

Convertible Console

YOCA-YOHA 12 to 60

SERVICE MANUAL



YOCA-YOHA 12 · YOCA-YOHA 18 · YOCA-YOHA 24
YOCA-YOHA 36 · YOCA-YOHA 48 · YOCA-YOHA 60



SM-YOCA-YOHA-12-60GB 05-08

Ceiling & Floor Type

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1. Features

1. New design, more modern and elegant appearance.



2. Convenient installation

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

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

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



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

5. Water proof by utilizing the absorbing plastic film on water collector

6. Easy operation. Auto-restart function, remote control and optional wire control method.

7. Low noise level plus compact size

--Shape of the blades has been improved to prevent noise caused by turbulence.

2. Specification

Model		YOCA 12	YOHA 12
Power supply		Ph-V-Hz	1,220-240V,50Hz
Cooling	Capacity	Btu/h	12000
	Capacity	kW	3.2
	Input	W	1380
	Rated current	A	6.1
	EER	Btu/W.h	8.7
Heating	Capacity	Btu/h	—
	Capacity	kW	—
	Input	W	—
	Rated current	A	—
	COP	Btu/W.h	—
Moisture Removal		L/h	1.2
Max. input consumption		W	1630
Max. current		A	8.9
Starting current		A	31
Compressor	Model		PH240X2C-8FTC
	Type		ROTARY
	Brand		MIDEA-TOSHIBA
	Supplier		MIDEA-TOSHIBA (Guangdong)
	Capacity	Btu/h	14125
	Input	W	1335
	Rated current(RLA)	A	6.2
	Locked rotor Amp(LRA)	A	31
	Thermal protector		INNER
	Capacitor	uF	35µF/370V
	Refrigerant oil	ml	(POE RB68) 680
Indoor fan motor	Model		YSK25-6L
	Input	W	50
	Capacitor	uF	1.2uF/450V
	Speed(hi /lo)	r/min	1080/950/770
Indoor coil	Number of rows		3
	Tube pitch(a)x row pitch(b)	mm	25.4×22
	Fin spacing	mm	1.7
	Fin type (code)		Hydrophilic aluminium
	Tube outer dia.and type	mm	Φ9.53 innergroove tube
	Coil length x height x width	mm	804×254×66
Indoor air flow (Hi/Lo)		m3/h	600/480/400

Indoor noise level (Hi/Lo)		dB(A)	43/41/38	43/41/38
Indoor unit	Dimension (W*H*D)	mm	995×660×198	995×660×199
	Packing (W*H*D)	mm	1089×744×296	1089×744×296
	Net/Gross weight	kg	27/33	27/33
Outdoor fan motor	Model		YDK24-6	YDK24-6
	Input	W	50	50
	Capacitor	uF	2.5 uF/450V	2.5uF/450V
	Speed (hi/lo)	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	1.7	1.7
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.53, Innergroove tube	Ø9.53 innergroove tube
	Coil length x height x width	mm	775×660×44	775×660×44
	Number of circuits		3	3
Outdoor air flow		m ³ /h	1800	1800
Outdoor noise level		dB(A)	43	43
Outdoor unit	Dimension(W*H*D)	mm	780×560×300	780×560×300
	Packing (W*H*D)	mm	910×575×335	910×575×335
	Net/Gross weight	kg	34/39	36/41
Refrigerant recharge weight		g	1150	1850
Design pressure		MPa	2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø 6.35/Ø12.7	Ø6.35/Ø12.7
	Max. pipe length	m	10	10
	Max. difference in level	m	5	5
Draining pipe dimension		mm	DN20	DN20
Operation temp		°C	17~30	17~30
Ambient temp		°C	-7~45	-7~45
Application area		m ²	25~45	25~45
Qty'per 20'/ 40'/40HQ		Pieces	68/144/216	68/144/216

Notes:

- Nominal cooling capacities are based on the following conditions:
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)
- Nominal heating capacities are based on the following conditions:
Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)
- Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

Model		YOCA 18	YOHA 18
Power supply		Ph-V-Hz	1,220-240V,50Hz
Cooling	Capacity	Btu/h	18000
	Capacity	kW	5.4
	Input	W	1900
	Rated current	A	8.8
	EER	Btu/W.h	9.7
Heating	Capacity	Btu/h	—
	Capacity	kW	—
	Input	W	—
	Rated current	A	—
	COP	Btu/W.h	—
Moisture Removal		L/h	1.8
Max. input consumption		W	2900
Max. current		A	11.7
Starting current		A	36.8
Compressor	Model		PH330X2CS-8
	Type		ROTARY
	Brand		MIDEA-TOSHIBA
	Supplier		MIDEA-TOSHIBA (Guangdong)
	Capacity	Btu/h	18834
	Input	W	1870
	Rated current(RLA)	A	8.75
	Locked rotor Amp(LRA)	A	36.8
	Thermal protector		INNER
	Capacitor	uF	50/370 μF/V
	Refrigerant oil	ml	ESTER OIL VG74 750
Indoor fan motor	Model		YSK55-4L
	Input	W	110
	Capacitor	uF	2.5uF/450V
	Speed(hi /lo)	r/min	1280/ 1190/1000
Indoor coil	Number of rows		3
	Tube pitch(a)x row pitch(b)	mm	25.4×22
	Fin spacing	mm	1.7
	Fin type (code)		Hydrophilic aluminium
	Tube outer dia.and type	mm	Φ9.53 innergroove tube
	Coil length x height x width	mm	804×254×66
Indoor air flow (Hi/Lo)		m3/h	800/600/500
Indoor noise level (Hi/Lo)		dB(A)	43/41/38

Indoor unit	Dimension (W*H*D)	mm	995×660×199	995×660×199
	Packing (W*H*D)	mm	1089×744×296	1089×744×296
	Net/Gross weight	kg	27/33	27/33
Outdoor fan motor	Model		YDK53-6GC	YDK53-6GC
	Input	W	110/104/98	110/104/98
	Capacitor	uF	2.5 uF/450V	2.5uF/450V
	Speed (hi/lo)	r/min	750	750
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		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outer dia.and type	mm	Φ9.53, Innergroove tube	Φ9.53 innergroove tube
	Coil length x height x width	mm	775×660×44	775×660×44
	Number of circuits		3	3
Outdoor air flow	m ³ /h		2400	2400
Outdoor noise level	dB(A)		48	48
Outdoor unit	Dimension(W*H*D)	mm	845×695×335	845×695×335
	Packing (W*H*D)	mm	970X770X395	970X770X395
	Net/Gross weight	kg	52/56	53/57
Refrigerant recharge weight	g		1150	1850
Design pressure	MPa		2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø6.35/Ø12.7	Ø6.35/Ø12.7
	Max. pipe length	m	20	20
	Max. difference in level	m	10	10
Draining pipe dimension	mm		DN20	DN20
Operation temp	°C		17~30	17~30
Ambient temp	°C		-7~45	-7~45
Application area	m ²		25~45	25~45
Qty'per 20'/ 40'/40HQ	Pieces		54/108/126	54/108/126

Notes:

- Nominal cooling capacities are based on the following conditions:
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)
- Nominal heating capacities are based on the following conditions:
Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)
- Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

Model		YOCA 24	YOHA 24
Power supply		Ph-V-Hz	220-240V~, 50Hz
Cooling	Capacity	Btu/h	24000
	Capacity	kW	7
	Input	W	3100
	Rated current	A	12.1
	EER	Btu/W.h	8.2
Heating	Capacity	Btu/h	---
	Capacity	kW	---
	Input	W	---
	Rated current	A	---
	COP	Btu/W.h	---
Moisture Removal		L/h	2.4
Max. input consumption		W	3700
Max. current		A	16.4
Starting current		A	46.2
Compressor	Model		THU33WC6-U
	Type		Rotary
	Brand		HITACHI
	Supplier		SHANGHAI HITACHI
	Capacity	Btu/h	28490
	Input	W	2650
	Rated current(RLA)	A	12.6
	Locked rotor Amp(LRA)	A	62
	Thermal protector		Internal
	Capacitor	uF	60μF/400V(220V) 60μF/450V(240V)
	Refrigerant oil	ml	SUNISO-4GSI 1050
Indoor fan motor	Model		YSK55-4L
	Input	W	110
	Capacitor	uF	2.5uF/450V
	Speed(hi /lo)	r/min	1280/1190/1000
Indoor coil	Number of rows		3
	Tube pitch(a)x row pitch(b)	mm	25.4×22
	Fin spacing	mm	1.7
	Fin type (code)		hydrophilic aluminium
	Tube outer dia.and type	mm	φ 9.52 groove tube
	Coil length x height x width	mm	804×254×66
Indoor air flow (Hi/Lo)		m3/h	1200/900/700
Indoor noise level (Hi/Lo)		dB(A)	45/43/40

Indoor unit	Dimension (W*H*D)	mm	995×660×199	995×660×199
	Packing (W*H*D)	mm	1089×744×296	1089×744×296
	Net/Gross weight	kg	29/34	29/34
Outdoor fan motor	Model		YDK53-6H	YDK53-6H
	Input	W	110/104/97	110/104/98
	Capacitor	uF	2.5uF/450V	2.5uF/450V
	Speed (hi/lo)	r/min	800	800
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4X22	25.4×22
	Fin spacing	mm	1.7	1.7
	Fin type		Unhydrophilic aluminium	Hydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.53, innergroove tube	Ø9.53 innergroove tube
	Coil length x height x width	mm	776X810X44	770X810X44
	Number of circuits		2	2
Outdoor air flow	m ³ /h		3000	3000
Outdoor noise level	dB(A)		52	52
Outdoor unit	Dimension(W*H*D)	mm	895X860X330	895X860X330
	Packing (W*H*D)	mm	1043X915X395	1043X915X395
	Net/Gross weight	kg	62/64	64/66
Refrigerant recharge weight	g		1600	2600
Design pressure	MPa		2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø9.53/Ø16.0	Ø9.53/Ø16.0
	Max. pipe length	m	20	20
	Max. difference in level	m	10	10
Draining pipe dimension	mm		DN20	DN20
Operation temp	°C		17~30	17~30
Ambient temp	°C		-7~45	-7~45
Application area	m ²		30-50	30-50
Qty'per 20'/ 40'/40HQ	Pieces		46/93/108	46/93/108

Notes:

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

Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)

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

Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)

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

Model		YOCA 36	YOHA 36
Power supply		Ph-V-Hz	1,220-240V,50Hz
Cooling	Capacity	Btu/h	36000
	Capacity	kW	10.5
	Input	W	4050
	Rated current	A	21
	EER	Btu/W.h	8.9
Heating	Capacity	Btu/h	—
	Capacity	kW	—
	Input	W	—
	Rated current	A	—
	COP	Btu/W.h	—
Moisture Removal		L/h	3.6
Max. input consumption		W	6100
Max. current		A	28
Starting current		A	73
Compressor	Model		ZR47K3-PFJ-522
	Type		SCROLL
	Brand		Copeland
	Supplier		Copeland(Suzhou)
	Capacity	Btu/h	39000
	Input	W	3510
	Rated current(RLA)	A	16.8
	Locked rotor Amp(LRA)	A	264
	Thermal protector		INNER
	Capacitor	uF	/
Refrigerant oil	ml	SONTEX 200 LT 1242	
Indoor fan motor	Model		YSK80-4A
	Input	W	134
	Capacitor	uF	3.5uF/450V
	Speed(hi /lo)	r/min	1310/1200/1000
Indoor coil	Number of rows		3
	Tube pitch(a)x row pitch(b)	mm	25.4×22
	Fin spacing	mm	1.7
	Fin type (code)		hydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.52 groove tube
	Coil length x height x width	mm	905×203×66
Indoor air flow (Hi/Lo)		m3/h	1600/1200/1000
Indoor noise level (Hi/Lo)		dB(A)	45/43/40
Indoor unit	Dimension (W*H*D)	mm	1285×660×198

	Packing (W*H*D)	mm	1379×744×296	1379×744×296
	Net/Gross weight	kg	35/40	35/40
Outdoor fan motor	Model		YDK250-6D	YDK250-6D
	Input	W	296	296
	Capacitor	uF	10 uF/450V	10 uF/450V
	Speed (hi/lo)	r/min	750	750
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4X22	25.4×22
	Fin spacing	mm	1.3	1.7
	Fin type		Unhydrophilic aluminium	Unhydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.53, innergroove tube	Ø9.53, inner groove tube
	Coil length x height x width	mm	988X914X44	988X914X44
	Number of circuits		4	4
Outdoor air flow		m3/h	5000	4900
Outdoor noise level		dB(A)	57	55
Outdoor unit	Dimension(W*H*D)	mm	990X960X360	990X960X360
	Packing (W*H*D)	mm	1120X1090X435	1120X1090X435
	Net/Gross weight	kg	90/95	100/106
Refrigerant recharge weight		g	1700	3100
Design pressure		MPa	2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø12.7(1/2")/Ø19(3/4")	Ø12.7(1/2")/Ø19(3/4")
	Max. pipe length	m	25	25
	Max. difference in level	m	10	10
Draining pipe dimension		mm	DN20	DN20
Operation temp		°C	17~30	17~30
Ambient temp		°C	-7~45	-7~45
Application area		m2	60-85	60-85
Qty'per 20' 40'/40HQ		Pieces	34/69/76	34/69/76

Notes:

- Nominal cooling capacities are based on the following conditions:
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)
- Nominal heating capacities are based on the following conditions:
Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)
- Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

Model		YOCA 36	YOHA 36
Power supply		Ph-V-Hz	3N,380V ~, 50Hz
Cooling	Capacity	Btu/h	36000
	Capacity	kW	10.5
	Input	W	4050
	Rated current	A	7.1
	EER	Btu/W.h	8.9
Heating	Capacity	Btu/h	—
	Capacity	kW	—
	Input	W	—
	Rated current	A	—
	COP	Btu/W.h	—
Max. input consumption		W	4620
Max. current		A	8.5
Starting current		A	58
Compressor	Model		C-SB303H8A
	Type		SCROLL
	Brand		Sanyo
	Supplier		Sanyo(dalian)
	Capacity	Btu/h	40262
	Input	W	3650
	Rated current(RLA)	A	6.5
	Locked rotor Amp(LRA)	A	42
	Thermal protector		Internal
	Capacitor	uF	—
	Refrigerant oil	ml	3GS 1360
Indoor fan motor	Model		YSK80-4A
	Input	W	134
	Capacitor	uF	3.5uF/450V
	Speed(hi /lo)	r/min	1310/1200/1000
Indoor coil	Number of rows		3
	Tube pitch(a)x row pitch(b)	mm	25.4×22
	Fin spacing	mm	1.7
	Fin type (code)		hydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.52 groove tube
	Coil length x height x width	mm	905×203×66
Indoor air flow (Hi/Lo)		m3/h	1600/1200/1000
Indoor noise level (Hi/Lo)		dB(A)	45/43/40
Indoor unit	Dimension (W*H*D)	mm	1285×660×198
	Packing (W*H*D)	mm	1379×744×296
	Net/Gross weight	kg	35/40

