



WALL MOUNTED TYPE AND FLOOR / CEILING UNIVERSAL TYPE AIR CONDITIONER

TECHNICAL MANUAL



FUJITSU GENERAL LIMITED

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1. FEATURE AND OPERATION

1.1 MODEL IDENTIFICATION

Example
INDOOR UNIT

This list applies to new models
since June 1997.

1	2	3	4	5	6	7	8	9	10
A	S	*	2	4	R	S	G	—	W
TYPE	DESTINATION MARKET REGIONS		COOLING/ HEATING RANK		FUNCTION TYPE	CONTROL METHOD (REMOTE CONTROL)	SHOWING MINOR CHANGES	COLOR	
AS: WALL MOUNTED	G: 220-240V S: 220V	50Hz 60Hz	BTU/h(kW) 7: 7,000 (2.1) 9: 9,000 (2.7) 12: 12,000 (3.6) 14: 14,000 (4.0) 18: 18,000 (5.2) 20: 20,000 (5.9) 24: 24,000 (7.0) 30: 30,000 (8.8)		A: COOLING ONLY R: REVERSE CYCLE (HEAT & COOL)	S: WIRELESS type (Handy type) W: WIRELESS type (Wall fixing type)		W: WHITE	
AB: UNIVERSAL (FLOOR/CEILING)	T: 240 - (220)V Y: 220-240V H: 220-240V P: 220V	50Hz 50Hz 50Hz 50Hz							

OUTDOOR UNIT

1	2	3	4	5	6	7	8	9	10
A	O	*	2	4	R	W	G	L	
TYPE	DESTINATION MARKET REGIONS		COOLING/ HEATING RANK		FUNCTION TYPE	SHOWING COMPRESSOR USED	SHOWING MINOR CHANGES	SPECIAL METHOD FUNCTION	
AO: OUTDOOR	G: 220-240V S: 220V T: 240 - (220)V Y: 220-240V H: 220-240V P: 220V	50Hz 60Hz 50Hz 50Hz 50Hz 50Hz	BTU/h(kW) 7: 7,000 (2.1) 9: 9,000 (2.7) 12: 12,000 (3.6) 14: 14,000 (4.0) 18: 18,000 (5.2) 20: 20,000 (5.9) 24: 24,000 (7.0) 30: 30,000 (8.8)		A: COOLING ONLY R: REVERSE CYCLE (HEAT & COOL)			L: LOW AMBIENT TEMP. OPERATION	

1.2 APPLICATION MODEL

1.2.1 COMPACT SII & MII SERIES FOR 7,000 TO 12,000 BTU/h

Classification		INDOOR UNIT	OUTDOOR UNIT
7,000 BTU/h SII— SERIES	Cooling	AS *7ASC-W	AO *7ASC
		AS *7ASCCW	AO *7ASCC
		AS *7ASD-W	AO *7ASD
	Reverse cycle (Cool & Heat)	AS *7RSC-W	AO *7RSC
		AS *7RSCCW	AO *7RSCC
		AS *7RSD-W	AO *7RSD
9,000 BTU/h MII— SERIES	Cooling	AS *9ASE-W	AO *9ANE
		AS *9ASECW	AO *9ANEC
		AS *9ASF-W	AO *9ANF
		(ASP9ASB-W)	(AOP9ANB)
	Reverse cycle (Cool & Heat)	AS *9RSE-W	AO *9RNE
		AS *9RSECW	AO *9RNEC
12,000 BTU/h MII— SERIES	Cooling	AS *9RSF-W	AO *9RNF
		(ASP9RSB-W)	(AOP9RNB)
	Reverse cycle (Cool & Heat)	AS *12ASE-W	AO *12ASE
		AS *12ASECW	AO *12ASEC
		AS *12ASF-W	AO *12ASF
		(ASP12ASB-W)	(AOP12ASB)
	Reverse cycle (Cool & Heat)	AS *12RSE-W	AO *12RSE
		AS *12RSECW	AO *12RSEC
		AS *12RSF-W	AO *12RSF
		(ASP12RSB-W)	(AOP12RSB)

