Unhydrophilic aluminium
	Tube outside dia.and type	mm	Φ9.53,innergroove tube	Φ9.53,innergroove tube
	Coil length x height x width	mm	850×810×44	955×915×44
	Number of circuits		4	8
Outdoor air flow		m ³ /h	3000	5000
Outdoor noise level		dB(A)	55	57
Outdoor unit	Dimension(W*H*D)	mm	895×860×330	990×960×360
	Packing (W*H*D)	mm	1043×915×395	1120×1090×435
	Net/ Gross weight	kg	68/70	90/102
Refrigerant type/Quantity		g	R410A/2600	R410A/3100
Design pressure (high side/low side)		MPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	9.53 (3/8)	12.7 (1/2)
	Gas side	mm(inch)	16 (5/8)	19 (3/4)
	Max. pipe length	m	30	30
	Max. difference in level	m	15	20
Operation temp		°C	17~30	17~30
Ambient temp		°C	-7~45	-7~45
Application area		m ²	40~56	50~75
Qty'per 20' & 40'Fcl		Pieces	30/63/66	25/55/62

Model			DB36UT_DOB36UT	DB48UT_DOB48UT	DB60UT_DOB60UT
Power supply		Ph-V-Hz	3,380V,50Hz	3,380V,50Hz	3,380V,50Hz
Cooling	Capacity	Btu/h	36000	48000	60,000
	Capacity	kW	10.5	14	16
	Input	W	3700	4700	6000
	Rated current	A	6.5	8.2	9.8
	EER	Btu/W.h	9.6	9.6	10
Heating	Capacity	Btu/h	39000	52000	68,000
	Capacity	kW	11.4	15.2	20,000
	Input	W	3350	4900	6000
	Rated current	A	5.8	8.6	9.8
	COP	Btu/W.h	11.5	10.6	11.3
Moisture Removal		L/h	3.8	4.8	6
Max. input consumption		W	4620	5870	7500
Max. current		A	8.5	10.7	12.8
Starting current		A	61	66	67
Compressor	Model		C-SBN303H8D	C-SBN373H8D	C-SBN453H8D
	Type		SCROLL	SCROLL	SCROLL
	Brand		SANYO	SANYO	SANYO
	Supplier		SANYO(Dalian)	SANYO(Dalian)	SANYO(Dalian)
	Capacity	Btu/h	33438	48109	55957
	Input	W	3650	4750	5750
	Rated current(RLA)	A	6.58	8.22	9.77
	Locked rotor Amp(LRA)	A	61	66	67
	Thermal protector		INNER	INNER	INNER
	Capacitor	uF	/	/	/
	Refrigerant oil	ml	DAPHNE FV68S 1700	DAPHNE FV68S 1700	DAPHNE FV68S 1700
Indoor fan motor	Model		YSK80-4A	YSK59-4A	YSK59-4A
	Brand		WELING	WELING	WELING
	Input	W	142/134/132	118/108/101	118/108/101
	Capacitor	uF	3.5uF/450V	2.5uF/450V	2.5uF/450V
	Speed(hi/lo)	r/min	1310/1200/1000	820/695/620	820/695/620
Indoor coil	Number of rows		3	3	3
	Tubepitch(a)x row pitch(b)	mm	25.4×22	25.4X22	25.4X22
	Fin spacing	mm	1.7	1.7	1.7
	Fin type (code)		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside dia.and type	mm	Φ9.53, inner groove tube	Φ9.53, inner groove tube	Φ9.53, inner groove tube
	Coil length x height x width	mm	905*203*66	1150x254x66	1150x254x66
Indoor air flow (Hi/Mid/Lo)		m³/h	1400/1200/1000	2000/1800/1600	2000/1800/1600

Indoor noise level (Hi/Mid/Lo)		dB(A)	41/34/31	47/44/40	47/44/40
Indoor unit	Dimension (W*H*D)(body)	mm	1285×660×198	1610×660×240	1610×660×240
	Packing (W*H*D)(body)	mm	1365×760×278	1690×760×320	1690×760×320
	Net/Gross weight(body)	kg	34/42	52/62	52/62
Outdoor fan motor	Model		YDK250-6D-WL	YDK65-6WL; YDK65-6F	YDK65-6F-WL; YDK65-6F
	Brand		WEILING	WELLING	WELLING
	Input	W	307	138+156	138+156
	Capacitor	uF	10 uF/450V	3.5×2 uF/450V	3.5×2 uF/450V
	Speed	r/min	740	800	800
Outdoor coil	Number of rows		2	2	2
	Tube pitch(a)x row pitch(b)	mm	25.4×22	25.4×22	25.4×22
	Fin spacing	mm	1.7	1.8	1.8
	Fin type (code)		unhydrophilic aluminium	hydrophilic aluminium	hydrophilic aluminium
	Tube outside dia.and type	mm	Φ9.53, innergroove tube	Φ9.53, innergroove tube	Φ9.53, innergroove
	Coil length x height x width	mm	955×915×44	715×1220×44	715×1220×44
	Number of circuits		8	4	4
Outdoor air flow		m ³ /h	5000	6000	6000
Outdoor noise level		dB(A)	57	58	58
Outdoor unit	Dimension(W*H*D)	mm	990×960×360	940×1245×340	940×1245×340
	Packing (W*H*D)	mm	1120×1090×435	1020×1370×435	1020×1370×435
	Net/ Gross weight	kg	90/102	112/127	112/127
Refrigerant type/Quantity		g	R410A/3100	R410A/4000	R410A/4200
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)	12.7 (1/2)	12.7 (1/2)	12.7 (1/2)
	Gas side	mm(inch)	19 (3/4)	19 (3/4)	19 (3/4)
	Max. pipe length	m	30	50	50
	Max. difference in level	m	20	30	30
Operation temp		°C	17~30	17~30	17~30
Ambient temp		°C	-7~45	-7~45	-7~45
Application area		m ²	60~85	80~105	95~120
Qty'per 20' & 40' Fcl		Pieces	33/72/77	27/55/58	27/55/58

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

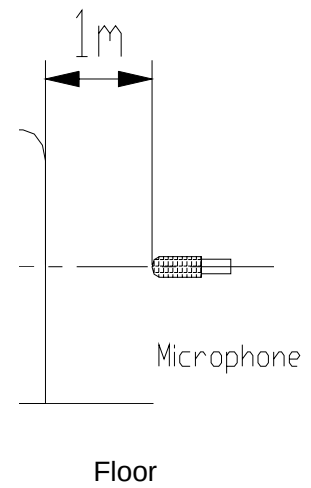
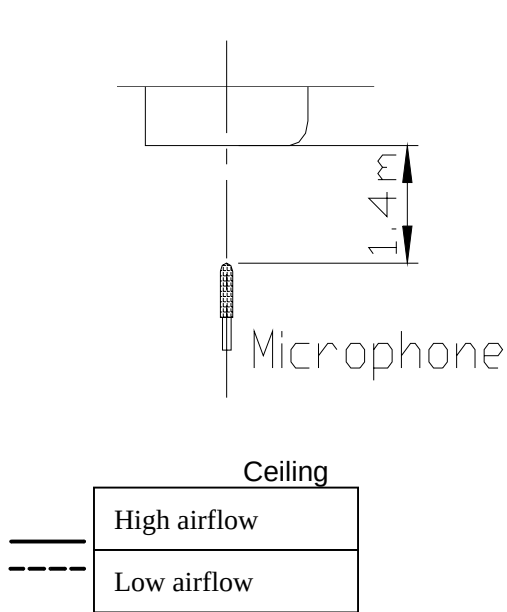
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;

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

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

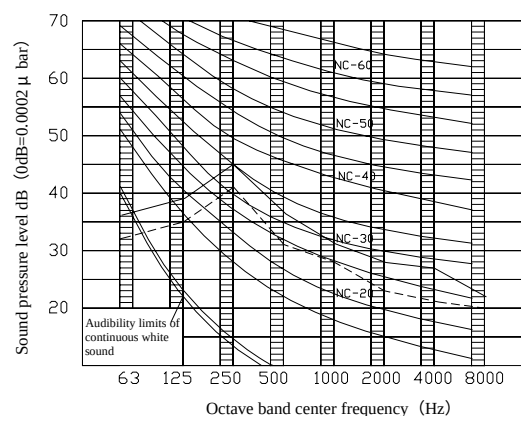
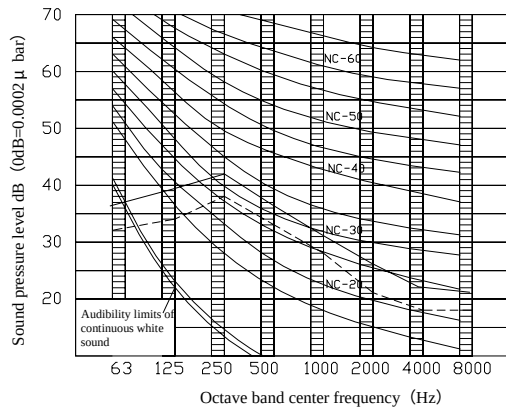
3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

2. Noise level

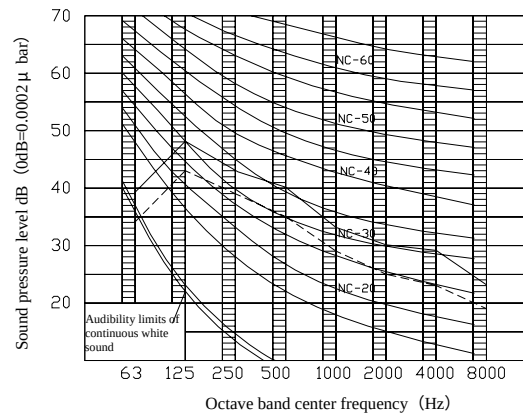
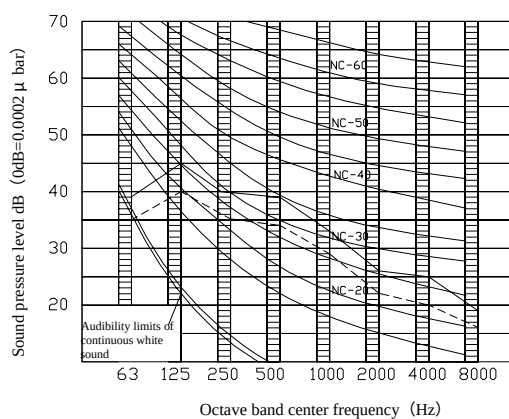


1.