Outdoor fan motor	Model		YDK250-6D	YDK250-6D
	Input	W	296	296
	Capacitor	uF	10 uF/450V	3.5uF/450V
	Speed (hi/lo)	r/min	800	800
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4X22	25.4×22
	Fin spacing	mm	1.3	1.7
	Fin type		Unhydrophilic aluminium	Unhydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.53, innergroove tube	Ø9.53, inner groove tube
	Coil length x height x width	mm	888X1220X44	888X1220X44
	Number of circuits		4	4
Outdoor air flow	m3/h	4900	4900	
Outdoor noise level	dB(A)	57	55	
Outdoor unit	Dimension(W*H*D)	mm	990X960X360	990X960X360
	Packing (W*H*D)	mm	1120X1090X435	1120X1090X435
	Net/Gross weight	kg	90/95	100/106
Refrigerant recharge weight	g	1700	3100	
Design pressure	MPa	2.6/1.2	2.8/1.2	
Refrigerant piping	Liquid side/ Gas side	mm	Ø12.7(1/2")/Ø19(3/4")	Ø12.7(1/2")/Ø19(3/4")
	Max. pipe length	m	25	25
	Max. difference in level	m	10	10
Draining pipe dimension	mm	DN20	DN20	
Operation temp	°C	17~30	17~30	
Ambient temp	°C	-7~45	-7~45	
Application area	m2	60-85	60-85	
Qty'per 20'/ 40'/40HQ	Pieces	34/69/76	34/69/76	

Notes:

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

Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)

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

Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)

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

Model			YOCA 48	YOHA 48
Power supply		Ph-V-Hz	3N,380V ~, 50H	3,380V,50Hz
Cooling	Capacity	Btu/h	48000	48000
	Capacity	kW	14	14
	Input	W	5500	4700
	Rated current	A	9	8.2
	EER	Btu/W.h	8.7	10.2
Heating	Capacity	Btu/h	—	52000
	Capacity	kW	—	15.2
	Input	W	—	4900
	Rated current	A	—	8.6
	COP	Btu/W.h	—	10.6
Moisture Removal		L/h	4.8	
Max. input consumption		W	6400	5870
Max. current		A	11.2	10.7
Starting current		A	58	59
Compressor	Model		VR61KF-TFP-542	VR61KF-TFP-542
	Type		SCROLL	SCROLL
	Brand		Copeland	Copeland
	Supplier		Copeland(Suzhou)	Copeland(Suzhou)
	Capacity	Btu/h	51000	51000
	Input	W	4636	4636
	Rated current(RLA)	A	9.4	9.4
	Locked rotor Amp(LRA)	A	61	61
	Thermal protector		Internal	INNER
	Capacitor	uF	/	/
	Refrigerant oil	ml	3GS 1360	3GS 1360
Indoor fan motor	Model		YSK59-4D	YSK59-4D
	Input	W	248	296
	Capacitor	uF	2.5x2 uF/450V TUV/VDE	2.5x2 uF/450V TUV/VDE
	Speed(hi /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	25.4X22
	Fin spacing	mm	1.7	1.7
	Fin type (code)		hydrophilic aluminium	Unhydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.52 groove tube	Ø9.53 innergroove tube
	Coil length x height x width	mm	1150×254×66	1150×254×66
Indoor air flow (Hi/Lo)		m3/h	2000/1800/1600	2000/1800/1600
Indoor noise level (Hi/Lo)		dB(A)	47/46/44	47/46/44
Indoor unit	Dimension (W*H*D)	mm	1670×680×240	1670×680×240

	Packing (W*H*D)	mm	1764×760×330	1764×760×330
	Net/Gross weight	kg	52/59	52/59
Outdoor fan motor	Model		YDK250-6D	YDK250-6D
	Input	W	296	296
	Capacitor	uF	10 uF/450V	10 uF/450V
	Speed (hi/lo)	r/min	750	750
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4X22	25.4X22
	Fin spacing	mm	1.3	1.7
	Fin type		Unhydrophilic aluminium	Hydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.53, innergroove tube	Ø9.53, inner groove tube
	Coil length x height x width	mm	888X1220X44	888X1220X44
	Number of circuits		4	4
Outdoor air flow		m3/h	5000	5400
Outdoor noise level		dB(A)	57	55
Outdoor unit	Dimension(W*H*D)	mm	990X960X360	990X960X360
	Packing (W*H*D)	mm	1120X1090X435	1120X1090X435
	Net/Gross weight	kg	88/100	100/106
Refrigerant recharge weight		g	1700	3100
Design pressure		MPa	2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø12.7(1/2")/Ø19(3/4")	Ø12.7(1/2")/Ø19(3/4")
	Max. pipe length	m	25	25
	Max. difference in level	m	10	10
Draining pipe dimension		mm	DN20	DN20
Operation temp		°C	17~30	17~30
Ambient temp		°C	-7~45	-7~45
Application area		m2	80~105	80~105
Qty'per 20'/ 40'/40HQ		Pieces	31/62/70	31/62/70

Notes:

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

Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)

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

Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)

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

Model			YOCA 60	YOHA 60
Power supply		Ph-V-Hz	3N,380V ~, 50H	3,380V,50Hz
Cooling	Capacity	Btu/h	60000	60,000
	Capacity	kW	17.6	17
	Input	W	6570	6570
	Rated current	A	10	10
	EER	Btu/W.h	9.1	9.1
Heating	Capacity	Btu/h	—	65000
	Capacity	kW	—	19.1
	Input	W	—	6900
	Rated current	A	—	10.5
	COP	Btu/W.h	—	9.4
Moisture Removal		L/h	6	8550
Max. input consumption		W	7450	7450
Max. current		A	13	13
Starting current		A	69	67
Compressor	Model		C-SB453H8A	ZR72KC-TFD-522
	Type		Scroll	SCROLL
	Brand		SANYO	Copeland
	Supplier		SANYO(Dalian)	Copeland(Suzhou)
	Capacity	Btu/h	60563	60100
	Input	W	5430	5270
	Rated current(RLA)	A	10	10
	Locked rotor Amp(LRA)	A	66	67
	Thermal protector		Internal	INNER
	Capacitor	uF	—	/
	Refrigerant oil	ml	FV68S 1700	SONTEX 200 LT 1774
Indoor fan motor	Model		YSK59-4D	YSK59-4D
	Input	W	148+148	148+148
	Capacitor	uF	2.5x2 uF/450V	2.5x2 uF/450V
	Speed(hi /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	25.4X22
	Fin spacing	mm	1.7	1.5
	Fin type (code)		hydrophilic aluminium	UnHydrophilic aluminium
	Tube outer dia.and type	mm	Ø9.52 groove tube	Ø9.53 innergroove tube
	Coil length x height x width	mm	1150×254×66	1150×254×66
Indoor air flow (Hi/Lo)		m3/h	2200/1800/1600	2200/1800/1600
Indoor noise level (Hi/Lo)		dB(A)	47/46/44	47/46/44
Indoor unit	Dimension (W*H*D)	mm	1670×680×240	1670×680×240

	Packing (W*H*D)	mm	1764×760×330	1764×760×330
	Net/Gross weight	kg	52/59	52/59
Outdoor fan motor	Model		YDK65-6F(YDK65-6F-WL)	YDK65-6F(YDK65-6F-WL)
	Input	W	148+148	118/108/101
	Capacitor	uF	3.5x2 uF/450V	2.5uF/450V
	Speed (hi/lo)	r/min	800	800
Outdoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	25.4X22	25.4X22
	Fin spacing	mm	1.5	1.7
	Fin type		UnHydrophilic aluminium	Hydrophilic aluminum
	Tube outer dia.and type	mm	Ø9.53, innergroove tube	Ø9.53, inner groove tube
	Coil length x height x width	mm	897*1220*44	897×1220×44
	Number of circuits		4	4
Outdoor air flow	m3/h		6000	6000
Outdoor noise level	dB(A)		65	62
Outdoor unit	Dimension(W*H*D)	mm	940*1245*340	940*1245*340
	Packing (W*H*D)	mm	1058*1370*435	1058*1370*435
	Net/Gross weight	kg	110/125	114/135
Refrigerant recharge weight	g		4400	5000
Design pressure	MPa		2.6/1.2	2.8/1.2
Refrigerant piping	Liquid side/ Gas side	mm	Ø 12.7(1/2")- Ø19(3/4")	Ø 12.7(1/2")- Ø 19(3/4")
	Max. pipe length	m	30	30
	Max. difference in level	m	15	15
Draining pipe dimension	mm		DN20	DN20
Operation temp	°C		17~30	17~30
Ambient temp	°C		-7~45	-7~45
Application area	m2		95~120	95~120
Qty'per 20'/ 40'/40HQ	Pieces		27/55/55	27/55/55

Notes:

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

Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. Piping: 7.5m(horizontal)

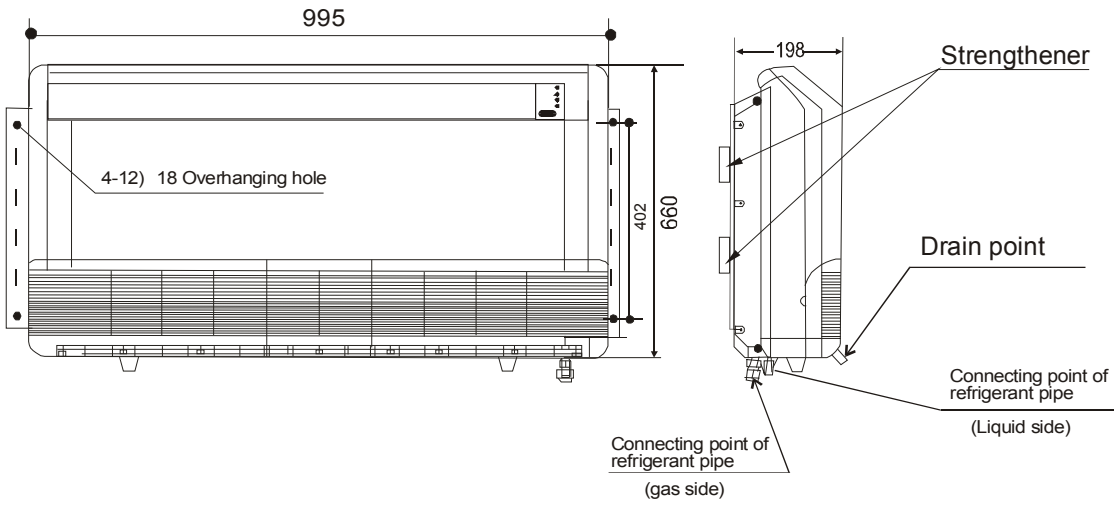
2. Nominal heating capacities are based on the following conditions:

Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. Piping: 7.5m(horizontal)

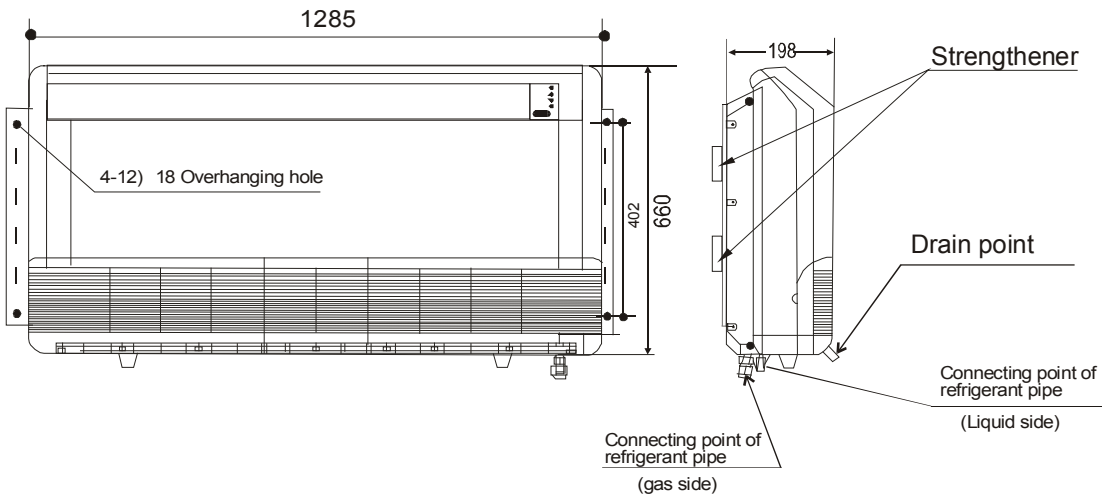
3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

3. Dimensions

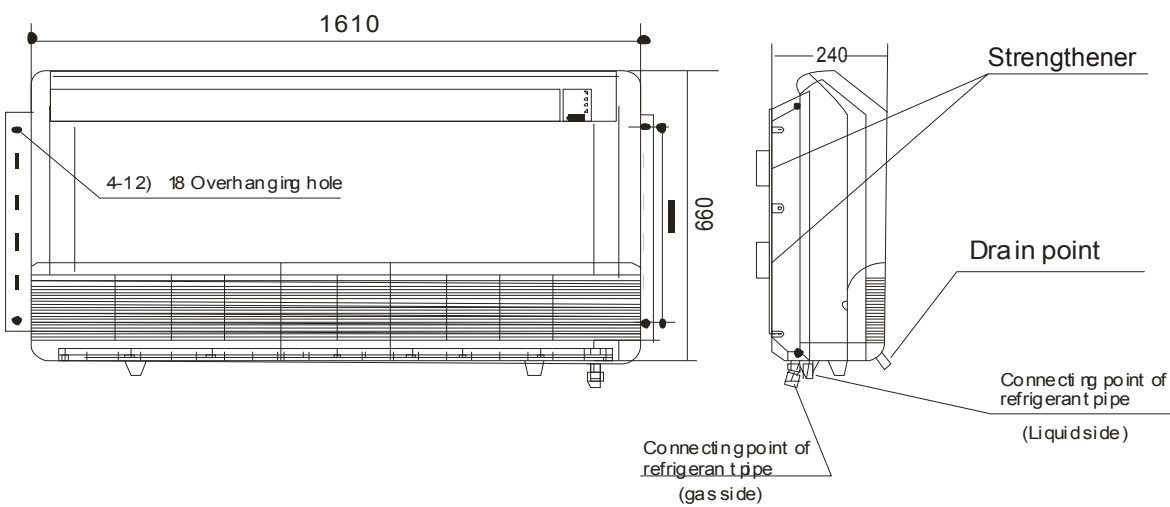
1. YOCA-YOHA 12 · YOCA-YOHA 18 · YOCA-YOHA 24