1.2.2 WALL MOUNTED LARGE AS-SERIES FOR 20,000 TO 30,000 BTU/h

Classification		INDOOR UNIT		OUTDOOR UNIT
		Wireless (Handy)	Wireless (Wall fixing)	
20,000 BTU/h	Cooling	AS *20AS (ACS-7502)	AS *20AW	AO *20AW (ACO-7502)
	Reverse cycle (Cool & Heat)	AS *20RS	AS *20RW	AO *20RW
24,000 BTU/h	Cooling	AS *24AS (ACS-7602)	AS *24AW	AO *24AW (ACO-7602)
	Revers cycle (Cool & Heat)	AS *24RS	AS *24RW	AO *24RW
30,000 BTU/h	Cooling	AS *30AS	AS *30AW	AO *30AB
	Reverse cycle (Cool & Heat)	AS *30RS	AS *30RW	AO *30RB

1.2.3 FLOOR/CEILING UNIVERSAL TYPE AB-SERIES FOR 14,000 TO 24,000 BTU/h

Classification		INDOOR UNIT		OUTDOOR UNIT
		Wireless (Handy)	Wireless (Wall fixing)	
14,000 BTU/h	Cooling	AB *14AS	AB *14AW	AO *14AN
	Reverse cycle (Cool & Heat)	AB *14RS	AB *14RW	AO *14RN
18,000 BTU/h	Cooling	AB *18AS	AB *18AW	AO *18AW
	Revers cycle (Cool & Heat)	AB *18RS	AB *18RW	AO *18RW
24,000 BTU/h	Cooling	AB *24AS	AB *24AW	AO *24AW
	Reverse cycle (Cool & Heat)	AB *24RS	AB *24RW	AO *25RW

1.3 FEATURES OF EACH MODEL

No.	ITEM	COMPACT SII-type		COMPACT MII-type		Wall mounted AS *20—30,000 BTU/h -type				FLOOR/CEILING AB *14—24,000 BTU/h -type			
		Cooling only	Reverse cycle	Cooling only	Reverse cycle	Cooling only	Reverse cycle	Cooling only	Reverse cycle	Cooling only	Reverse cycle	Cooling only	Reverse cycle
1	Wireless remote control unit • Handy type	○	○	○	○	○	○	—	—	○	○	—	—
	Wireless remote control unit • Wall fixing type	—	—	—	—	—	—	○	○	—	—	○	○
2	Automatic operation	○	○	○	○	○	—	○	—	○	—	○	—
	Auto changeover operation	—	—	—	—*3	—	○	—	○	—	○	—	○
3	Heating operation (reverse cycle)	—	○	—	○	—	○	—	○	—	○	—	○
4	Cooling operation	○	○	○	○	○	○	○	○	○	○	○	○
5	Dry operation	○	○	○	○	○	○	○	○	○	○	○	○
6	Fan operation	○	○	○	○	○	○	○	○	○	○	○	○
7	Auto fan speed	○	○	○	○	○	○	○	○	○	○	○	○
8	Nice morning timer (ON timer)	○	○	○	○	○	○	○	○	○	○	○	○
9	OFF timer	○	○	○	○	○	○	○	○	○	○	○	○
10	Sleep timer	○	○	○	○	○	○	○	○	○	○	○	○
11	Program timer	○	○	○	○	○	○	○	○	○	○	○	○
12	Energy save operation	—	—	—	—	—	—	○	○	—	—	○	○
13	Vertical air direction adjustment	○	○	○	○	○	○	○	○	○	○	○	○
14	Horizontal air direction adjustment	—	—	—	—	○	○	○	○	○	○	○	○
15	Vertical airflow swing operation	○	○	○	○	○	○	○	○	○	○	○	○
16	Horizontal airflow swing operation	—	—	—	—	○	○	○	○	○	○	○	○
17	Super vane	—	—	—	—	○	○	○	○	○	○	○	○
18	Linked power diffuser	—	—	—	—	○	○	○	○	—	—	—	—
19	Automatic shut flaps	○	○	○	○	○	○	○	○	○	○	○	○
20	Cooling operation even at low outdoor temperature (0°C)	—	—	—	—	—*1	○*2	—*1	○*2	—	○*2	—	○*2
21	Mold prevention filter	○	○	○	○	○	○	○	○	○	○	○	○
22	Air purifying filter (optional)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	—	—	—	—
23	Auto-restart	○	○	○	○	○	○	○	○	○	○	○	○
24	Quiet	○	○	○	○	—	—	—	—	—	—	—	—
25	Others												