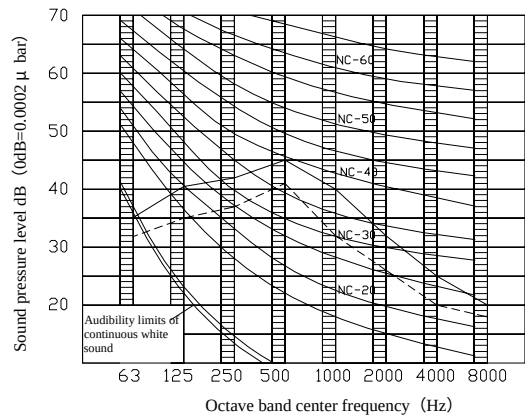
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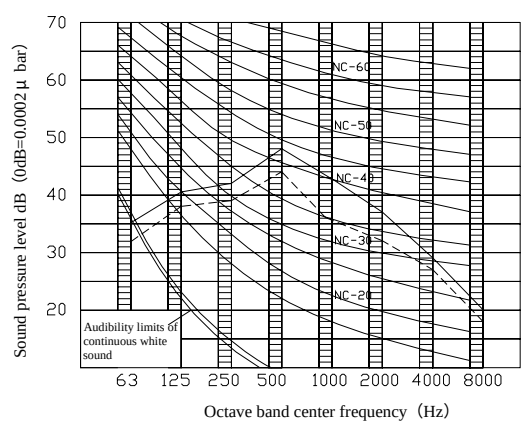
24000btu/h



30000btu/h 36000btu/h

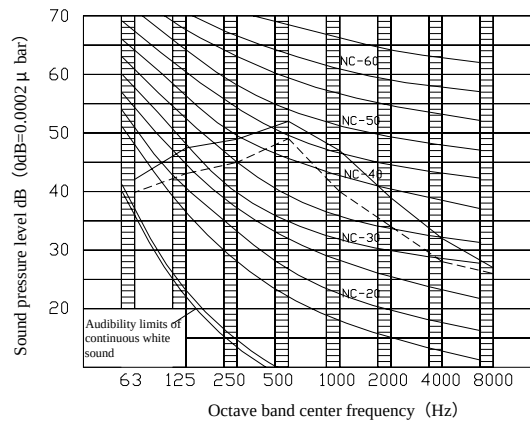


Ceiling

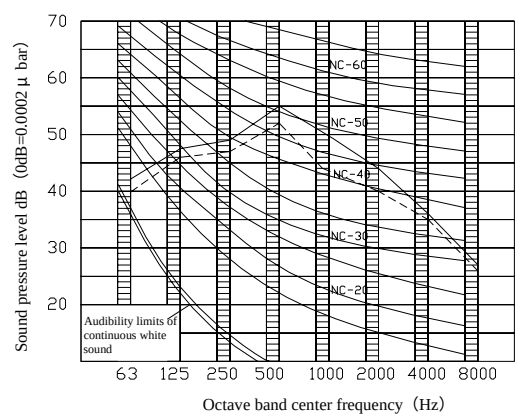


Floor

48000btu/h

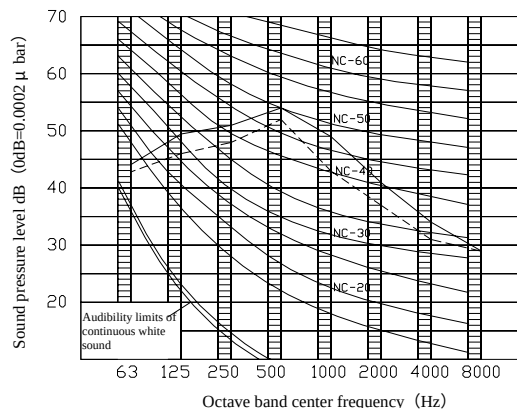


Ceiling

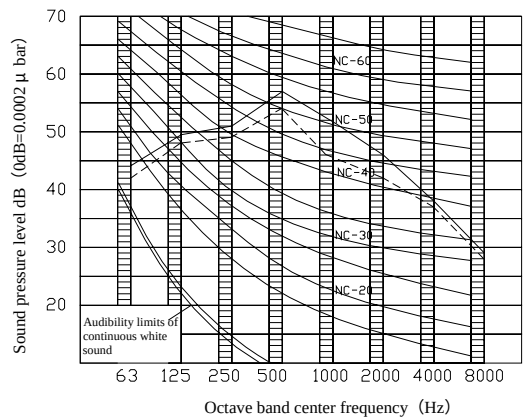


Floor

60000btu/h



Ceiling

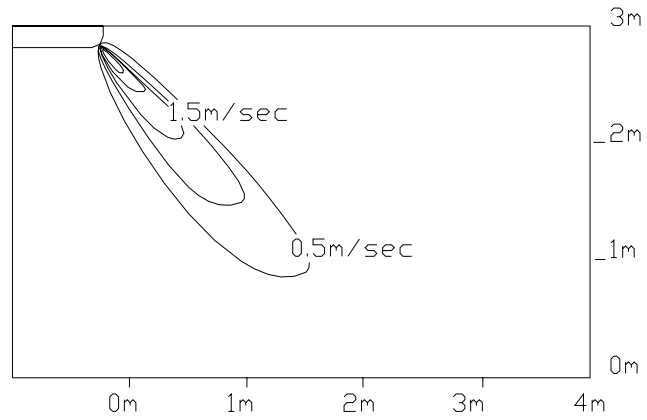


Floor

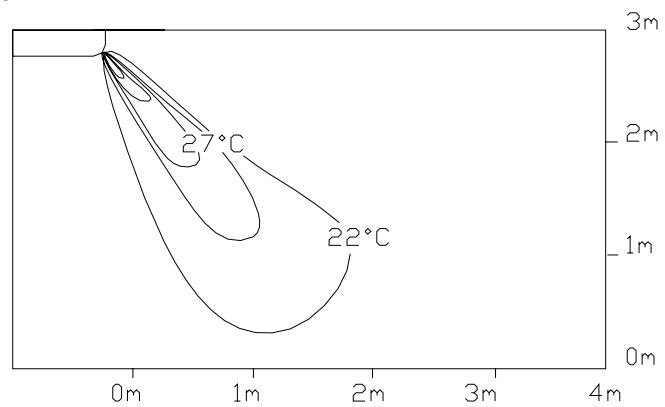
3. Velocity & temperature distribution

Discharge angle 60 ° (CEILING)

Airflow velocity

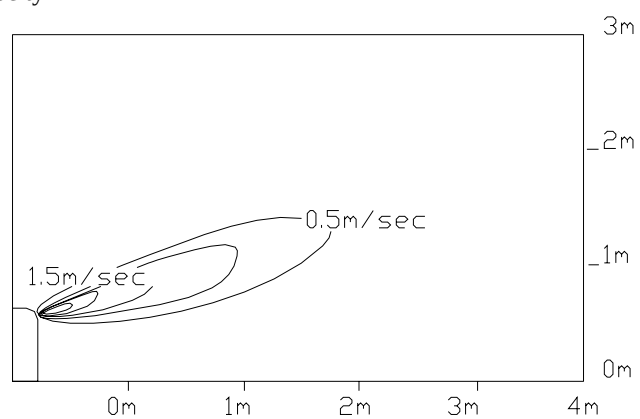


Temperature

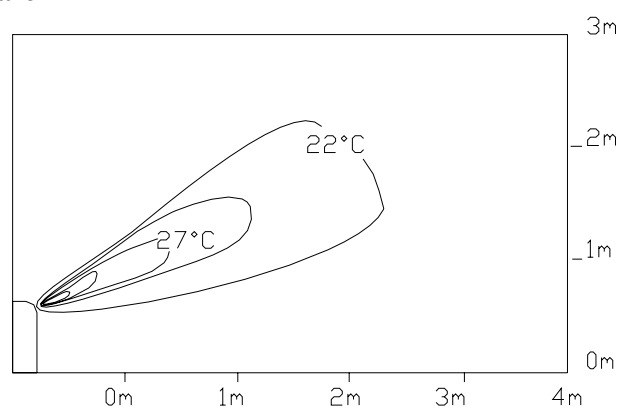


Discharge angle 60 ° (FLOOR)

Airflow velocity



Temperature



4. Capacity table

Model: DB12U_DOB12U

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: DB12U_DOB12U

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: DB18U_DOB18U

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: DB18U_DOB18U

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: DB24U_DOB24U

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: DB24U_DOB24U

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: DB30UT_DOB30UT

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: DB30UT_DOB30UT

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: DB36UT_DOB36UT

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: DB36UT_DOB36UT

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	19.67	15.73	13.11	11.80	11.14	9.83	9.18	8.52
	Input kW.	5.78	4.62	3.85	3.66	3.47	3.27	3.08	2.70
18°C	Capacity kW	18.47	14.77	12.31	11.08	10.47	9.23	8.62	8.00
	Input kW.	5.43	4.34	3.62	3.44	3.26	3.08	2.89	2.53
20°C	Capacity kW	17.10	13.68	11.40	10.26	9.69	8.55	7.98	7.41
	Input kW.	5.03	4.02	3.35	3.18	3.02	2.85	2.68	2.35
22°C	Capacity kW	15.73	12.59	10.49	9.44	8.91	7.87	7.34	6.82
	Input kW.	4.62	3.70	3.08	2.93	2.77	2.62	2.47	2.16
27°C	Capacity kW	13.68	10.94	9.12	8.21	7.75	6.84	6.38	5.93
	Input kW.	4.02	3.22	2.68	2.55	2.41	2.28	2.14	1.88