2. YOCA-YOHA 36

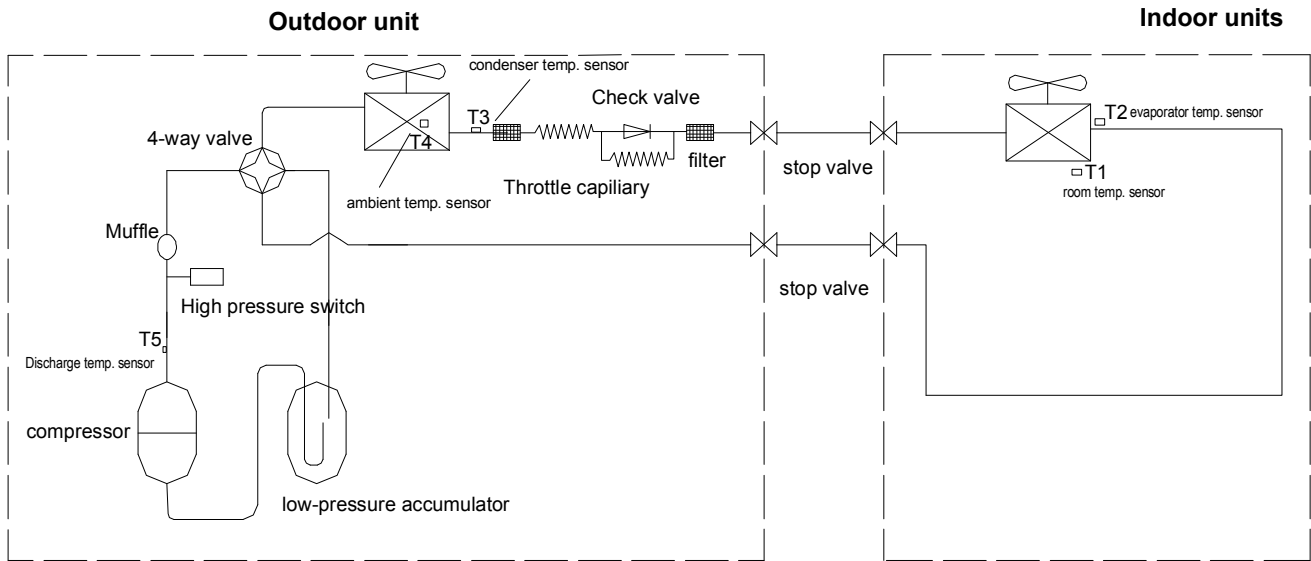


3. YOCA-YOHA 48 · YOCA-YOHA 60

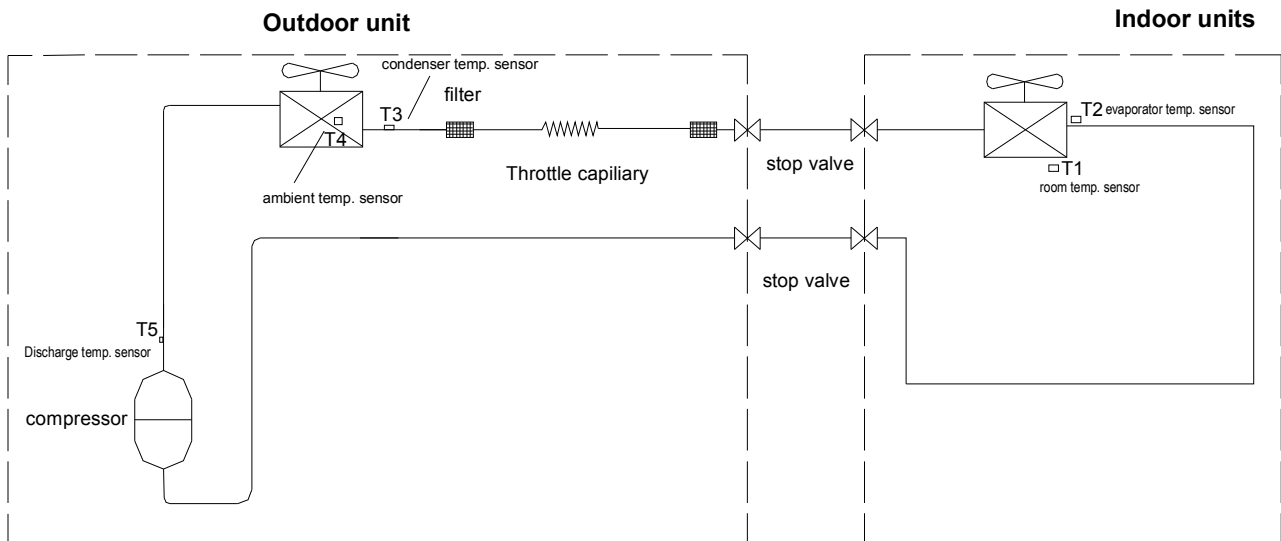


4. Piping diagram

Heat pump



Cooling Only



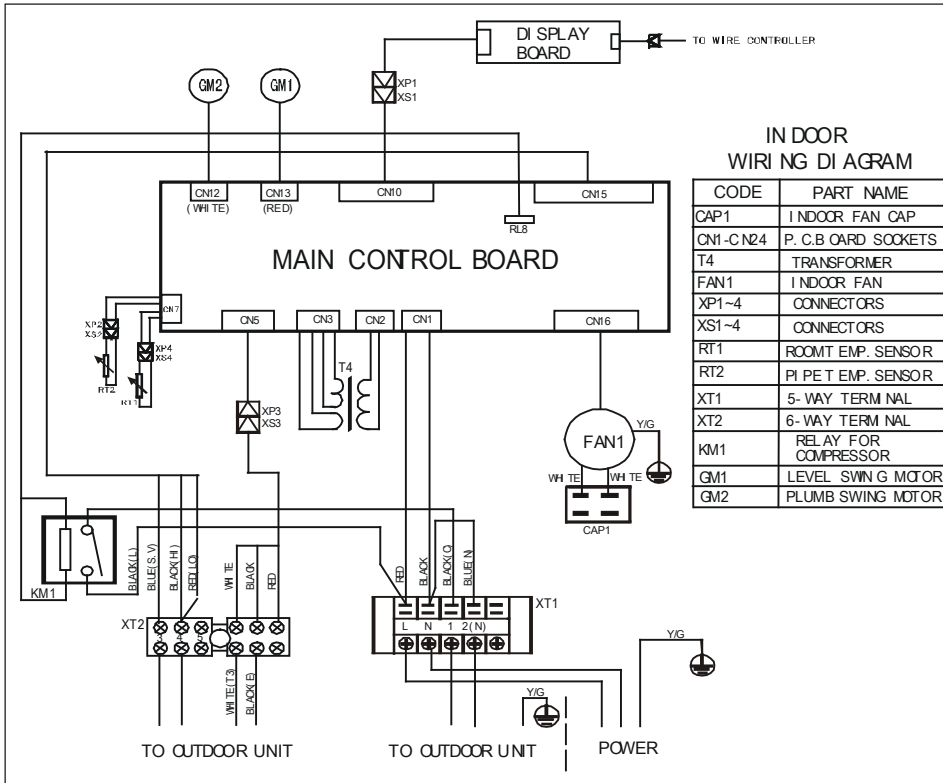
Remark:

1. For YOJA 12 and YOJA 18 , accumulator is not included.
2. For YOJA 36 and YOJA 48 , YOJA 60 , check valve and auxiliary capillary is not included.
3. For YODA 60, accumulator is standard.

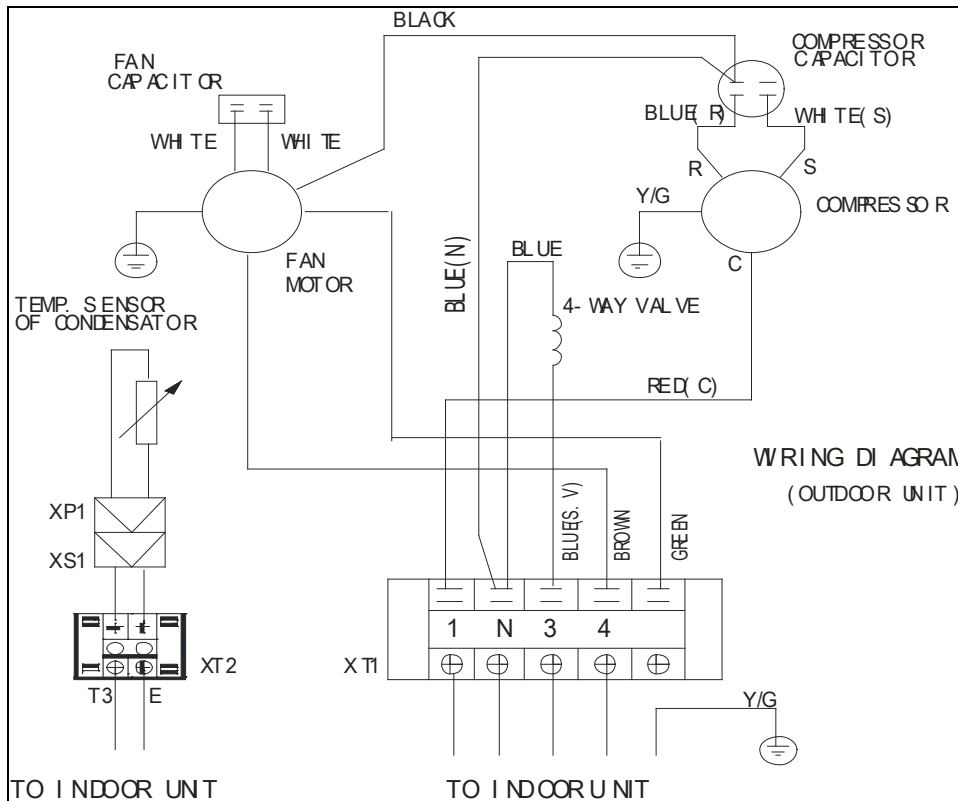
5. Wiring diagram

YOHA 12 · YOHA 18

Indoor unit:

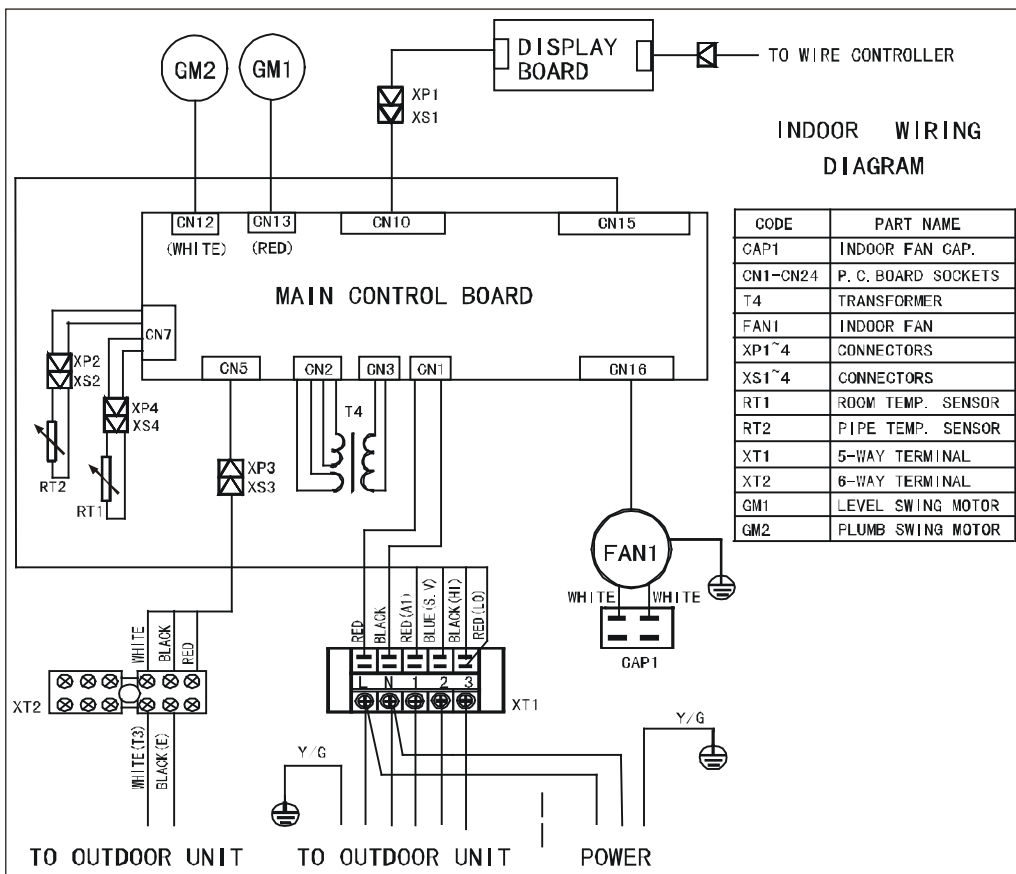


Outdoor unit:

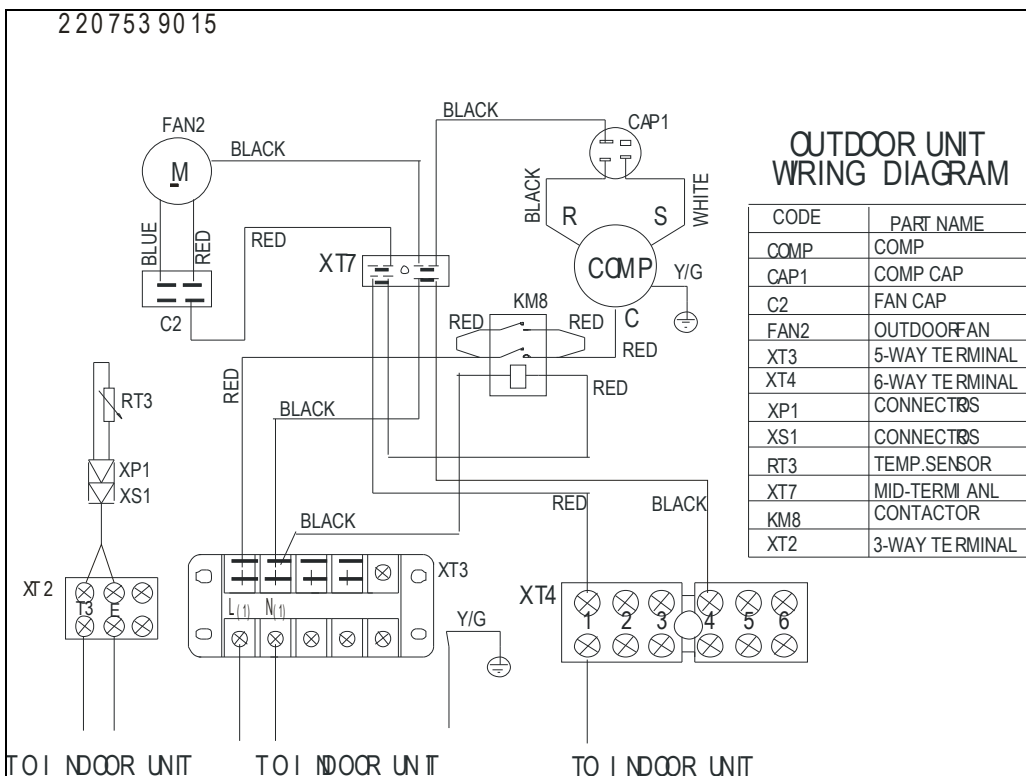


YOHA 24 (1 phase)