NOTE:

* 1 Models ASG30AS and ASY30AS have a No. 20 function.

* 2 Models AB *14RS and ASS/ABS models have no No. 20 function.

* 3 Models AST9RSG and AST12RSG have a No. 2 function.

1.3.1 WIRELESS REMOTE CONTROL UNIT (Handy type)

[1] SLEEP button

[2] MASTER CONTROL button

[3] SET TEMP./SET TIME buttons (+ / -)

[4] Signal Transmitter

[5] TIMER button

[6] FAN CONTROL button

[7] START/STOP button

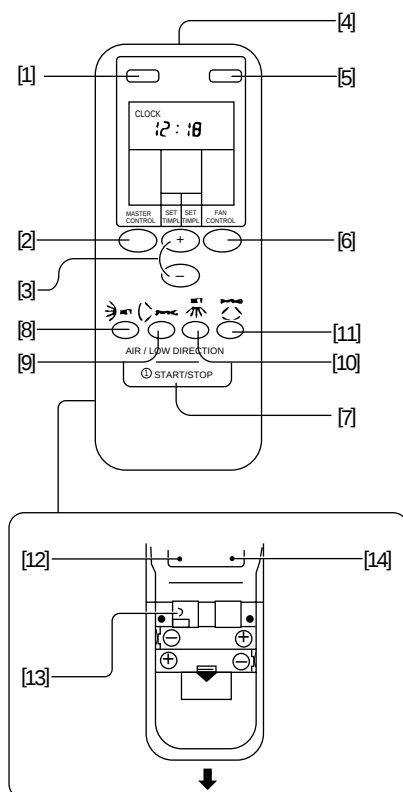
[8] AIR FLOW DIRECTION
VERTICAL SET Button

[9] AIR FLOW DIRECTION
VERTICAL SWING Button

[10] AIR FLOW DIRECTION
HORIZONTAL SET Button

[11] AIR FLOW DIRECTION
HORIZONTAL SWING Button

● Wireless type



Rear Side

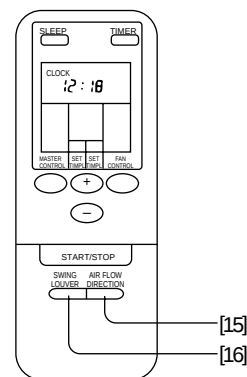
[12] TIME ADJUST button

[13] ACL button
(located inside battery compartment)

[14] TEST RUN button

- This button is used when installing the air conditioner, and should not be used under normal conditions, as it will cause the air conditioner's thermostat function to operate incorrectly.
- If this button is pressed during normal operation, the unit will switch to test operation mode, and the Indoor Unit's OPERATION Indicator Lamp and TIMER Indicator Lamp will begin to flash simultaneously.
- To stop the test operation mode, either press the TEST RUN button once again, or press the START/STOP button to stop the air conditioner.