Model: DB48UT_DOB48UT

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: DB48UT_DOB48UT

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: DB60UT_DOB60UT

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

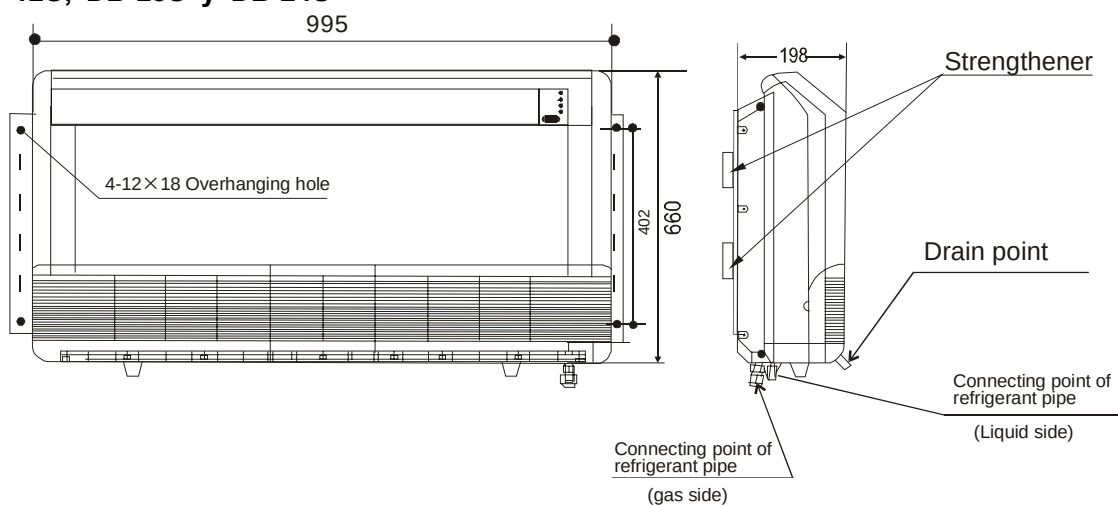
Model: DB60UT_DOB60UT

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

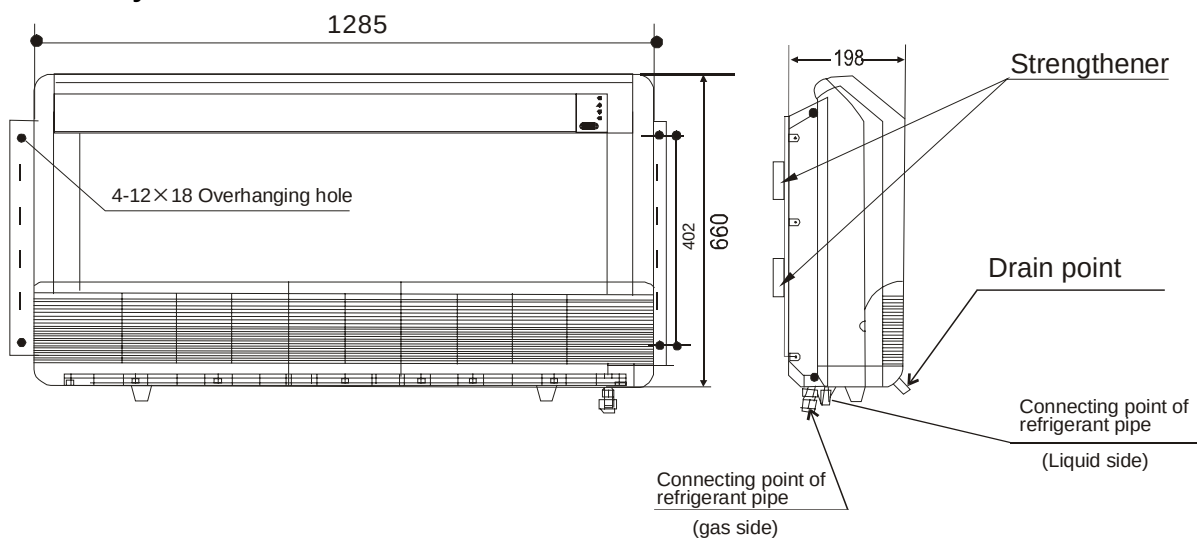
5. Outline & dimension

Indoor units

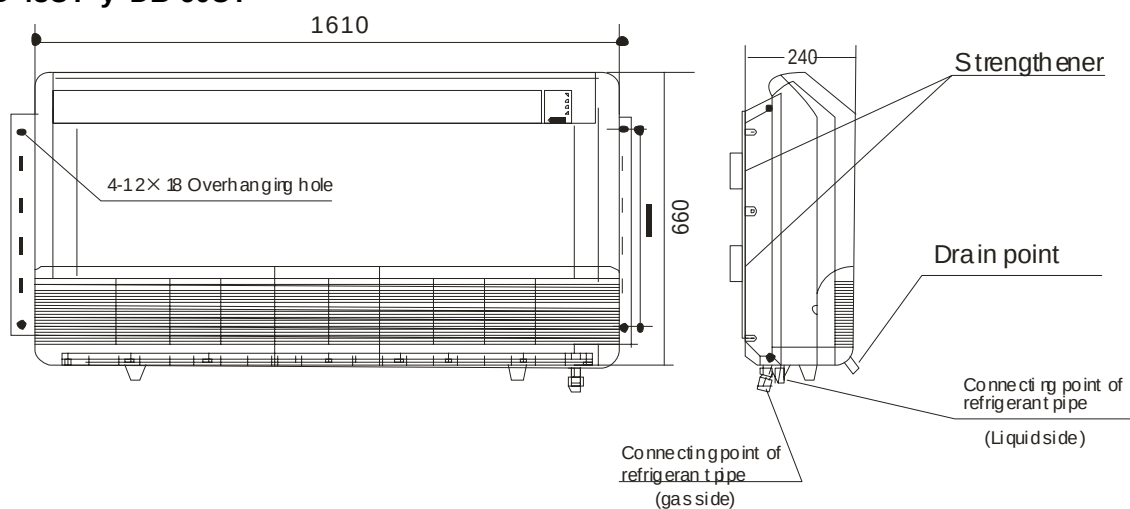
1. DB-12U, DB-18U y DB-24U



2. DB-30UT y DB-36UT



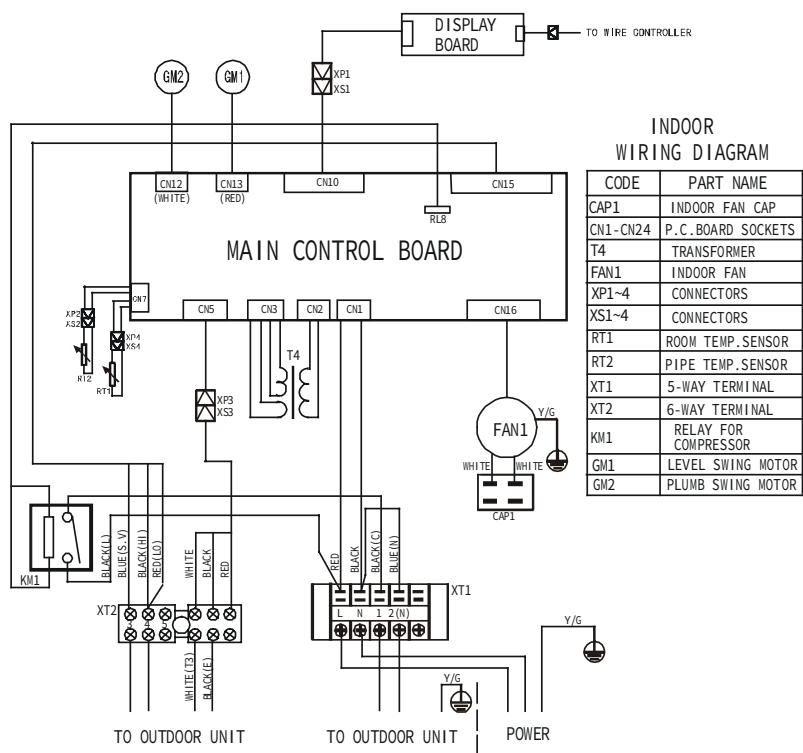
3. DB-48UT y DB-60UT



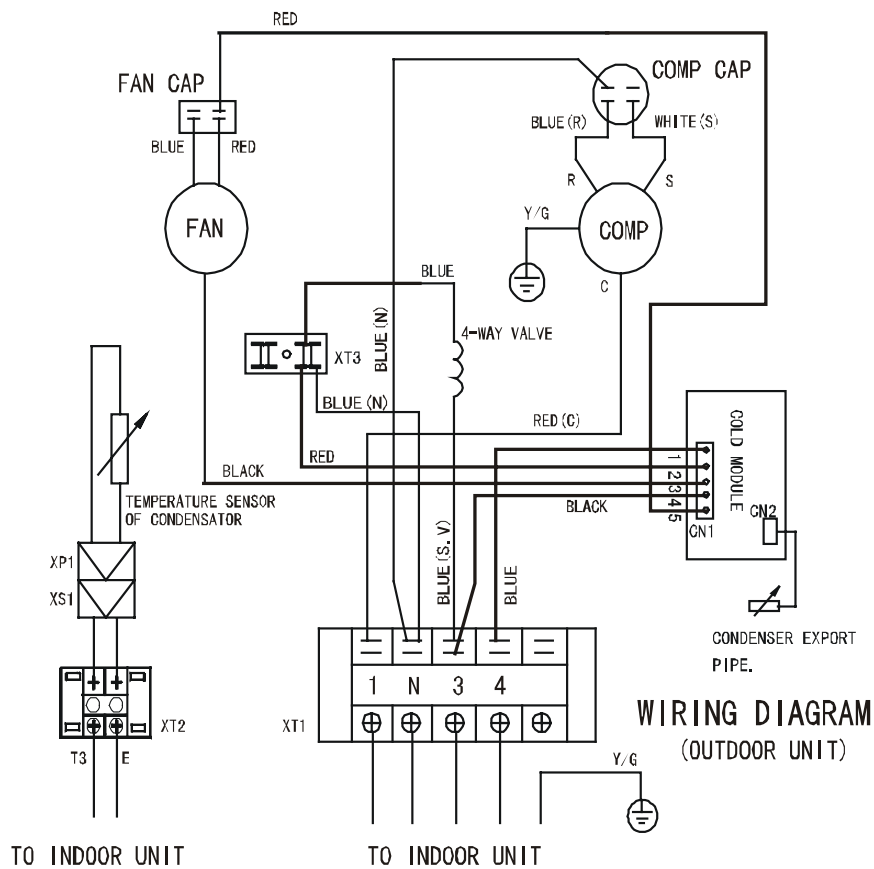
6. Wiring diagram

2. DB-18U_DOB-18U

Indoor unit:

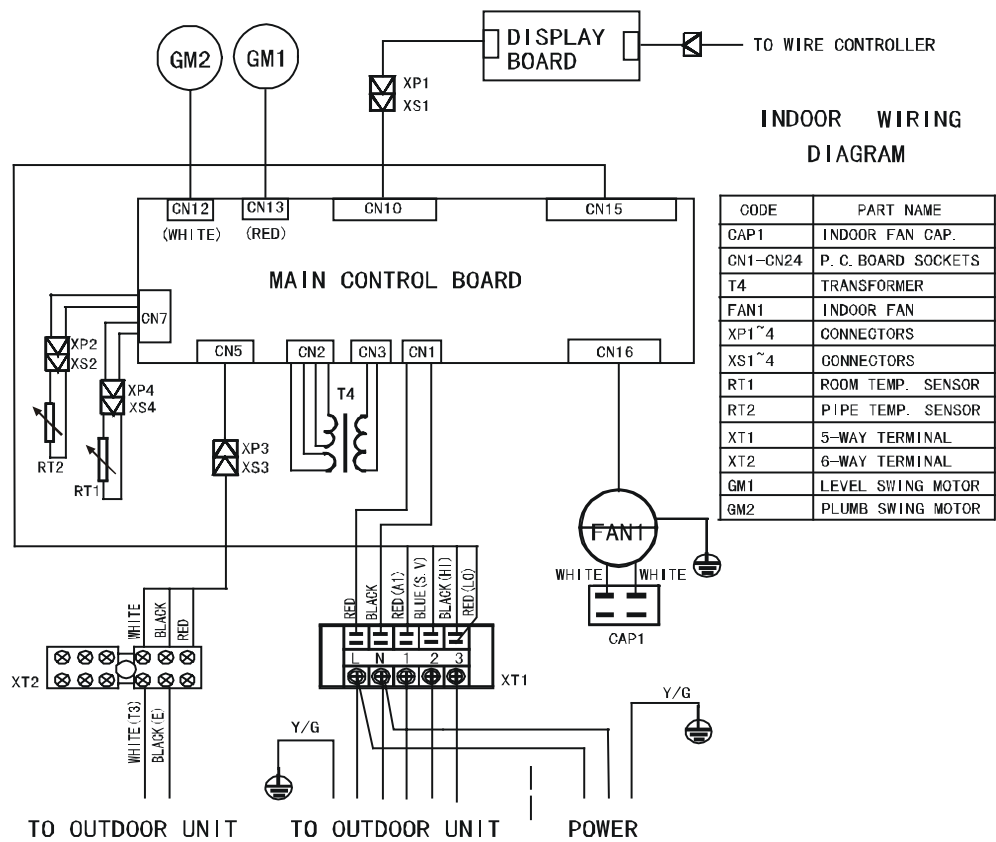


Outdoor unit:

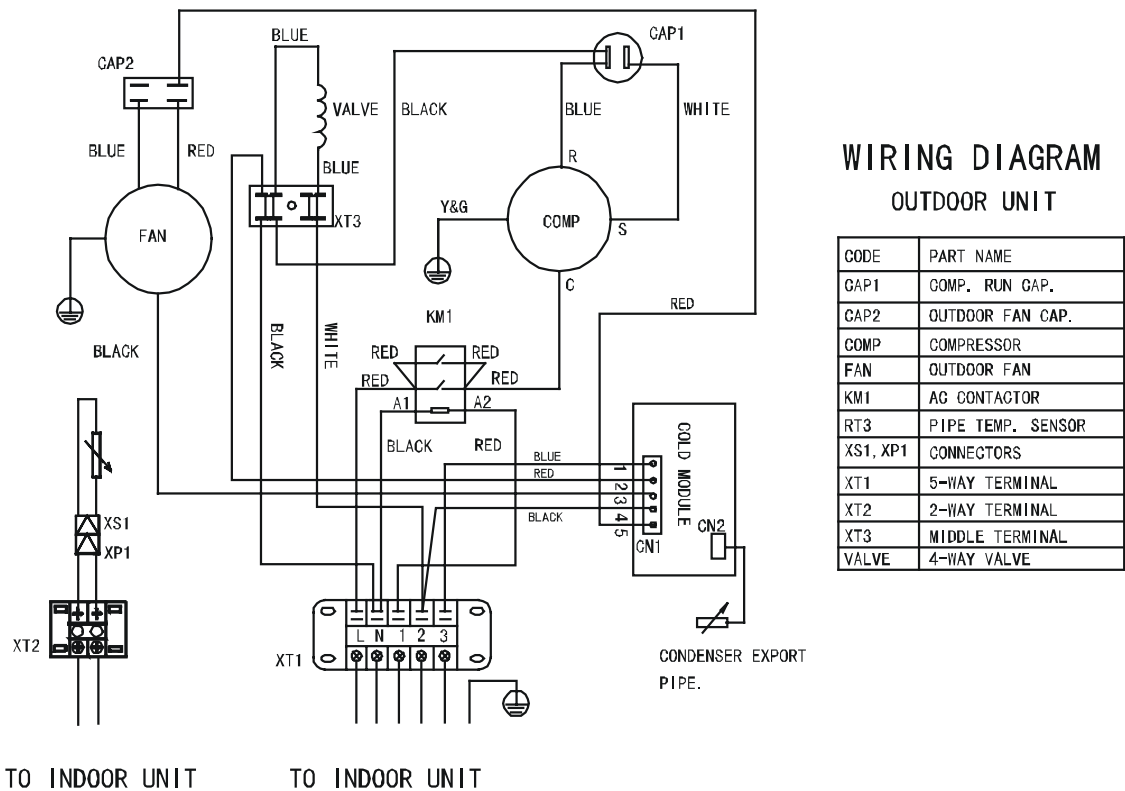


3. DB-24U_DOB-24U

Indoor unit:

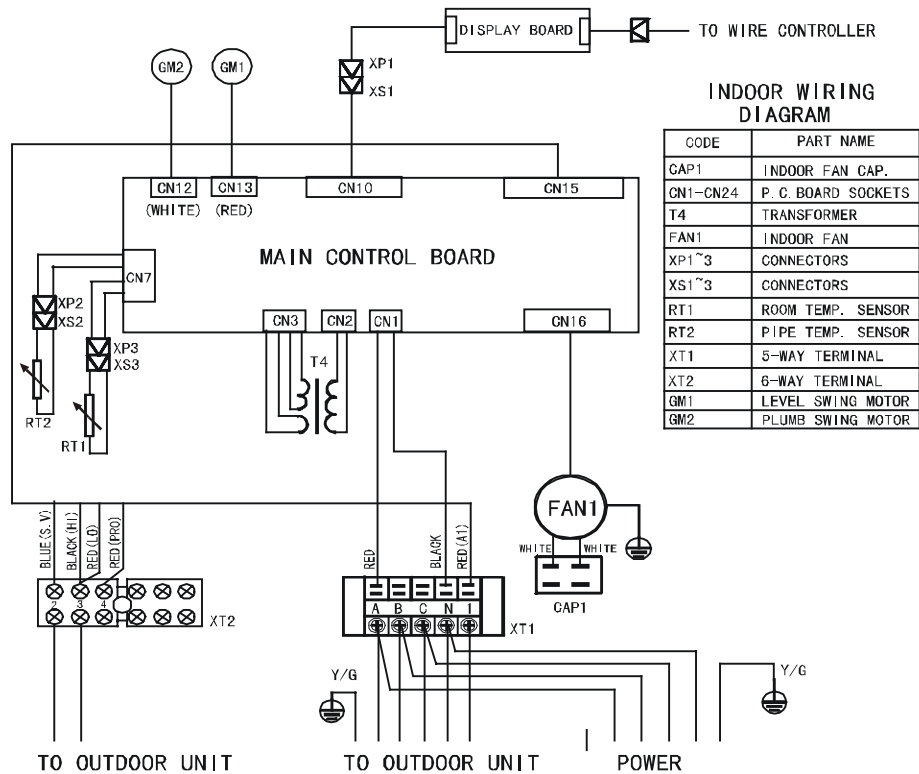


Outdoor unit:

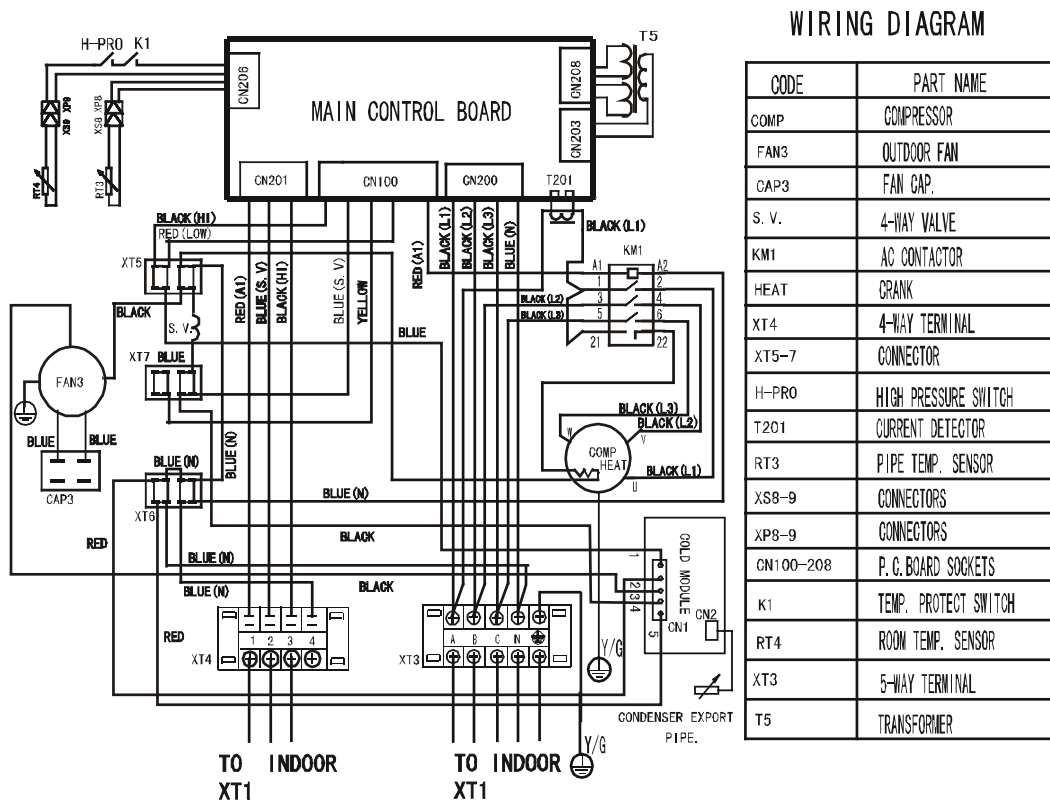


4. DB-30UT_DOB30UT DB-36UT_DOB-36UT

Indoor unit:

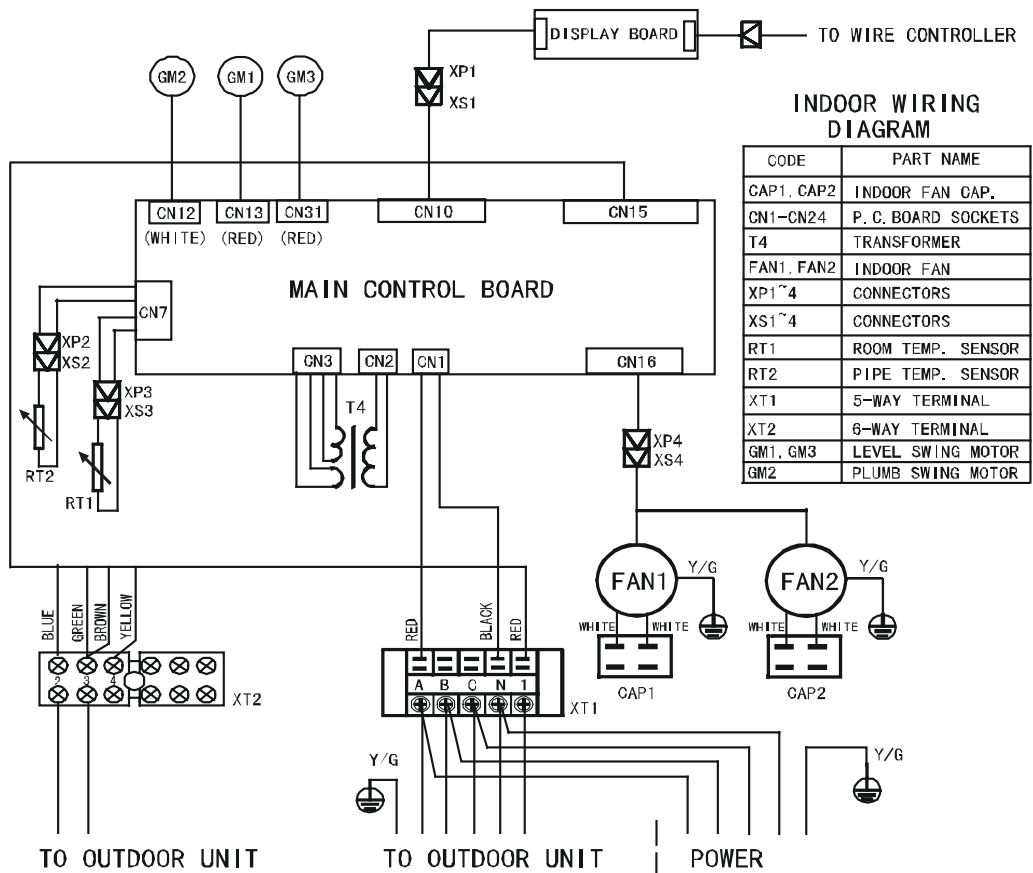


Outdoor unit:

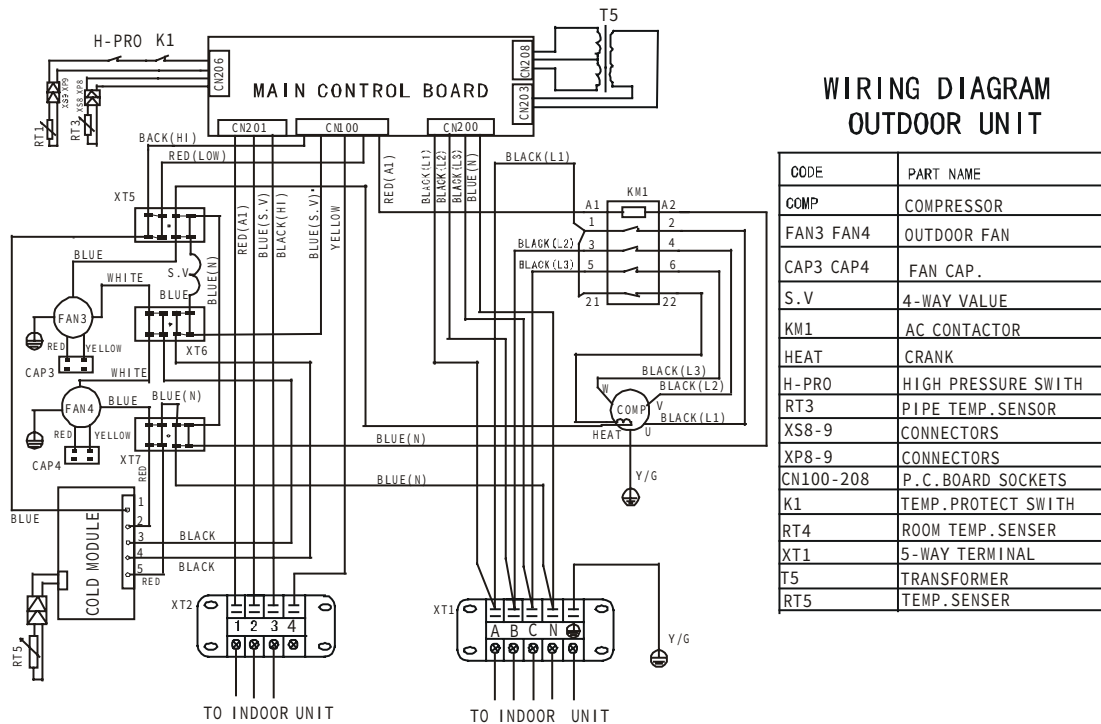


5. DB-48UT_DOB48UT

Indoor unit:

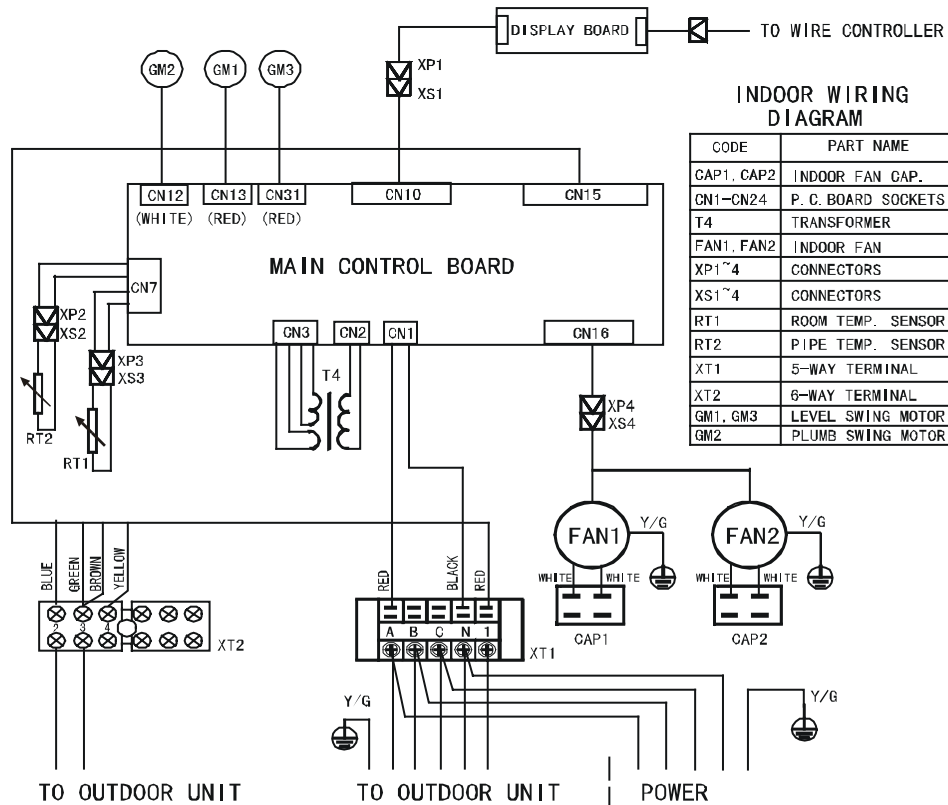


Outdoor unit:

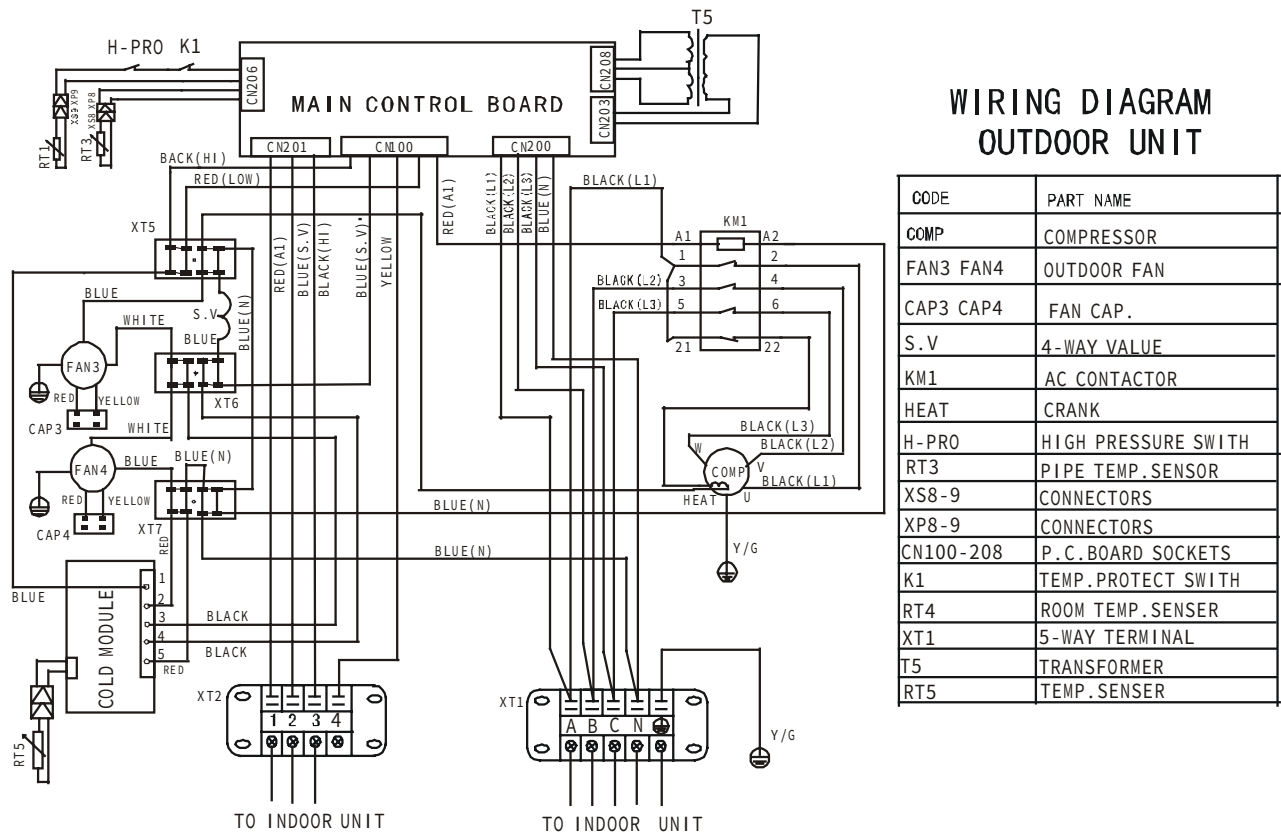


6. DB-60UT_DOB-60UT

Indoor unit:

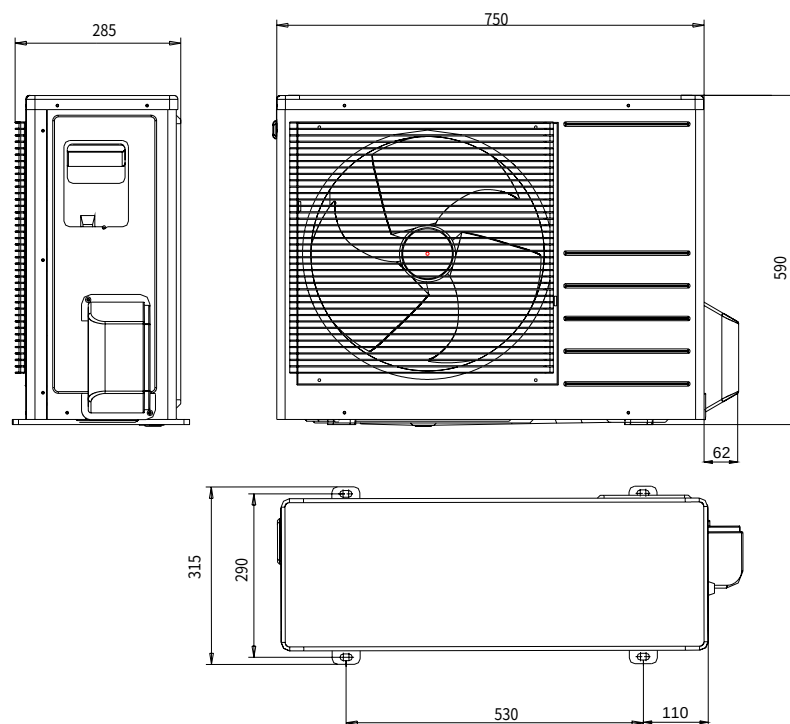


Outdoor unit:

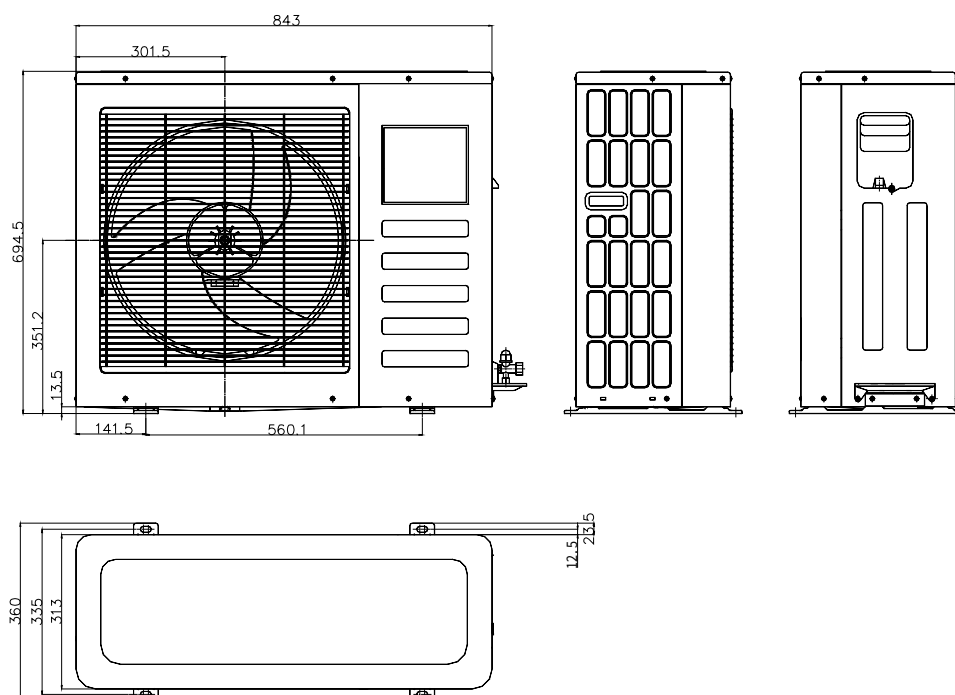


Outline & dimension

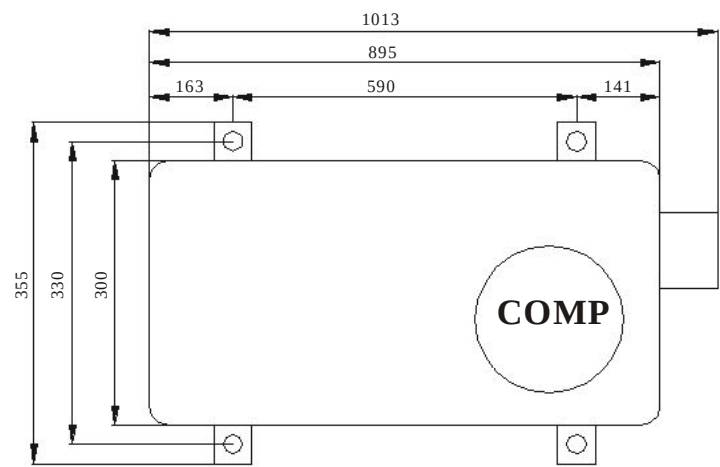
1. DOB-12U



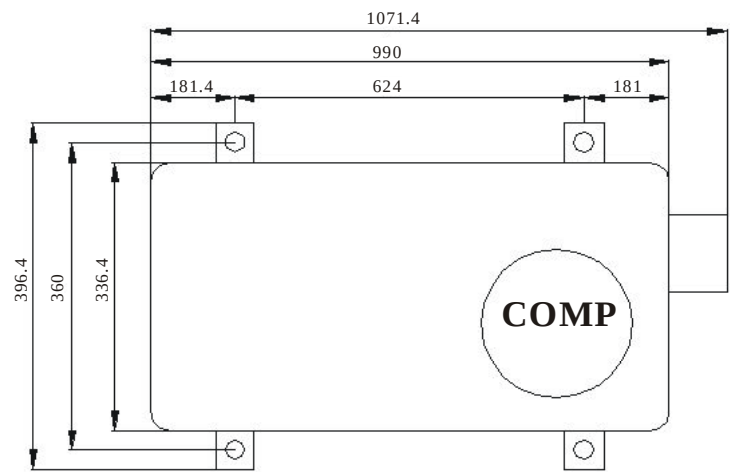
2. DOB-18U



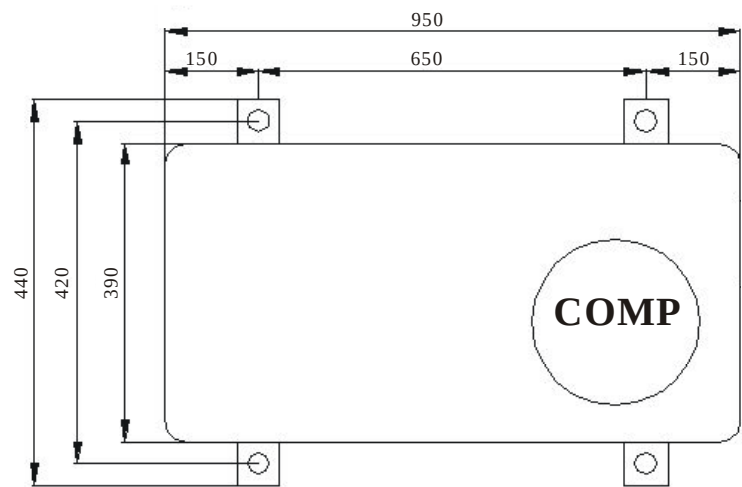
3. DOB-24U



4. DOC-30UT DOC-36UT



5. DOB-48UT DOB-60UT



Part 2 Self-diagnosis and troubleshooting

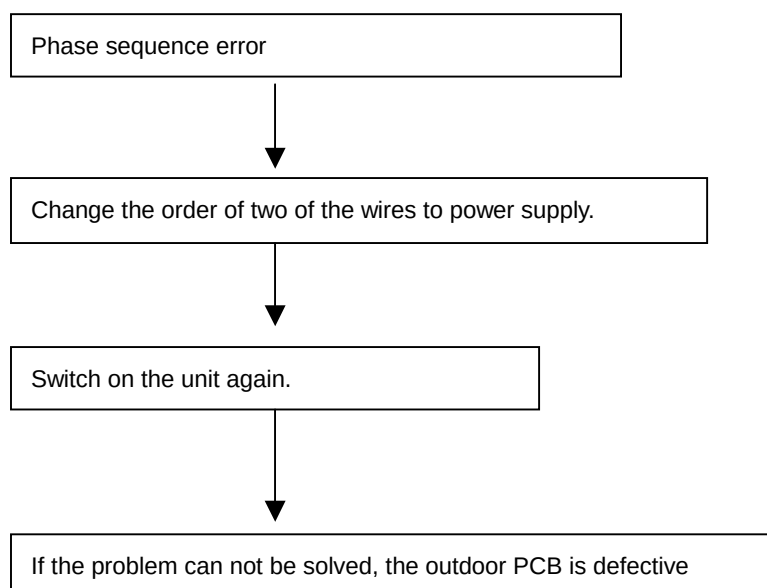
2.1 Indoor unit

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	

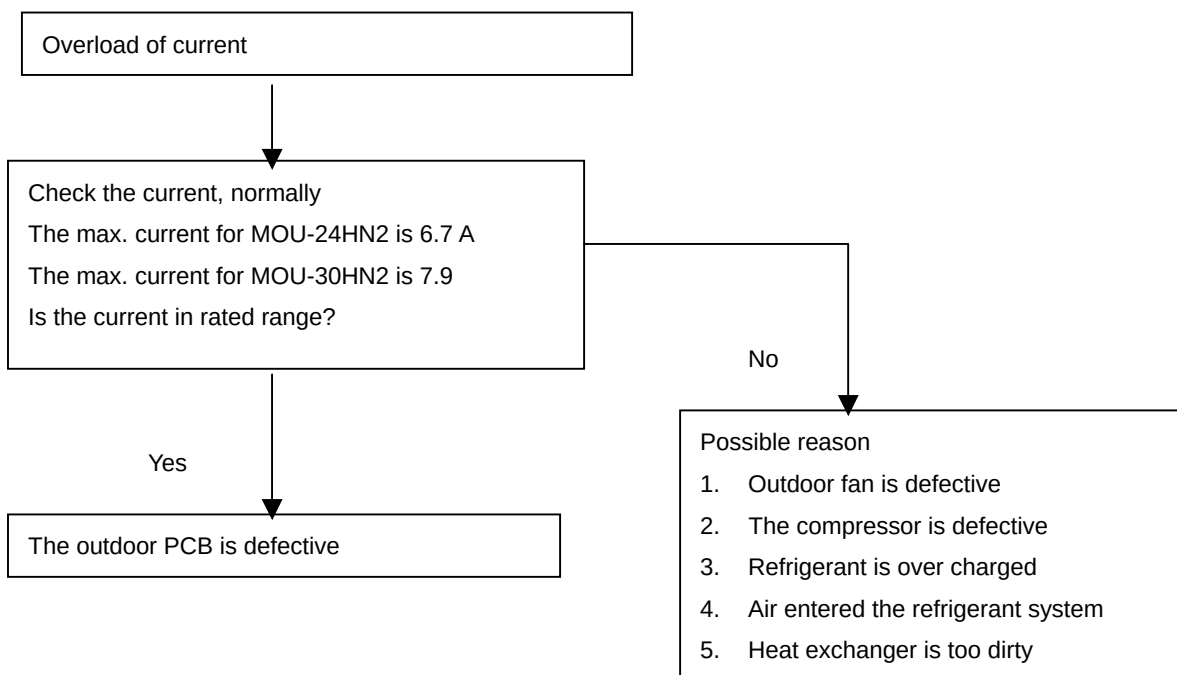
2.2 LEDs' for the indication of outdoor trouble(3 phase type, 3~3.5HP)