Indoor unit:

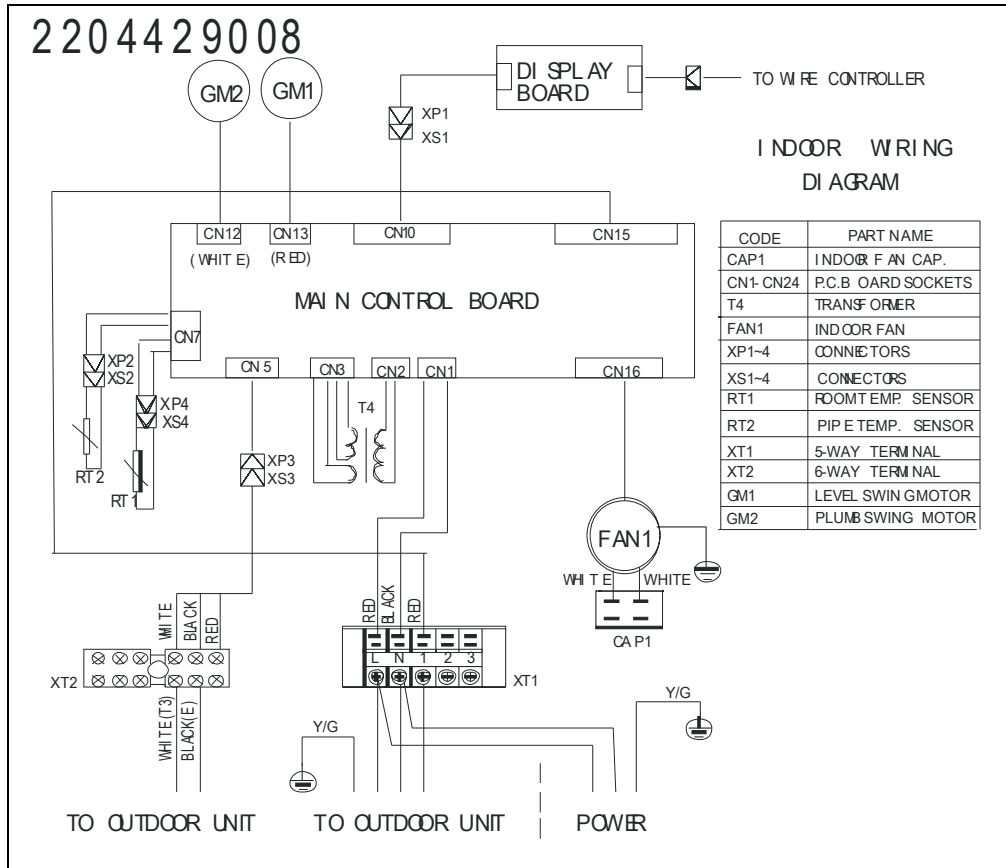


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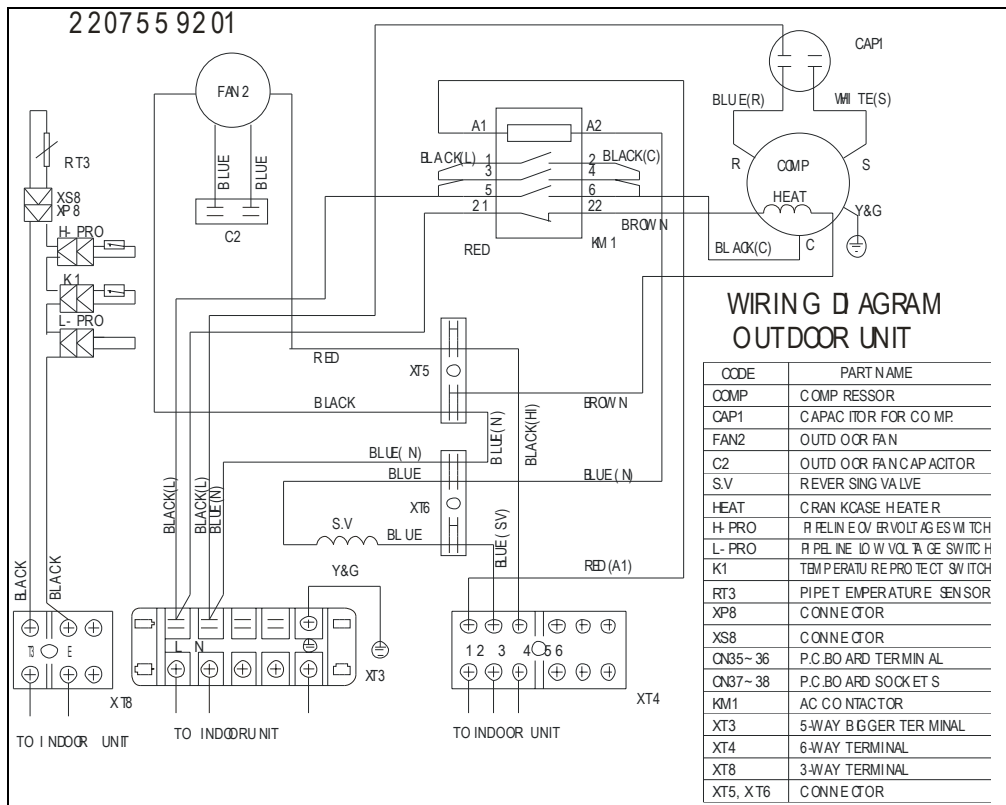


YOHA 36 (1 phase)

Indoor unit:

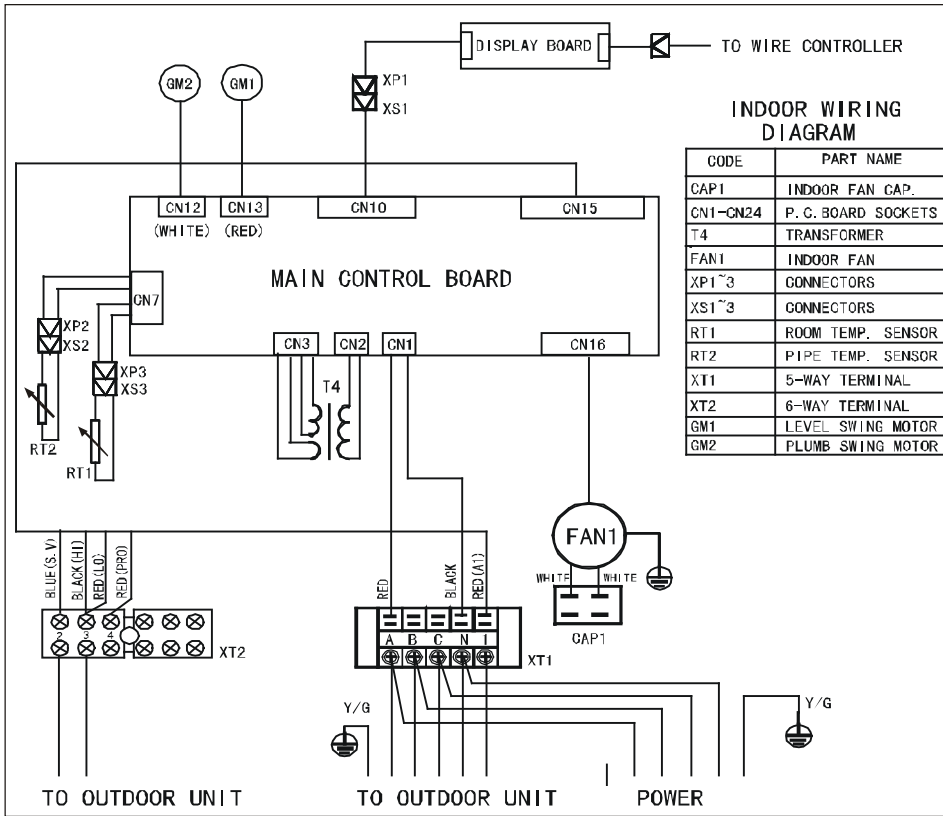


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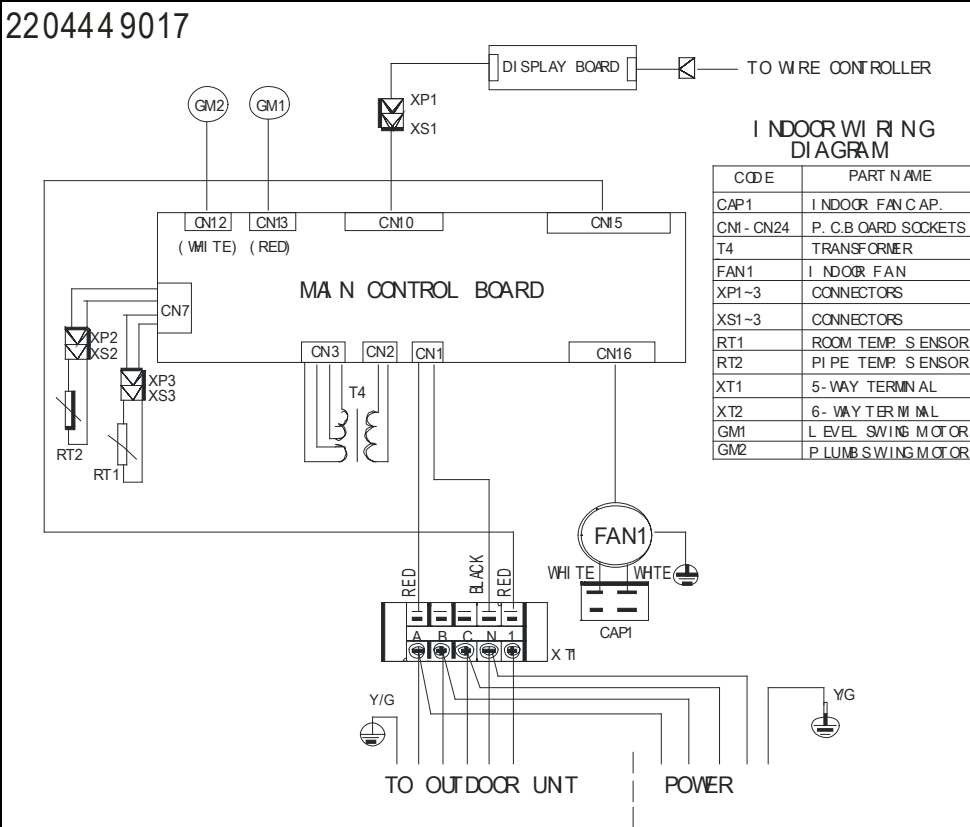


YOHA 36 (3 phase)

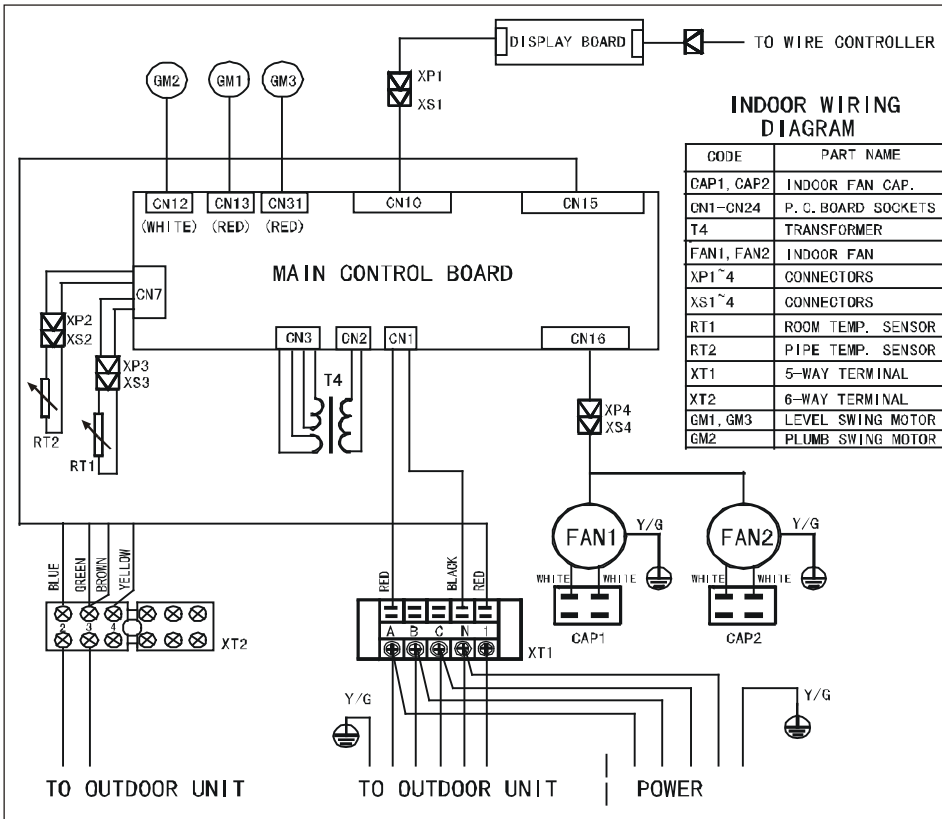
Indoor unit:



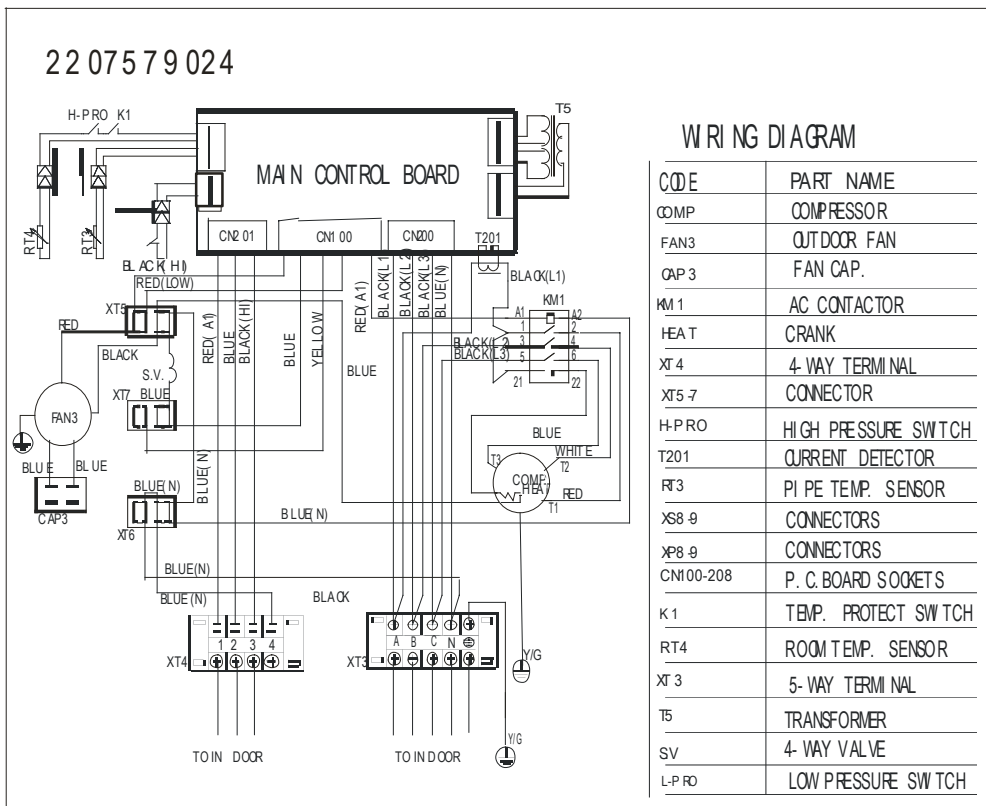
Outdoor unit:



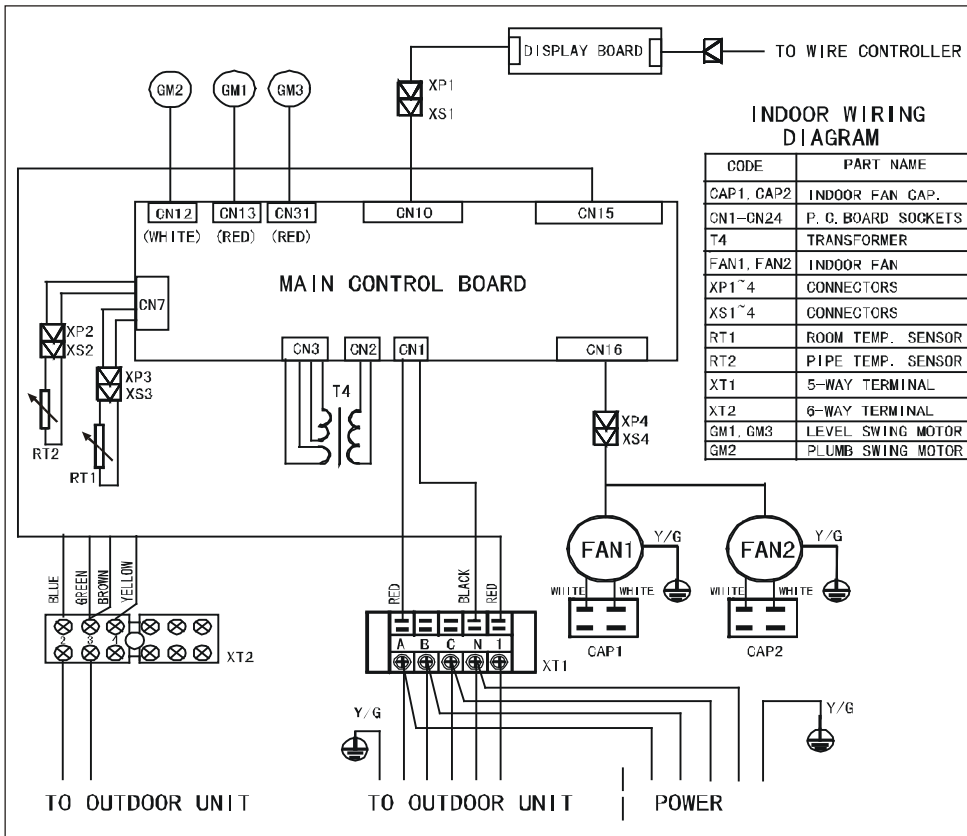
YOHA 48
Indoor unit:



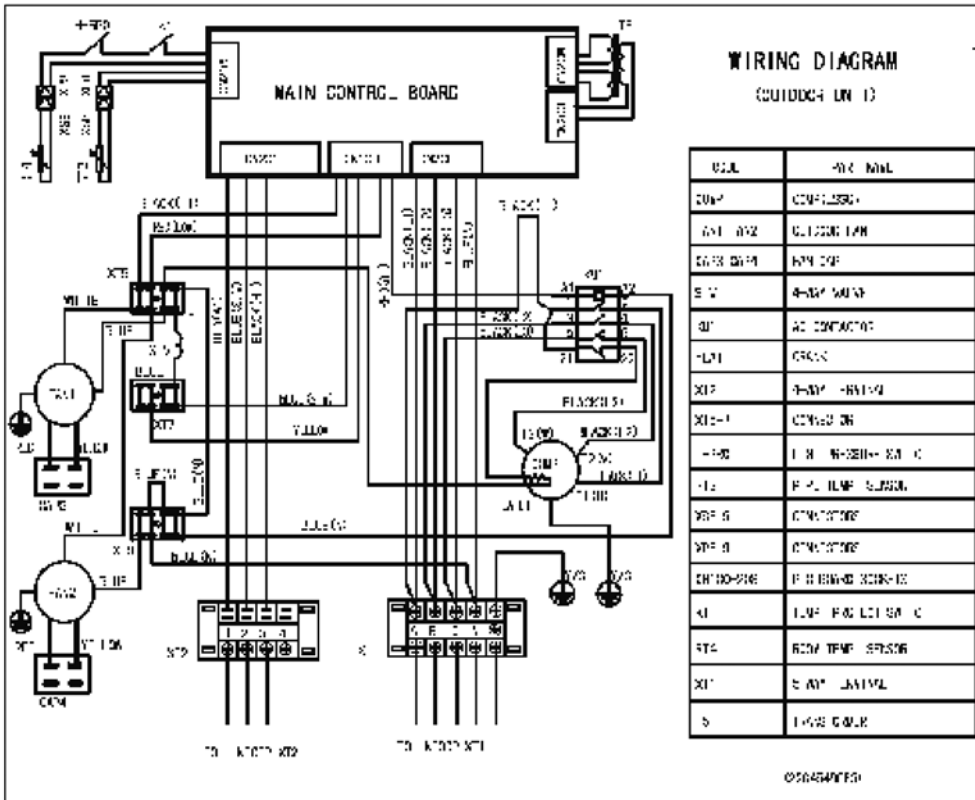
Outdoor unit:



YOH A 60
Indoor unit:

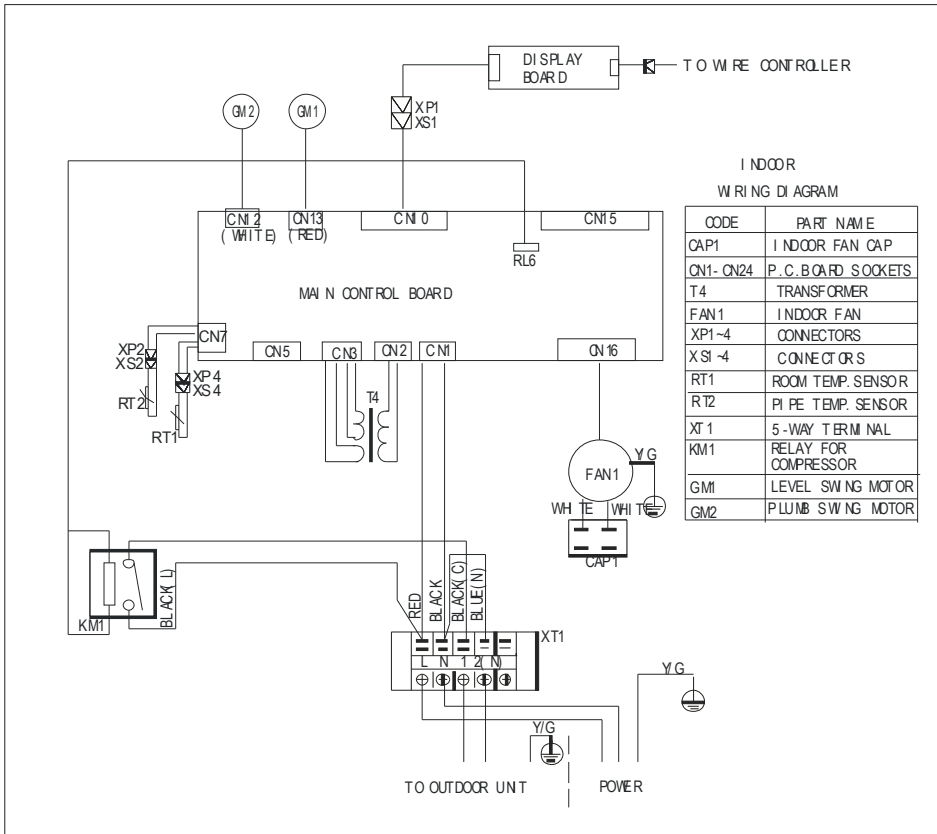


Outdoor unit:

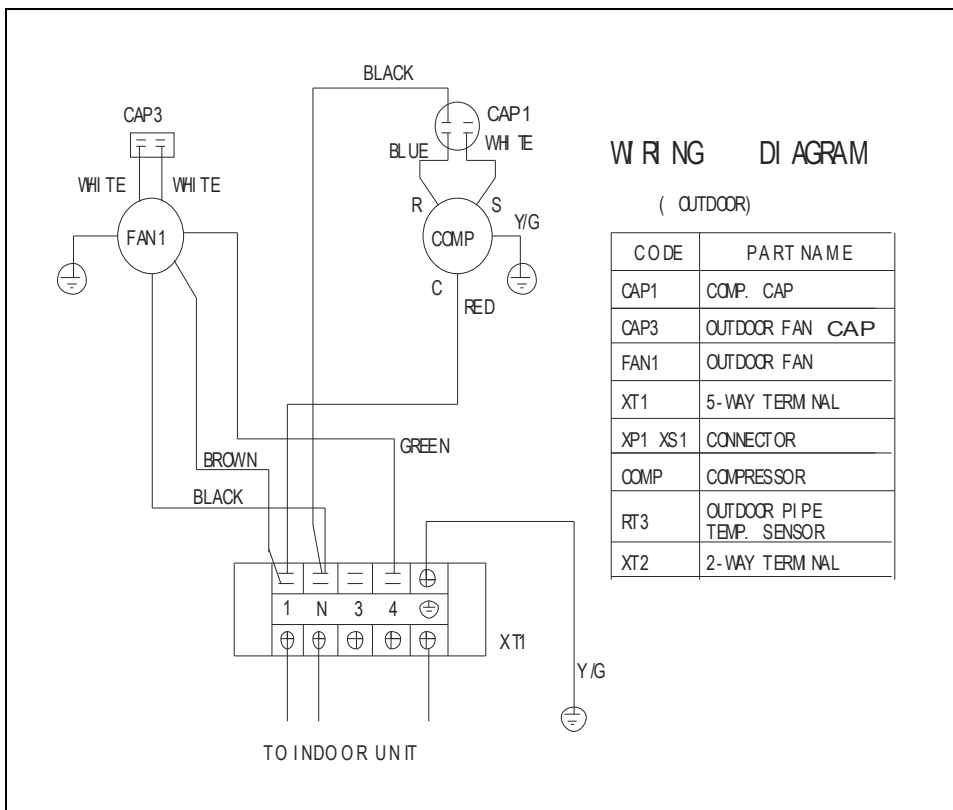


YOCA 12 · YOCA 18

Indoor unit

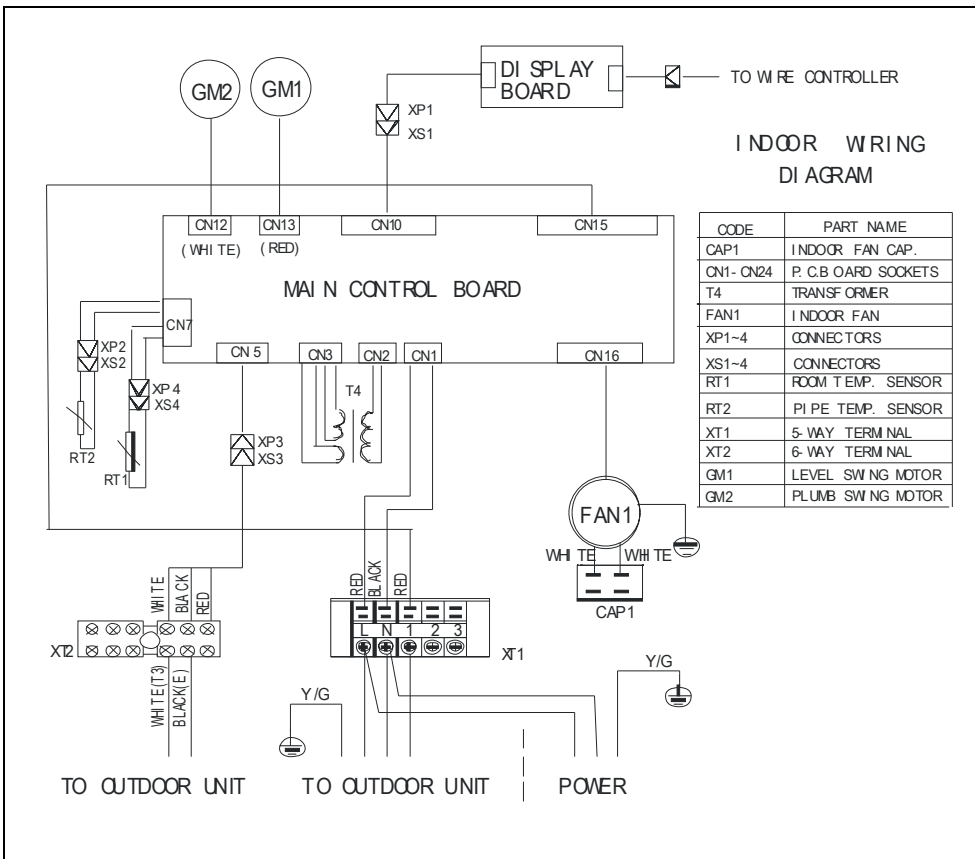


Outdoor unit

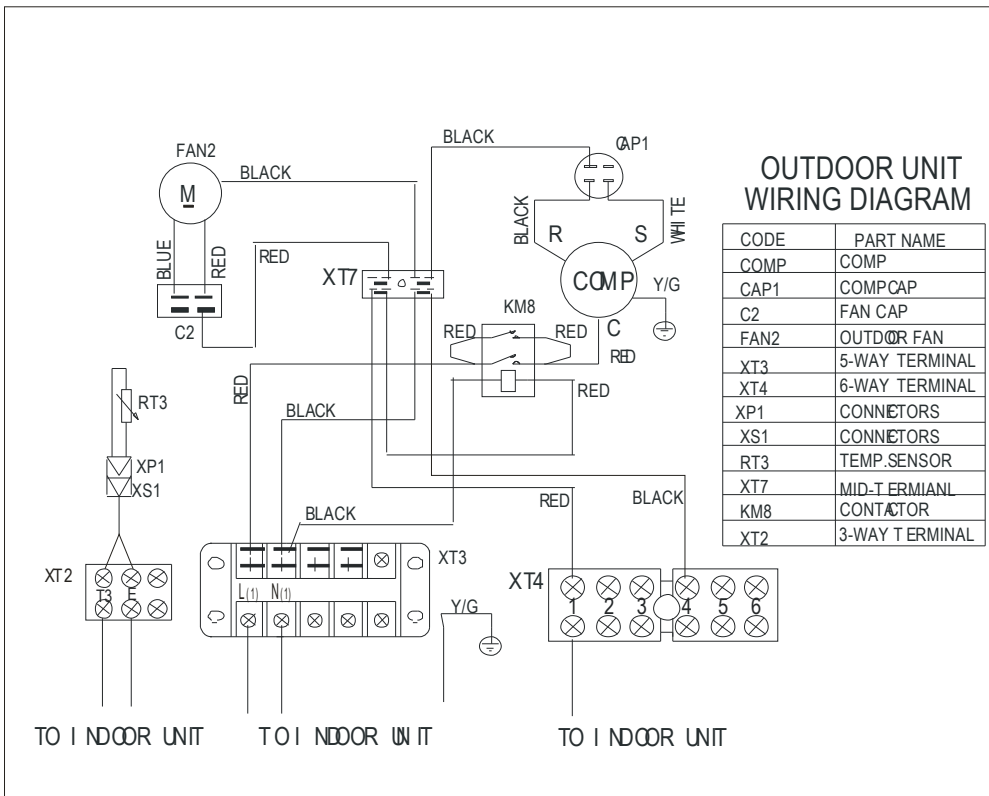


YOCA 24

Indoor unit

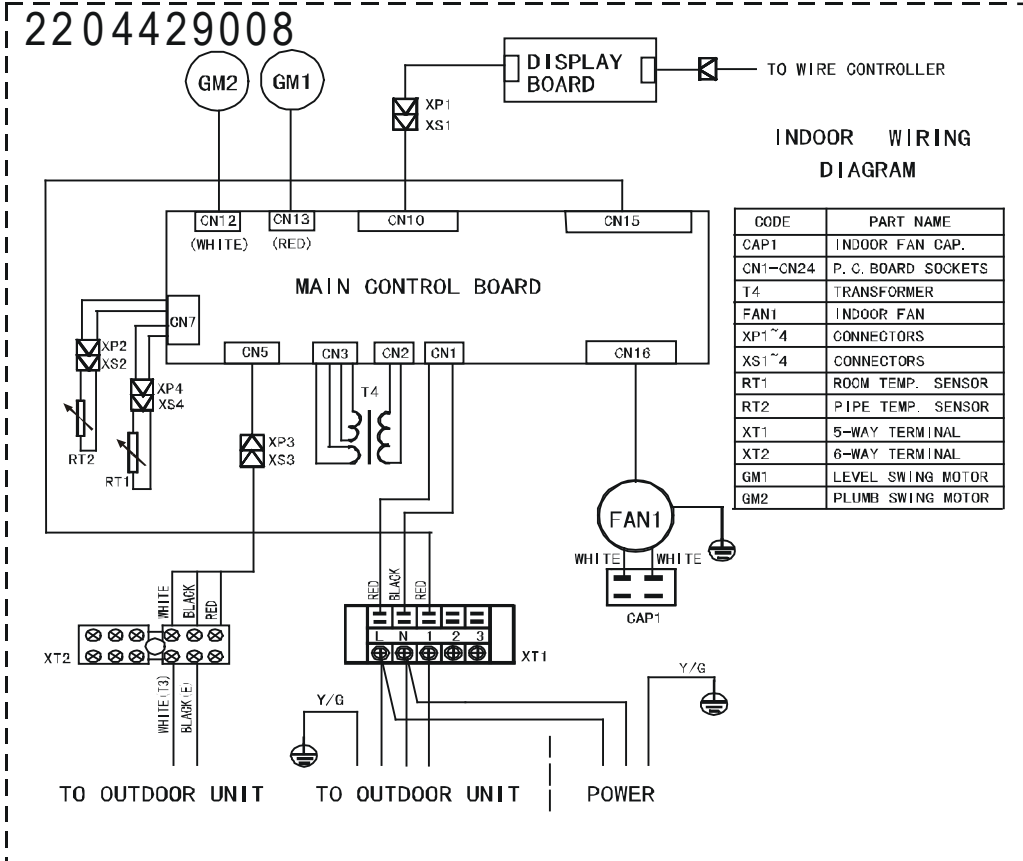


Outdoor unit

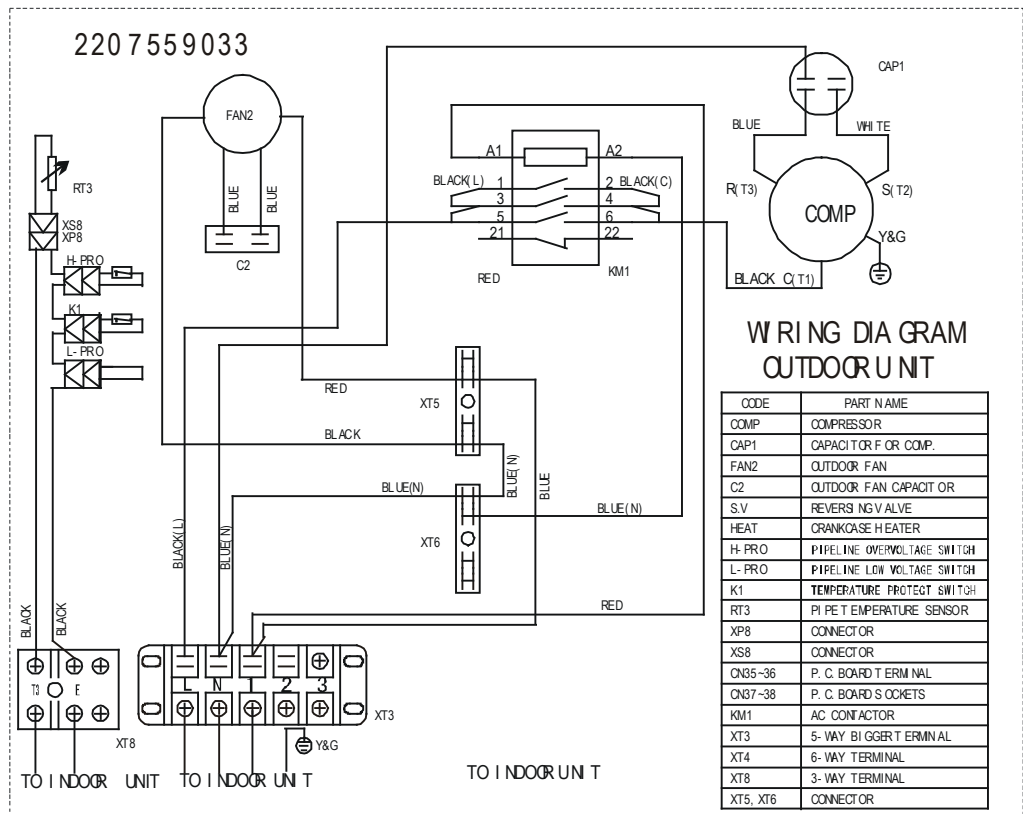


YOCA 36 (1 phase)

Indoor unit

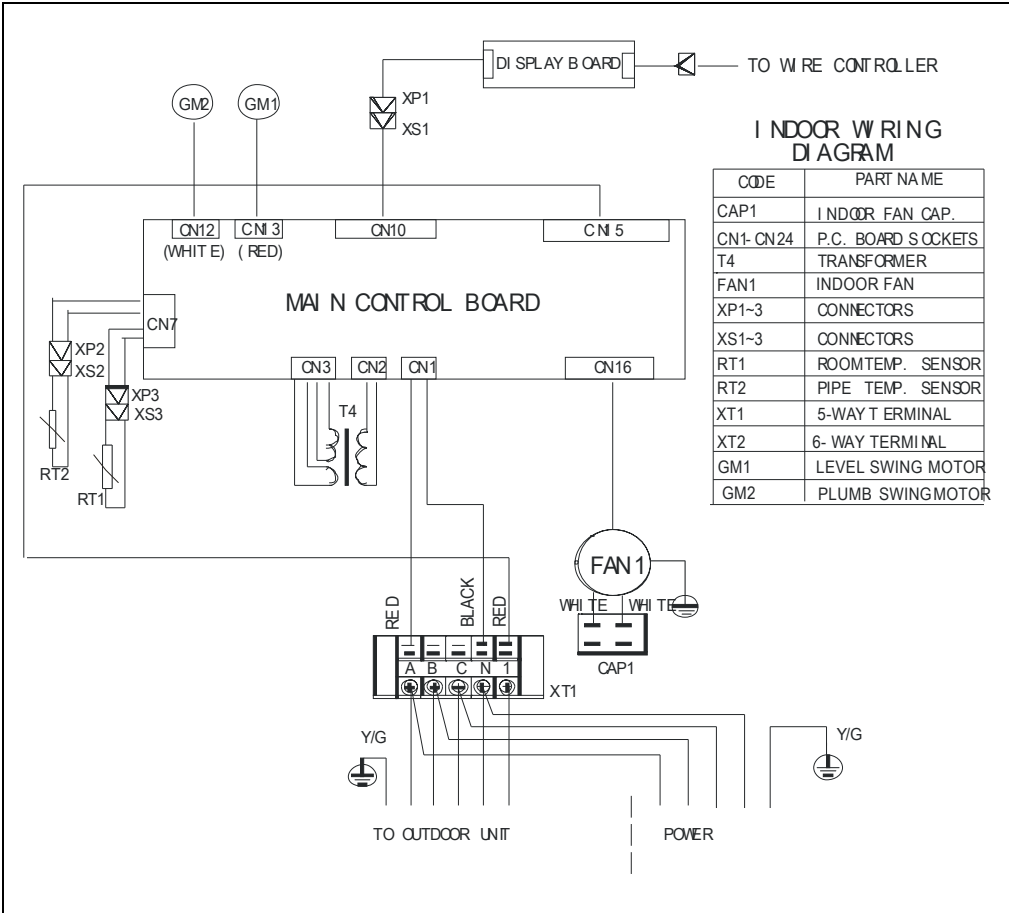


Outdoor unit

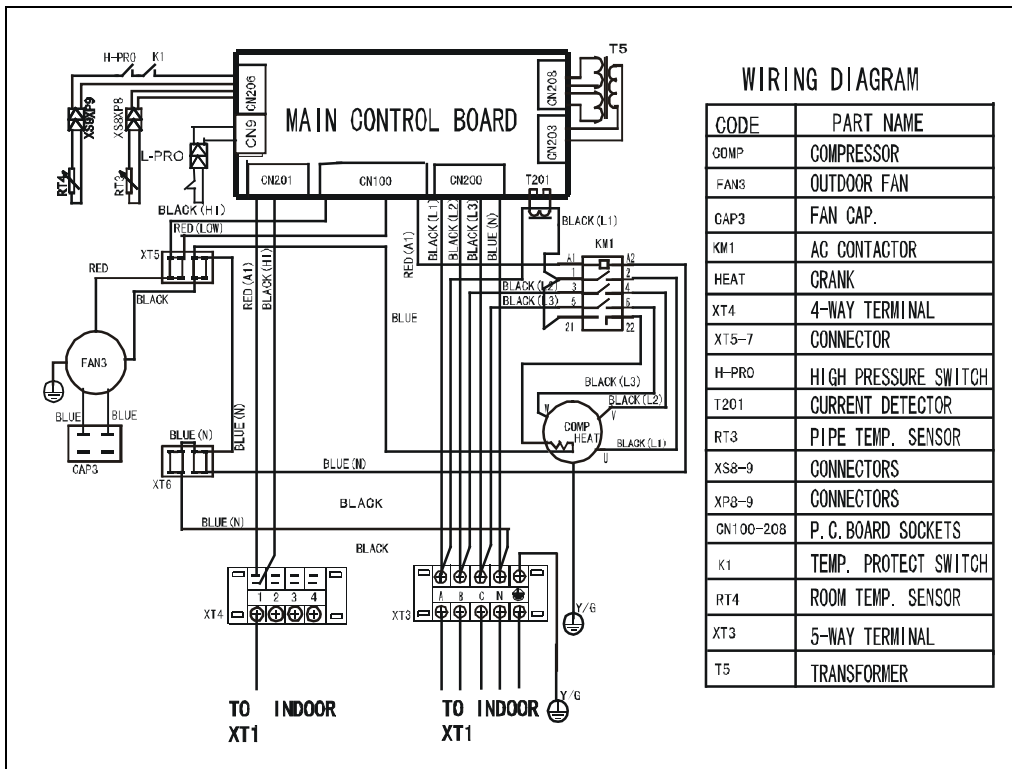


YOCA 36 (3 phase)