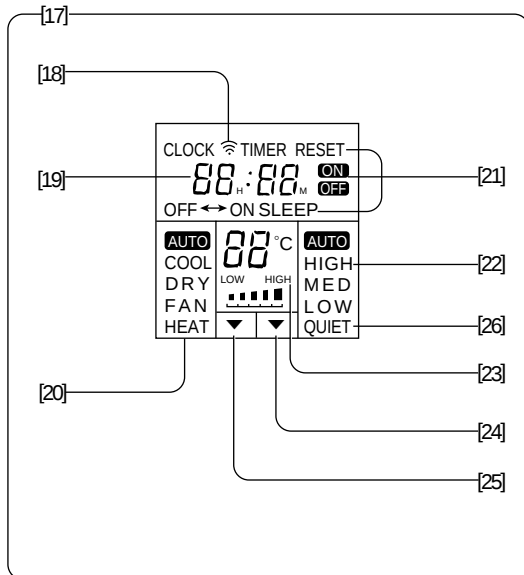
● Compact type SII, MII only



[15] AIR FLOW DIRECTION
VERTICAL SET Button

[16] AIR FLOW DIRECTION
VERTICAL SWING Button

Remote Control Unit Display



[17] Remote Control Unit Display

[18] Transmit Indicator

[19] Clock Display

[20] Operating Mode Display

[21] Timer Mode Display

[22] Fan Speed Display

[23] Temperature Set Display

[24] Timer Set Indicator

[25] Temperature Set Indicator

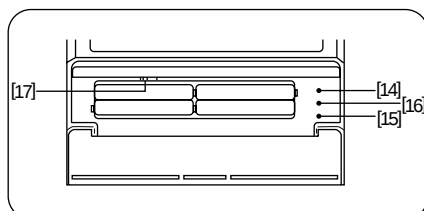
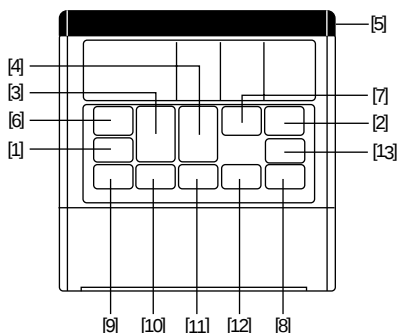
[26] Compact type SII, MII only

1.3.2 WIRELESS REMOTE CONTROL UNIT (Wall fixing type)

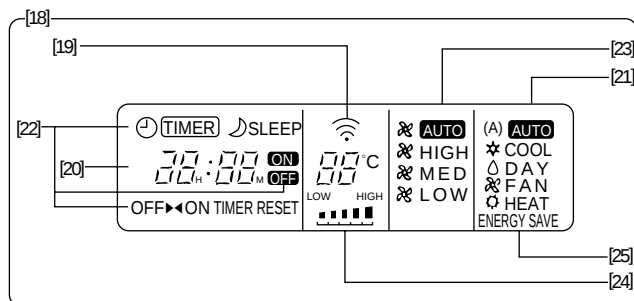
- [1] SLEEP button
- [2] MASTER CONTROL button
- [3] SET TIME buttons (▲ / ▼)
- [4] SET TEMP. buttons (▲ / ▼)
- [5] Signal Transmitter
- [6] TIMER button
- [7] FAN CONTROL button
- [8] START/STOP button
- [9] AIR FLOW DIRECTION
VERTICAL SET Button
- [10] AIR FLOW DIRECTION
VERTICAL SWING Button
- [11] AIR FLOW DIRECTION
HORIZONTAL SET Button
- [12] AIR FLOW DIRECTION
HORIZONTAL SWING Button
- [13] ENERGY SAVE Button

Inside of battery cover

- [14] TIME ADJUST button
- [15] ACL button
(located inside battery compartment)
- [16] TEST RUN button
 - This button is used when installing the air conditioner, and should not be used under normal conditions, as it will cause the air conditioner's thermostat function to operate incorrectly
 - If this button is pressed during normal operation, the unit will switch to test operation mode, and the Indoor Unit's OPERATION Indicator Lamp and TIMER Indicator Lamp will begin to flash simultaneously.
 - To stop the test operation mode, either press the TEST RUN button once again, or press the START/STOP button to stop the air conditioner.
- [17] CODE CHANGE Switch
 - Switching the remote controller code.
 - Use remote controller code A (on the leftmost side) to operate the unit using the remote controller.
 - When it is necessary to switch the remote controller code, contact a service technician since the PCB remote controller code of the indoor unit must also be switched.