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

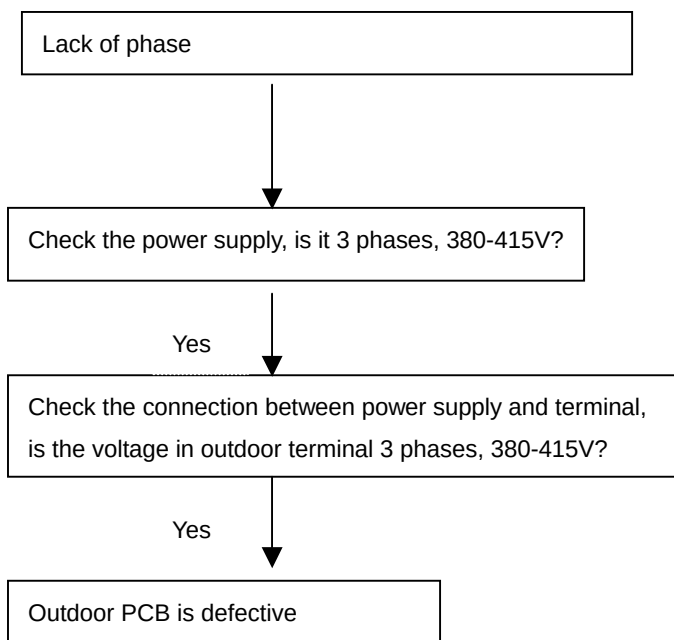
2.2.1 Phase sequence error:



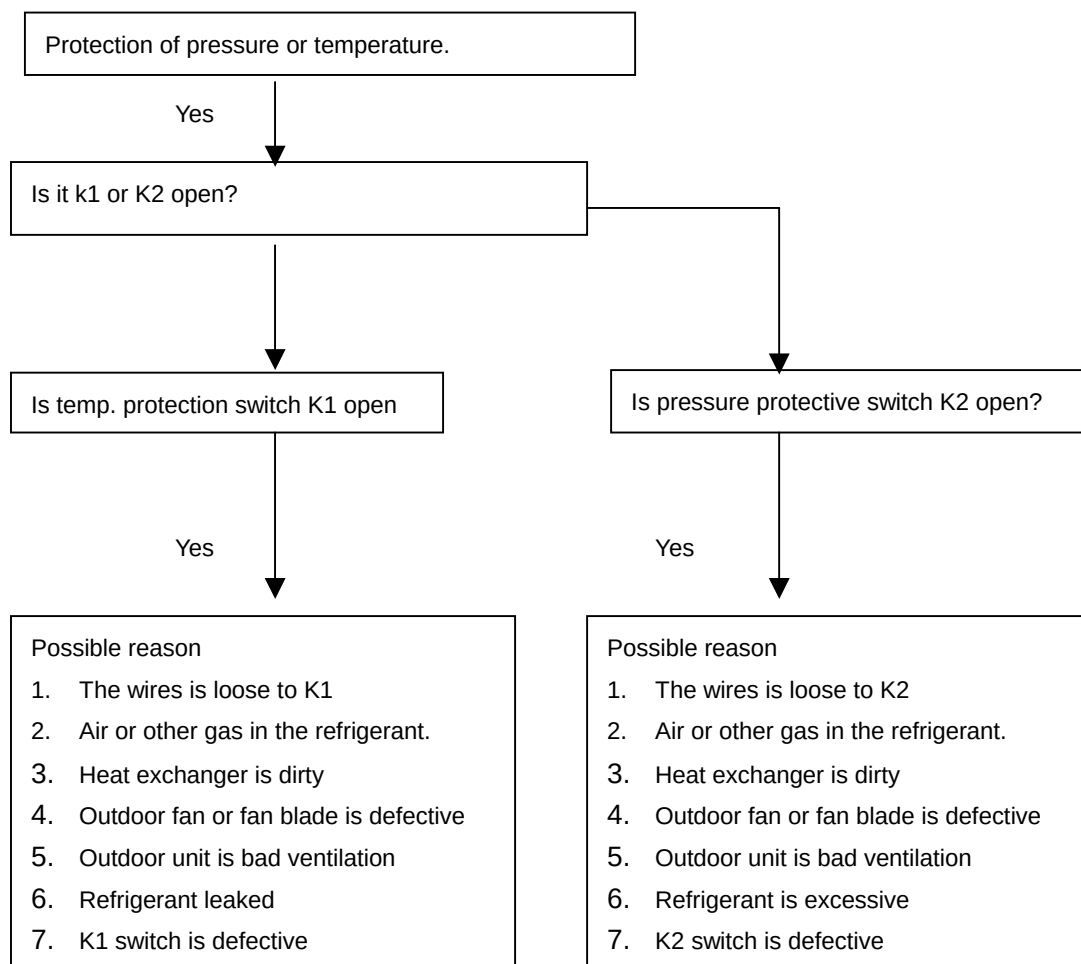
2.2.2 Overload of current



2.2.3 Lack of phase



2.2.4 Protection of pressure or temperature.

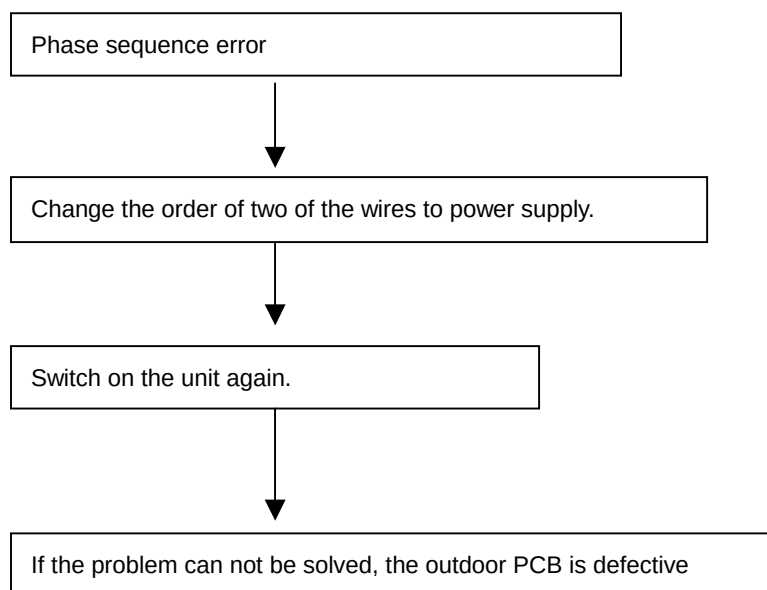


2.3 LEDs' for the indication of outdoor trouble(3 phase type, 4~7HP)

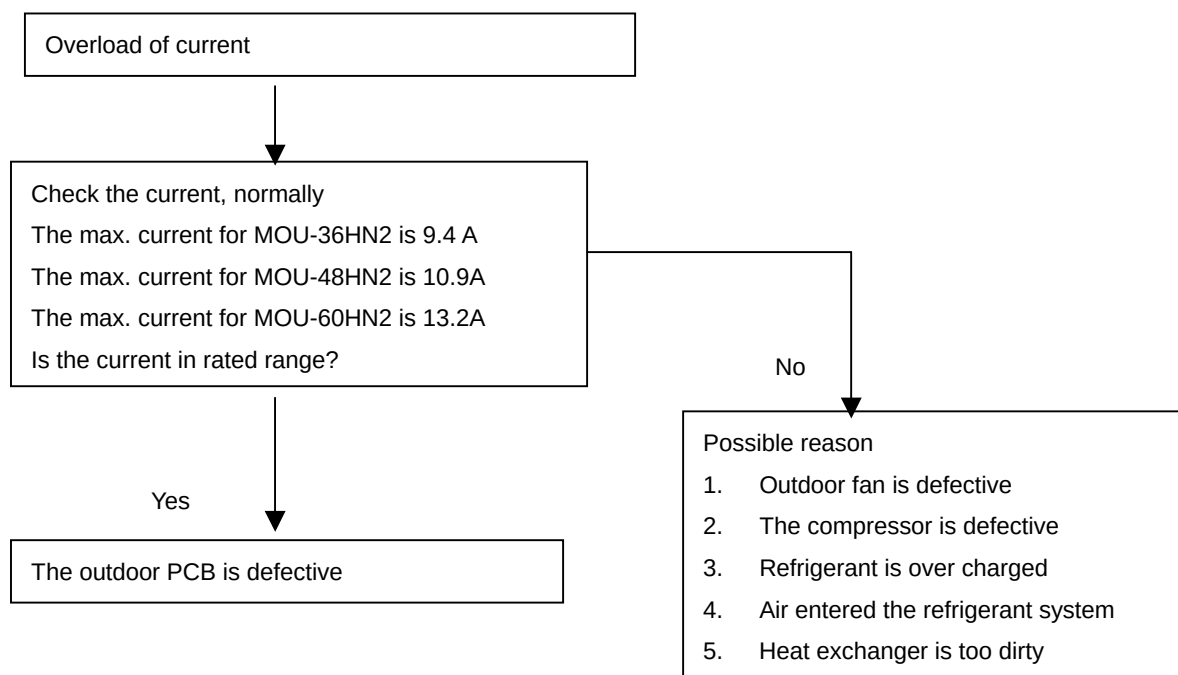
Type	Contents	LED1	LED2	LED3
Trouble	Phase sequence	Flash	Off	Off
Trouble	Lack of phase	Flash	Off	Off
Trouble	Protection of pressure	Flash	Flash	Off
Trouble	Overload of current	Off	Off	Flash
Trouble	Open-circuit and short-circuit trouble of T3	Off	Flash	Flash
Trouble	Open-circuit and short-circuit trouble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

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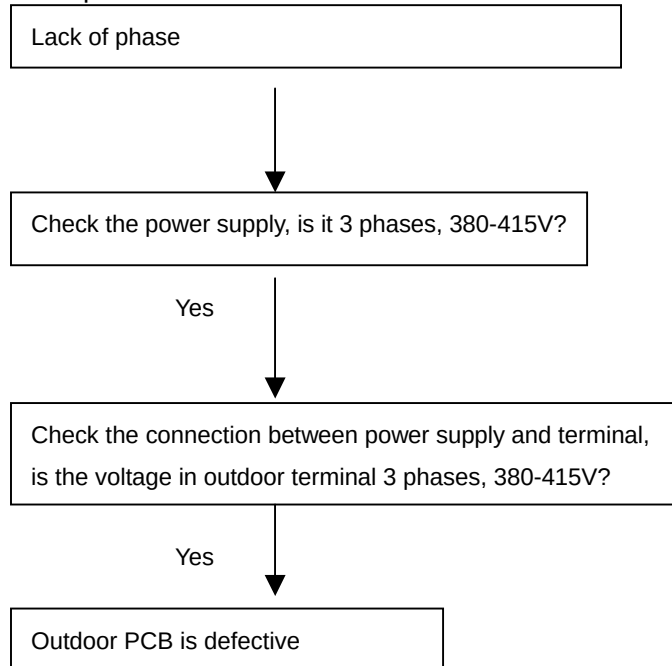
2.3.1 Phase sequence error:



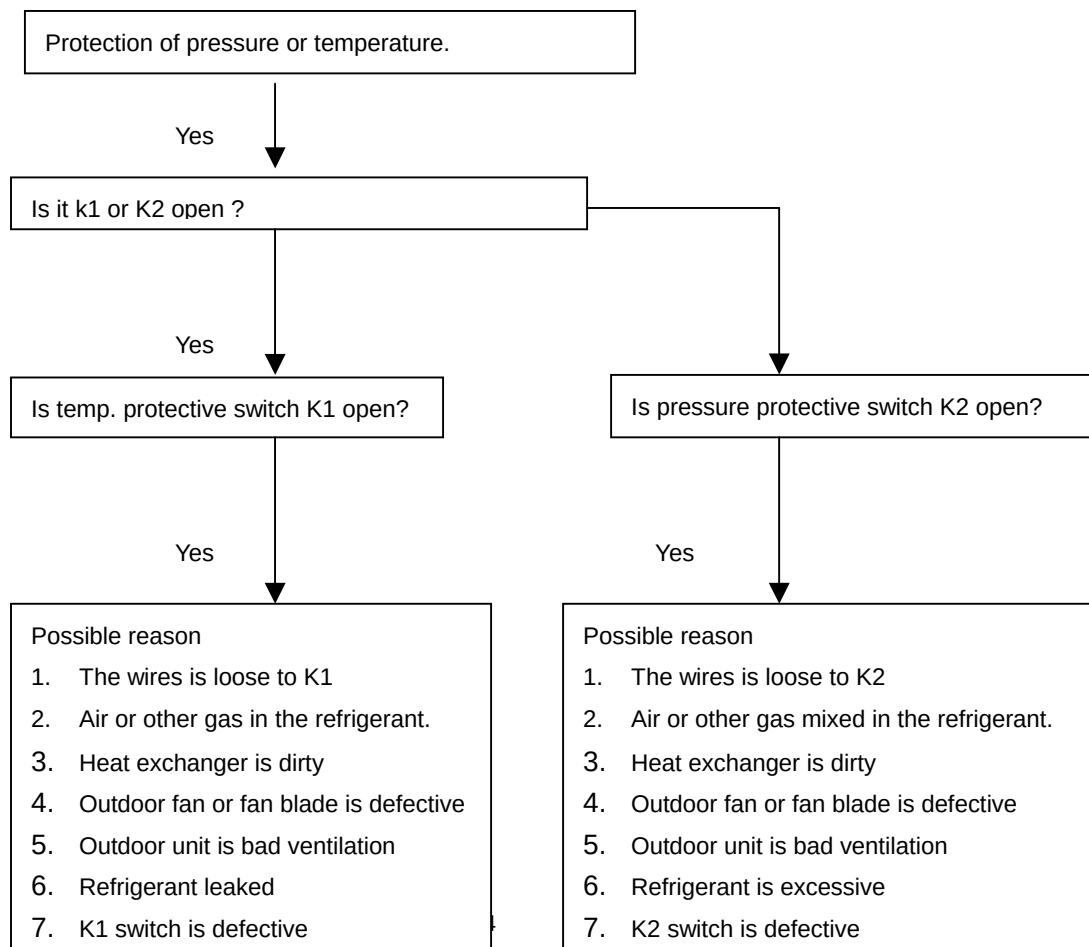
2.3.2 Overload of current



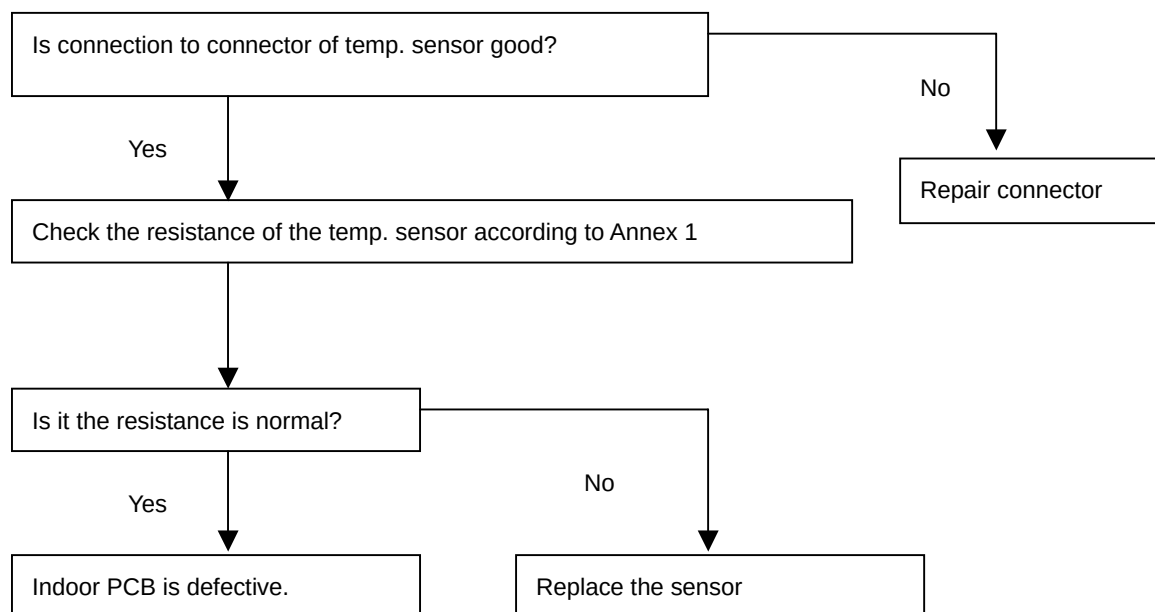
2.3.3 Lack of phase



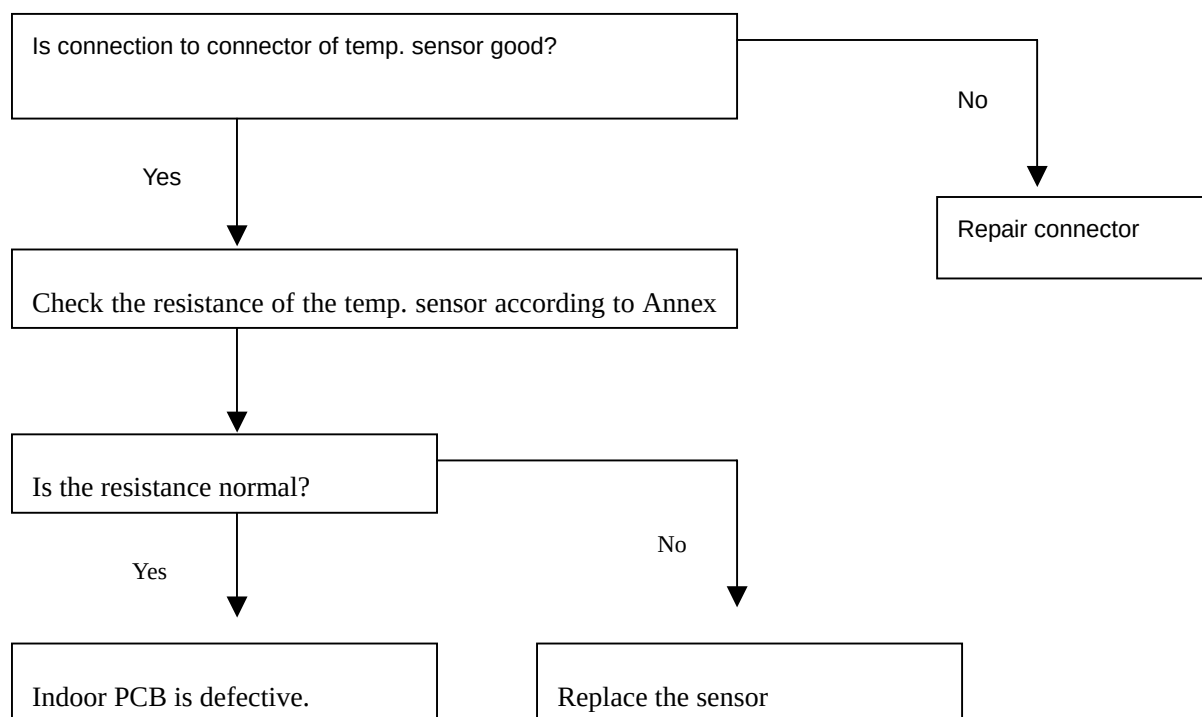
2.3.4 Protection of pressure or temperature.



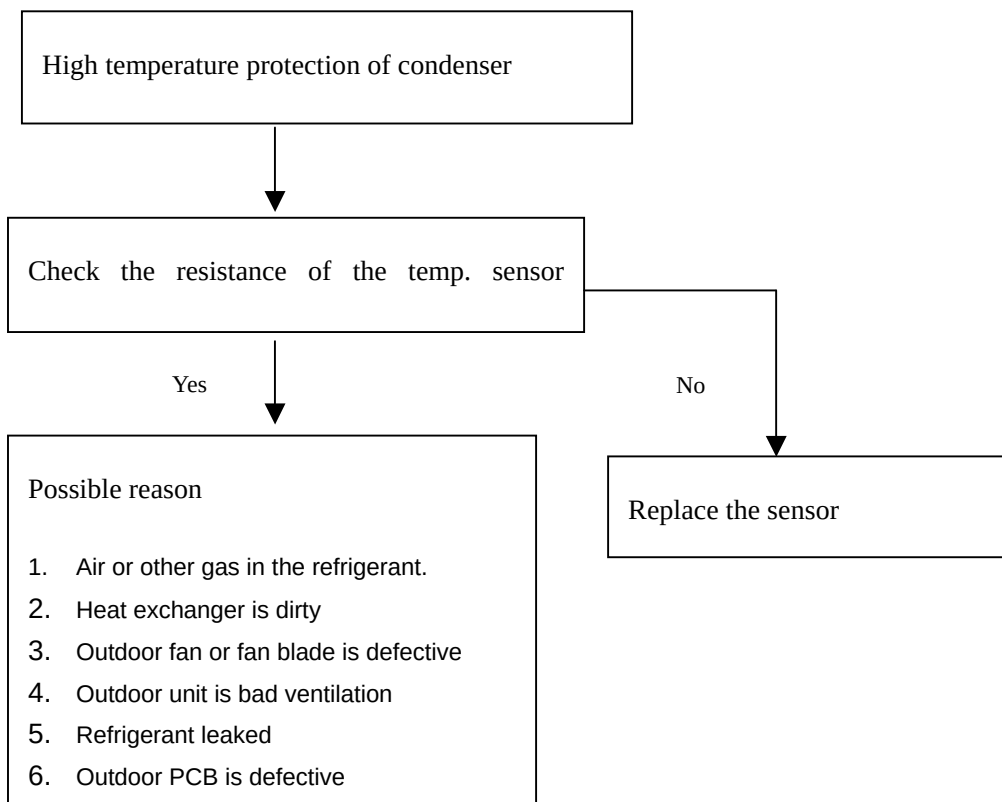
2.3.5 Open-circuit and short-circuit trouble of T3



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 (°C--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