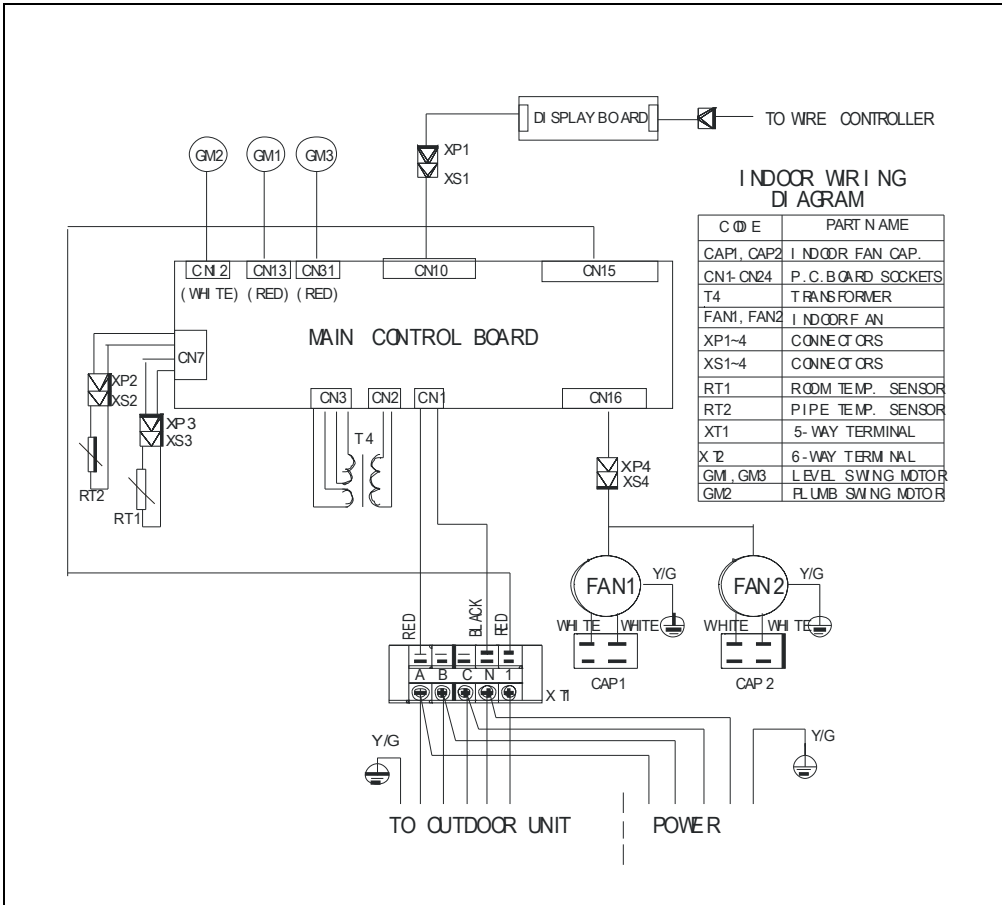
Indoor unit



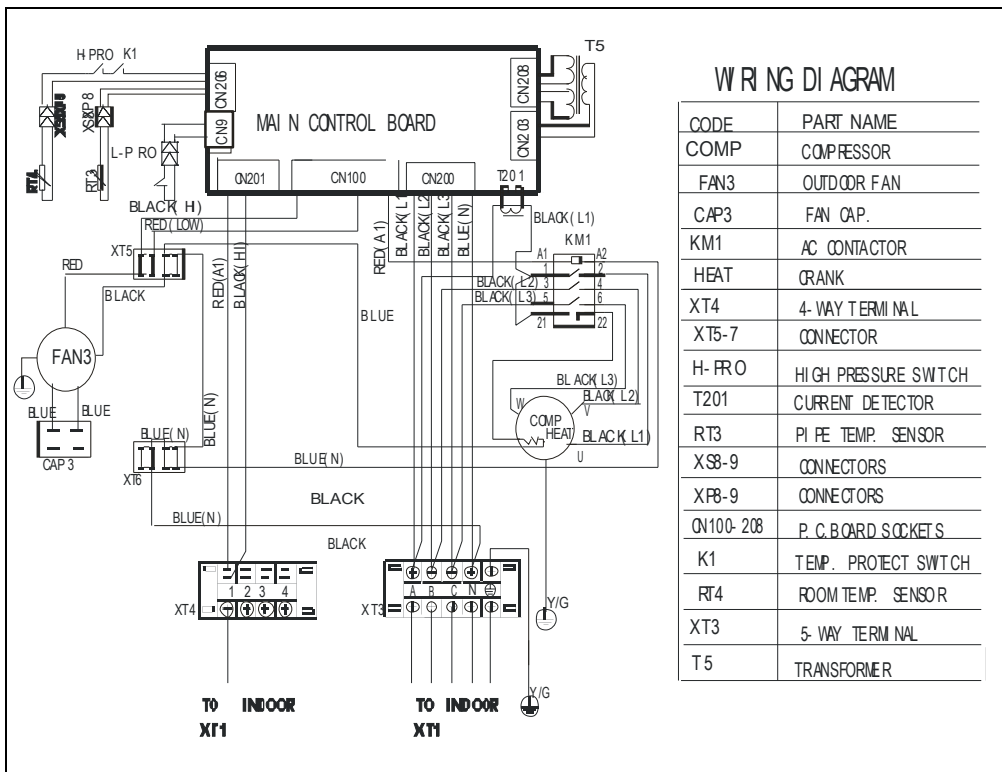
Outdoor unit



YOCA 48 Indoor unit

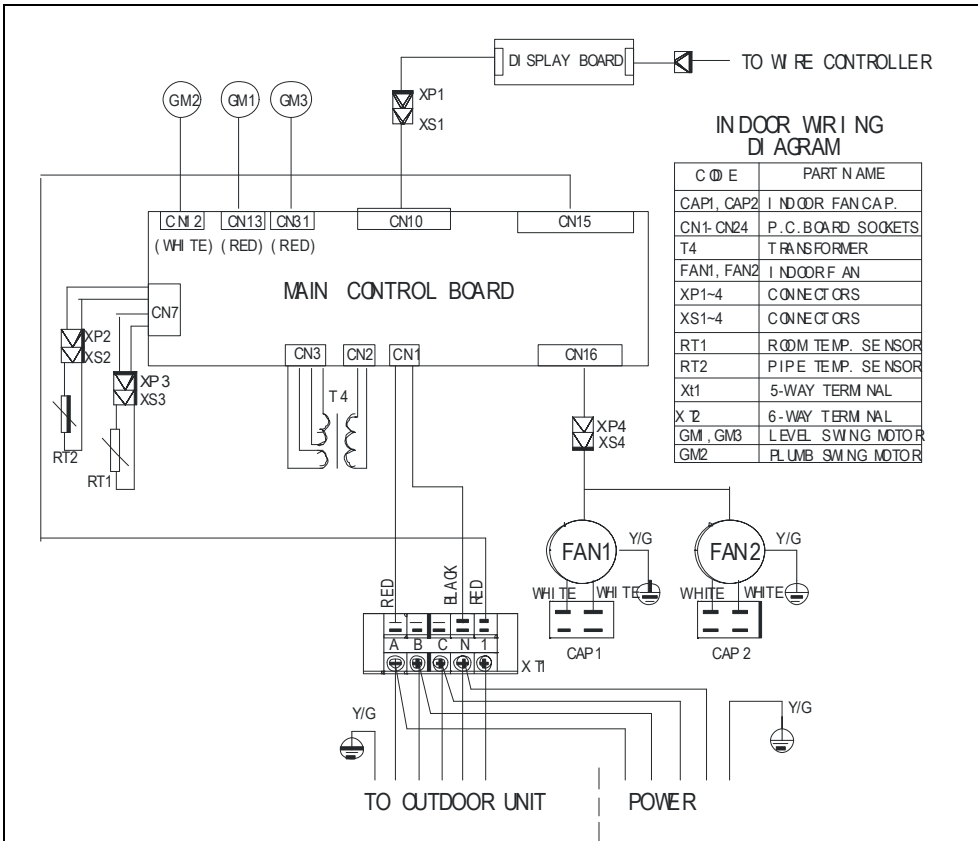


Outdoor unit

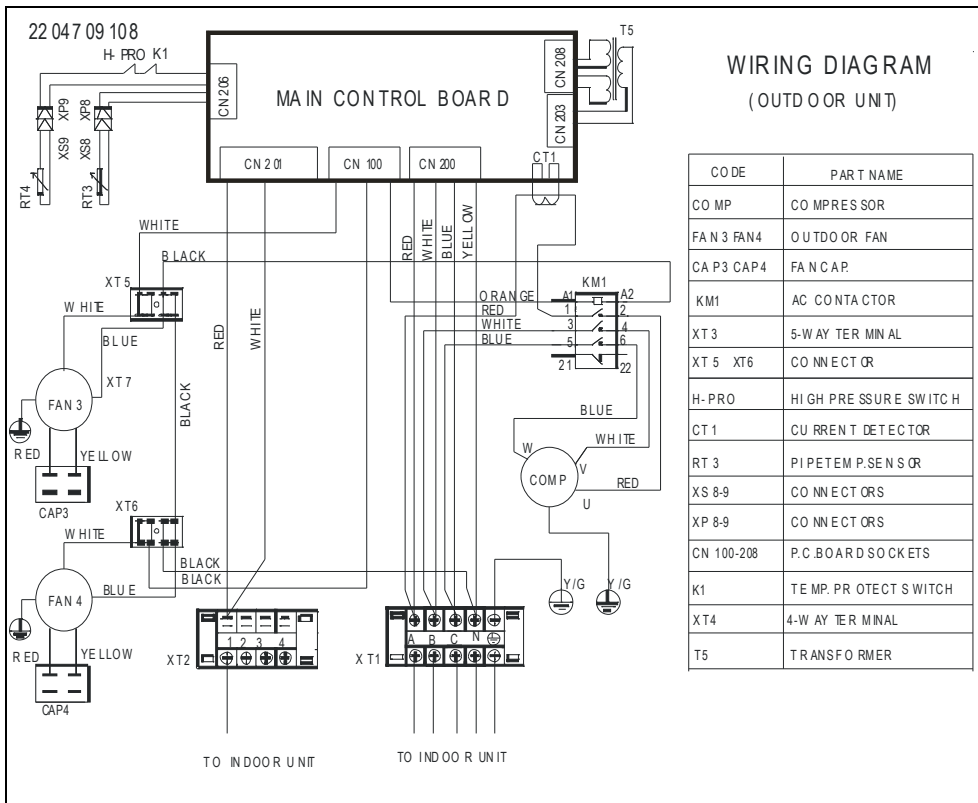


YOCA 60

Indoor unit



Outdoor unit



6. Capacity table

Model: YOCA-YOHA 12

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
Sensitive capacity kW	2.70		2.59	2.49	2.35	2.26	2.19
Input kW.	0.73		0.84	0.94	1.04	1.15	1.25
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.	0.77	0.88	0.99	1.10	1.21	1.32
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.	0.81	0.93	1.04	1.16	1.28	1.39
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.	0.93	1.07	1.20	1.33	1.47	1.60

Model: YOHA 12

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	Capacity kW	6.56	5.24	4.37	3.93	3.71
Input kW.	2.07		1.66	1.38	1.31	1.24	1.17	1.10
18°C	Capacity kW	6.16	4.92	4.10	3.69	3.49	3.08	2.87
	Input kW.	1.94	1.56	1.30	1.23	1.17	1.10	1.04
20°C	Capacity kW	5.70	4.56	3.80	3.42	3.23	2.85	2.66
	Input kW.	1.80	1.44	1.20	1.14	1.08	1.02	0.96
22°C	Capacity kW	5.24	4.20	3.50	3.15	2.97	2.62	2.45
	Input kW.	1.66	1.32	1.10	1.05	0.99	0.94	0.88
27°C	Capacity kW	4.56	3.65	3.04	2.74	2.58	2.28	2.13
	Input kW.	1.44	1.15	0.96	0.91	0.86	0.82	0.77

Model: YOCA-YOHA 18

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	5.22	4.99	4.81	4.54
Sensitive capacity kW	4.17		3.99	3.85	3.63	3.48	3.37
Input kW.	1.20		1.37	1.54	1.71	1.88	2.05
24°C D 17°C W	Total capacity kW	5.71	5.46	5.27	4.97	4.77	4.62
	Sensitive capacity kW	4.57	4.37	4.21	3.97	3.82	3.70
	Input kW.	1.26	1.44	1.62	1.81	1.99	2.17
27°C D 19°C W	Total capacity kW	6.21	5.94	5.72	5.40	5.18	5.02
	Sensitive capacity kW	4.97	4.75	4.58	4.32	4.15	4.02
	Input kW.	1.33	1.52	1.71	1.90	2.09	2.28
32°C D 23°C W	Total capacity kW	7.14	6.83	6.58	6.21	5.96	5.78
	Sensitive capacity kW	5.71	5.46	5.27	4.97	4.77	4.62
	Input kW.	1.53	1.75	1.97	2.19	2.40	2.62

Model: YOHA 18

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	Capacity kW	10.35	8.28	6.90	6.21	5.87
Input kW.	3.28		2.62	2.19	2.08	1.97	1.86	1.75
18°C	Capacity kW	9.72	7.78	6.48	5.83	5.51	4.86	4.54
	Input kW.	3.08	2.46	2.05	1.95	1.85	1.74	1.64
20°C	Capacity kW	9.00	7.20	6.00	5.40	5.10	4.50	4.20
	Input kW.	2.85	2.28	1.90	1.81	1.71	1.62	1.52
22°C	Capacity kW	8.28	6.62	5.52	4.97	4.69	4.14	3.86
	Input kW.	2.62	2.10	1.75	1.66	1.57	1.49	1.40
27°C	Capacity kW	7.20	5.76	4.80	4.32	4.08	3.60	3.36
	Input kW.	2.28	1.82	1.52	1.44	1.37	1.29	1.22

Model: YOCA-YOHA 24

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
Sensitive capacity kW	5.49		5.25	5.06	4.77	4.58	4.44
Input kW.	1.58		1.81	2.03	2.26	2.48	2.71
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.	1.67	1.91	2.15	2.38	2.62	2.86
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.	1.76	2.01	2.26	2.51	2.76	3.01
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.	2.02	2.31	2.60	2.89	3.18	3.46

Model: YOHA 24

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

Model: YOCA-YOHA 36

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: YOHA 36

HEATING		OUTDOOR CONDITIONS						
Indoor Conditions		24°C D	12°C D	7°C D	4°C D	0°C D	-5°C D	-7°C D
		18°C W	11°C W	6°C W	3°C W	-1°C W	-6°C W	-8°C W
15°C	Capacity kW	19.67	15.73	13.11	11.80	11.14	9.83	9.18
	Input kW.	5.78	4.62	3.85	3.66	3.47	3.27	3.08
18°C	Capacity kW	18.47	14.77	12.31	11.08	10.47	9.23	8.62
	Input kW.	5.43	4.34	3.62	3.44	3.26	3.08	2.89
20°C	Capacity kW	17.10	13.68	11.40	10.26	9.69	8.55	7.98
	Input kW.	5.03	4.02	3.35	3.18	3.02	2.85	2.68
22°C	Capacity kW	15.73	12.59	10.49	9.44	8.91	7.87	7.34
	Input kW.	4.62	3.70	3.08	2.93	2.77	2.62	2.47
27°C	Capacity kW	13.68	10.94	9.12	8.21	7.75	6.84	6.38
	Input kW.	4.02	3.22	2.68	2.55	2.41	2.28	2.14