Remote Control Unit Display



[18] Remote Controller Display

[19] Transmit Indicator

[20] Clock Display

[21] Operating Mode Display

[22] Timer Mode Display

[23] Fan Speed Display

[24] Temperature Set Display

[25] Energy Save Display

1.3.3 AUTOMATIC OPERATION

COOLING MODEL This applies to the COMPACT type SII and MII.

- Depending on the room temperature at the time operation begins, the operating mode will be switched automatically as shown in the accompanying table. Also, depending on the operating mode, the room temperature setting will cause the "standard" temperature to be set as shown. The operating mode and standard thermostat settings are selected automatically when operation begins.
- When automatic operation is initiated, the fan will run at very low speed for about one minute while the unit detects and selects the proper operating mode.
- Once the operating mode has been set, the mode will not change even if the room temperature changes.
- If the START/STOP button is pressed to recommence operation within two hours after stopping automatic operation, the unit will begin operating from the same mode as before.

Actual Room Temperature	Operating Mode	Thermostat Setting (standard setting)
30°C or above ➡	Cooling ➡	27°C
27°C to 30°C ➡	Cooling ➡	26°C
25°C to 27°C ➡	Dry ➡	24°C
23°C to 25°C ➡	Dry ➡	22°C
Below 23°C ➡	Dry ➡	20°C

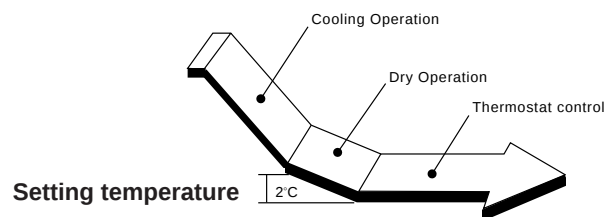
HEAT & COOL MODEL (Reverse cycle)

- Depending on the room temperature at the time operation begins, the operating mode will be switched automatically as shown in the accompanying table. Also, depending on the operating mode, the room temperature setting will cause the "standard" temperature to be set as shown. The operating mode and standard thermostat settings are selected automatically when operation begins.
- When automatic operation is initiated, the fan will run at very low speed for about one minute while the unit detects and selects the proper operating mode.
- Once the operating mode has been set, the mode will not change even if the room temperature changes. However, during the monitor operation mode, if the room temperature changes to below 22°C, the mode will automatically switch to Heat, and when it rises above 24°C the mode will automatically switch to Dry.
- When in the monitor mode, the fan will operate very slowly.
- If the START/STOP button is pressed to recommence operation within two hours after stopping automatic operation, the unit will begin operating from the same mode as before.

Actual Room Temperature	Operating Mode	Thermostat Setting (standard setting)
30°C or above ➡	Cooling ➡	27°C
27°C - 30°C ➡	Cooling ➡	26°C
25°C - 27°C ➡	Dry ➡	24°C
22°C - 24°C ➡	Monitor ➡	
Below 22°C ➡	Heating ➡	23°C

COOLING MODEL This does not apply to the COMPACT type S II, M II.

- When the room temperature is 2°C higher than the set temperature, the mode will switch between Cooling and Drying.
- During Drying mode operation, FAN setting is switched to LOW gentle cooling effect, and the room fan may stop rotating temporarily.
- If the mode automatically selected by the unit is not what you wish, select one of the mode operation (COOL, DRY, FAN).



1.3.4 AUTO CHANGEOVER OPERATION

HEAT & COOL MODEL (Reverse cycle)

- When AUTO CHANGEOVER operation is selected, the air conditioner selects the appropriate operation mode (Cooling or Heating) in response to your room's temperature.
- When AUTO CHANGEOVER operation first selected, the fan will operate at very low speed for about one minute, during which time the unit detects the room conditions and selects the proper operating mode.
- When the air conditioner has adjusted your room's temperature to near the thermostat setting, it will begin monitor operation. In the monitor operation mode, the fan will operate at low speed. If the room temperature subsequently changes, the air conditioner will once again select the appropriate operation (Heating, Cooling) to adjust the temperature to the value set in the thermostat. (The monitor operation range is $\pm 2^{\circ}\text{C}$ relative to the thermostat setting.)
- If the mode automatically selected by the unit is not what you wish, select one of the mode operation (HEAT, COOL, DRY, FAN).