Model: YOCA-YOHA 48

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: YOHA 48

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

Model: YOCA-YOHA 60

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	16.42	15.71	15.14	14.28
Sensitive capacity kW	13.14		12.57	12.11	11.42	10.97	10.62
Input kW.	3.78		4.32	4.86	5.40	5.94	6.48
24°C D 17°C W	Total capacity kW	17.99	17.20	16.58	15.64	15.01	14.55
	Sensitive capacity kW	14.39	13.76	13.26	12.51	12.01	11.64
	Input kW.	3.99	4.56	5.13	5.70	6.27	6.84
27°C D 19°C W	Total capacity kW	19.55	18.70	18.02	17.00	16.32	15.81
	Sensitive capacity kW	15.64	14.96	14.42	13.60	13.06	12.65
	Input kW.	4.20	4.80	5.40	6.00	6.60	7.20
32°C D 23°C W	Total capacity kW	22.48	21.51	20.72	19.55	18.77	18.18
	Sensitive capacity kW	17.99	17.20	16.58	15.64	15.01	14.55
	Input kW.	4.83	5.52	6.21	6.90	7.59	8.28

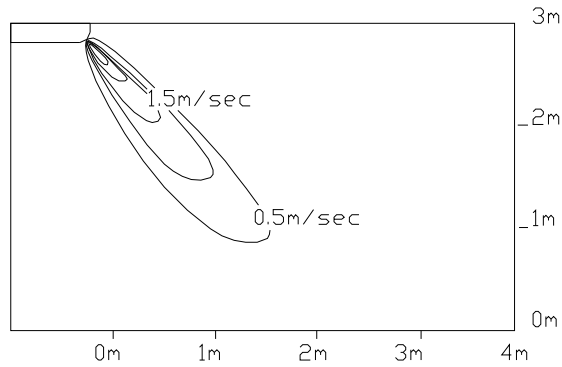
Model: YOHA 60

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

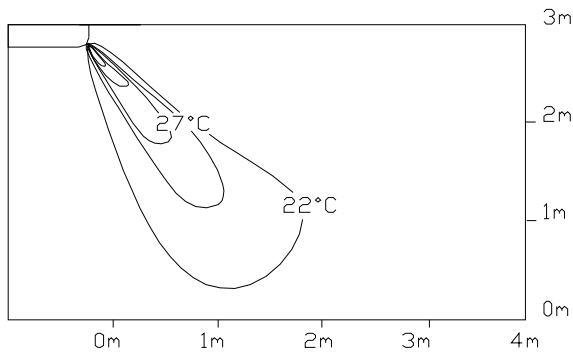
7. Air Velocity and Temperature Distributions (Reference Data)

Discharge angle 60° (CEILING)

Airflow velocity

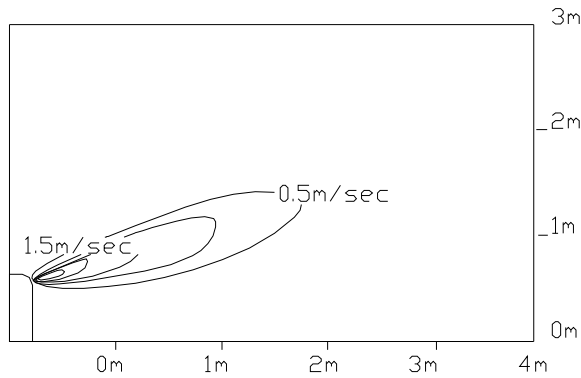


Temperature

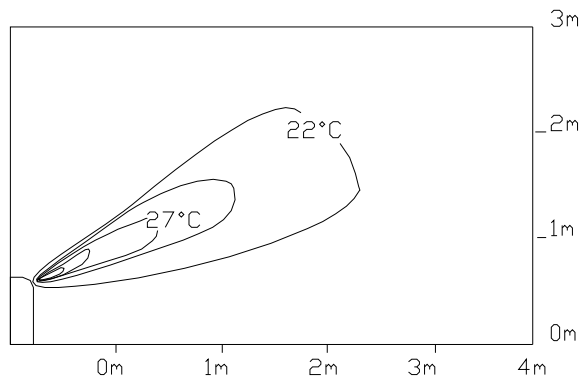


Discharge angle 60°(FLOOR)

Airflow velocity



Temperature



8. Electric Characteristics

Model	Indoor Units				Power Supply		Indoor fan motor		Power input(W)	
	Hz	Voltage	Min.	Max.	MCA	MFA	kW	FLA	Cooling	Heating
YOCA 12	50	220~240	198	264	7.6	15	0.03	0.145	1370	
YOHA 12					7.6	15	0.03	0.145	1370	1350
YOCA 18					10.6	20	0.055	0.52	1900	
YOHA 18					11.0	20	0.055	0.52	1900	1850
YOCA 24					17.6	50	0.055	0.52	3100	
YOHA 24					17.0	50	0.055	0.52	2800	2860
YOCA 36					22.5	70	0.08	0.59	4050	
YOHA 36					22.0	70	0.08	0.59	3700	3350
YOCA 36		380	342	418	8.9	20	0.08	0.59	4050	
YOHA 36					8.2	20	0.08	0.59	3700	3350
YOCA 48					10.6	30	0.12	0.78	4800	
YOHA 48					10.3	30	0.12	0.78	4700	4900
YOCA 60					12.5	30	0.12	0.78	6570	
YOHA 60					12.5	30	0.12	0.78	6570	6900

Symbols:

MCA: Min. Circuit Amps.

MFA: Max. Fuse Amps..

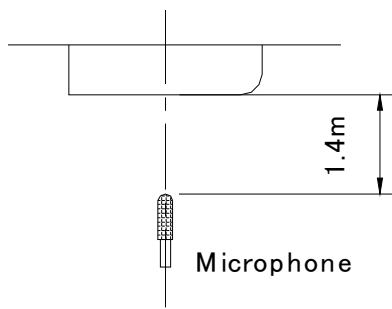
FLA: Full Load Amps.

Kw: Rate Motor Output

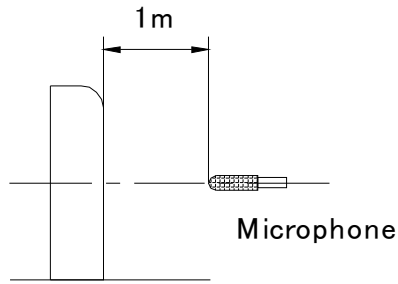
Notes:

3. Voltage range should not over the value of above table.
4. Maximum allowable voltage variation between phase is 2%
5. Selection wire size based on the larger value of MCA.
6. MCA/MFA
 $MCA = 1.25 \times FLA$
 $MFA \leq 4 \times FLA$
 (Next lower standard fuse rating min. 15A)
5. Instead of fuse, circuit breaker is also acceptable.

9. Sound Levels



Ceiling

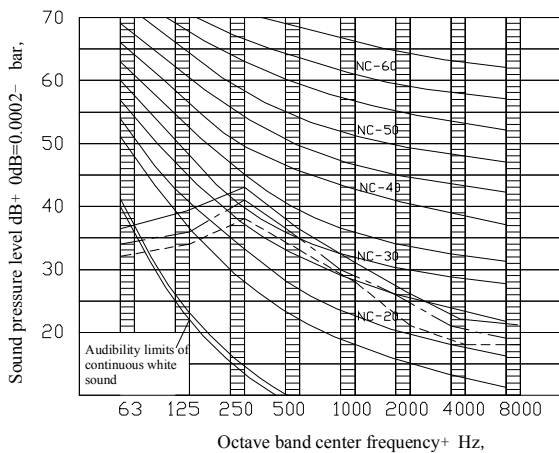


Floor

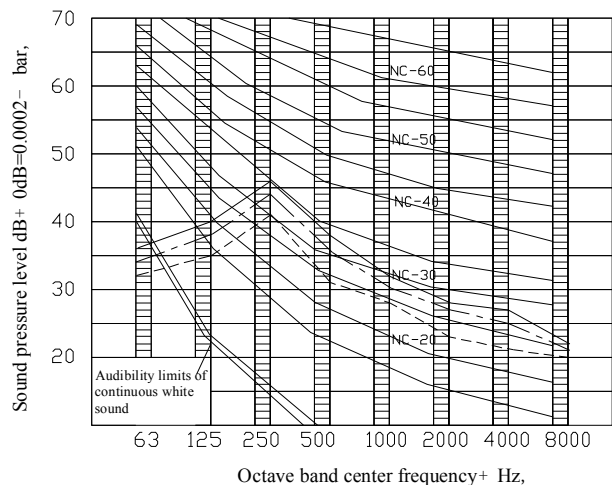
- High speed airflow
- - - - - Medium speed airflow
- . - . - . Low speed airflow

Model	Ceiling			Floor		
	H	M	L	H	M	L
YOCA-YOHA 12	43	41	38	46	44	41
YOCA-YOHA 18	43	41	38	46	44	41
YOCA-YOHA 24	45	43	40	48	46	43
YOCA-YOHA 36	45	43	40	48	46	43
YOCA-YOHA 48	47	46	44	49	47	44
YOCA-YOHA 60	47	46	44	49	47	44

1). 12000btu/h 18000btu/h

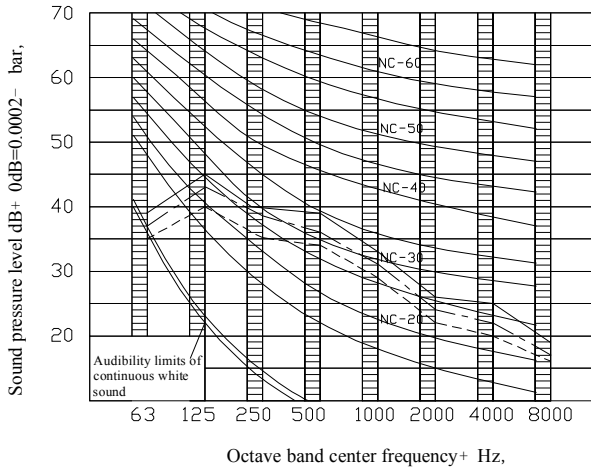


Ceiling

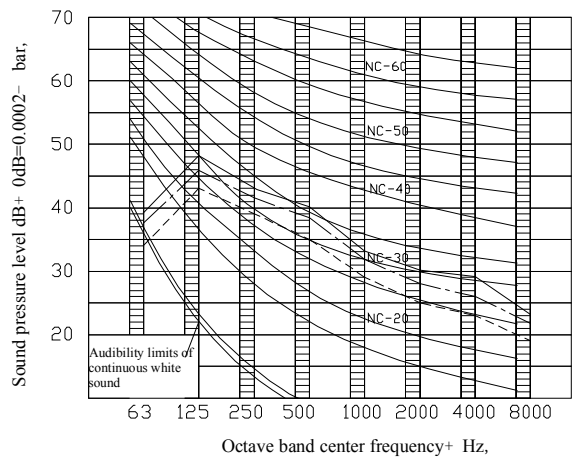


Floor

2). 24000btu/h

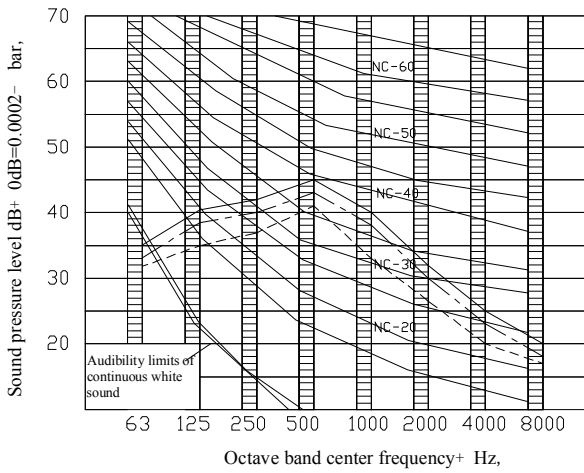


Ceiling

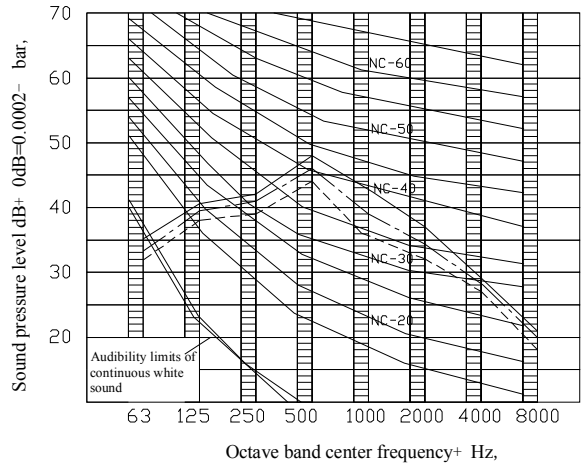


Floor

3). 36000btu/h

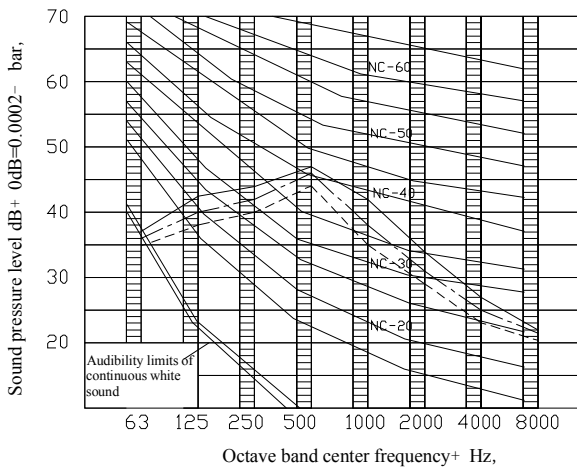


Ceiling

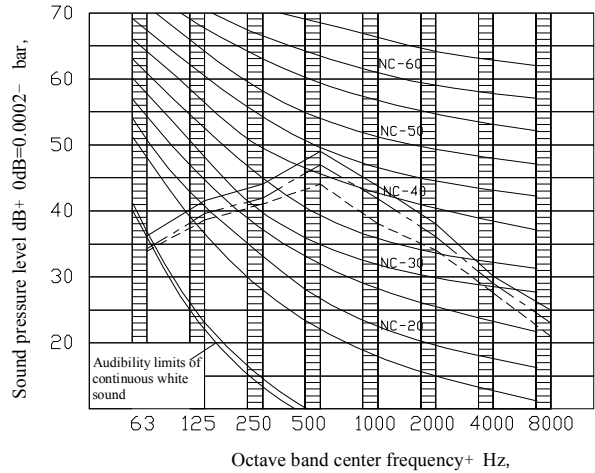


Floor

4). 48000btu/h 60000btu/h



Ceiling



Floor



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