1.3.5 HEATING OPERATION (REVERSE CYCLE)

- Use to warm your room.
- When Heating mode is selected, the air conditioner will operate at very low fan speed for about 3 to 5 minutes, after which it will switch to the selected fan setting. This period of time is provided to allow the indoor unit to warm up before begin full operation.
- When the room temperature is very low, frost may form on the outside unit, and its performance may be reduced. In order to remove such frost, the unit will automatically enter the defrost cycle from time to time. During Automatic Defrosting operation, the OPERATION indicator lamp (red) will flash, and the heat operation will be interrupted.

1.3.6 COOLING OPERATION

- Use to cool your room.

1.3.7 DRY OPERATION

- Use for gently cooling while dehumidifying your room.
- You cannot heat the room during Dry mode.
- During Dry mode, the unit will operate at low speed; in order to adjust room humidity, the indoor unit's fan may stop from time to time. Also, the fan may operate at very low speed when detecting room humidity.
- Then fan speed cannot be changed manually when Dry mode has been selected.

During Heating mode:

Set the thermostat to a temperature setting that is higher than the current room temperature. The Heating mode will not operate if the thermostat is set lower than the actual room temperature.

During Cooling/Dry mode:

Set the thermostat to a temperature setting that is lower than the current room temperature. The Cooling and Dry modes will not operate if the thermostat is set higher than the actual room temperature (in Cooling mode, the fan alone will operate).

During Fan mode:

You can not use the unit to heat and cool your room.

1.3.8 FAN OPERATION

- Use to circulate the air throughout your room.

1.3.9 AUTO FAN SPEED

- When the FAN CONTROL switch is set to the AUTO position, the optimum fan speed will be selected automatically in accordance with room temperature and other conditions.
- During the dry mode, fan speed is set automatically and cannot be changed.
- The breeze is:

Cooling operation

Ta°C	Fan mode	Ta°C
2°C higher	HIGH	3°C higher
2°C or less	MEDIUM	3°C or less
1°C or more		2°C or more
1°C or less	LOW	2°C or less
Room temperature lowered		Room temperature risen

(Room temperature and set temperature difference = Ta°C)

Heating operation

Tp°C	Fan mode
47°C or more	HIGH
41°C to 47°C	MEDIUM
41°C or less	LOW

(Indoor heat exchanger temperature = Tp°C)

1.3.10 NICE MORNING TIMER (ON TIMER)

When the ON timer is used, the air conditioner not only starts at the set time, but also automatically starts before the set time according to the difference between the room temperature and the set temperature so the room becomes the desired temperature at the set time. The time can be set in 5-minute steps.

	Room temperature and set temperature difference	Operation start time
Cooling	Over 10 °C 5 °C — 10 °C Under 5 °C	Started 20 minutes before set time Started 15 minutes before set time Started 10 minutes before set time
Heating	Over 20 °C 15 °C — 20 °C 10 °C — 15 °C Under 10 °C	Started 45 minutes before set time Started 30 minutes before set time Started 15 minutes before set time Started 10 minutes before set time

1.3.11 OFF TIMER

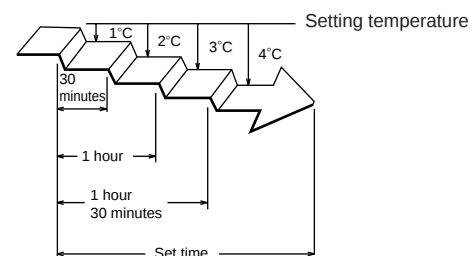
When the timer reaches the set time, the air conditioner will be turned off.

1.3.12 SLEEP TIMER OPERATION

During Heating operation [HEAT & COOL MODEL (Reverse cycle) only] :

When the SLEEP timer is set, the thermostat setting is automatically lowered 1°C every thirty minutes. When the thermostat has been lowered a total of 4°C, the thermostat setting at that time is maintained until the set time has elapsed, at which time the air conditioner automatically turns off.

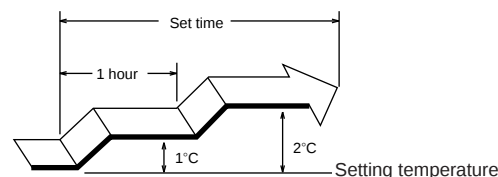
SLEEP timer setting



During Cooling/Dry operation:

When the SLEEP timer is set, the thermostat setting is automatically raised 1°C every sixty minutes. When the thermostat has been raised a total of 2°C, the thermostat setting at that time is maintained until the set time has elapsed, at which time the air conditioner automatically turns off.

SLEEP timer setting



1.3.13 PROGRAM TIMER

Combines the OFF timer and the ON timer for one cycle. (OFF ⇌ ON or ON ⇌ CFF)
Starts operation from the OFF timer or the ON timer, Whichever is closer to the current time.

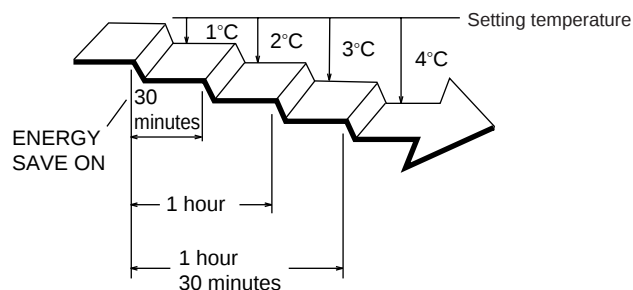
1.3.14 ENERGY SAVE OPERATION

※ Wireless type (Wall fixing type) only

During Heating operation [HEAT & COOL MODEL (Reverse cycle) only] :

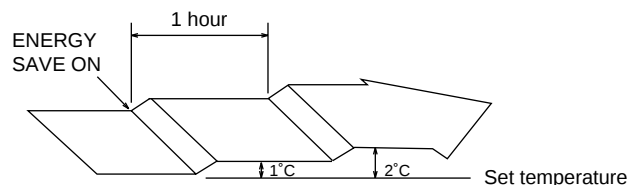
The thermostat temperature setting decreases by 1°C as soon as the ENERGY SAVE button is pressed, and then decreases by another 1°C every thirty minutes. Afterwards, energy consumption is saved by continuing to heat at a thermostat temperature of 4°C less than that set.

ENERGY SAVE setting



During Cooling/Dry operation:

The thermostat temperature setting increases by 1°C as soon as the ENERGY SAVE button is pressed, and then increases by another 1°C after one hour has passed. Afterwards, energy consumption is saved by continuing to cool or dry at a thermostat temperature of 2°C more than that set.

ENERGY SAVE setting

1.3.15 VERTICAL AIR DIRECTION ADJUSTMENT

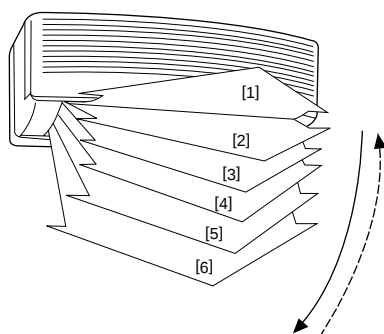
Each time the button is pressed, the air direction range will change as follows:

[1] ↔ [2] ↔ [3] ↔ [4] ↔ [5] ↔ [6] ↔ [7]

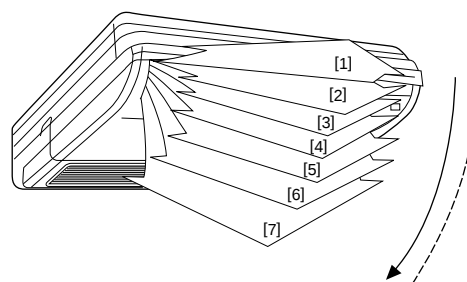
Types of Air flow Direction Setting:

[1],[2],[3],[4] : During Cooling/Dry Modes
[5],[6],[7] : During Heating mode

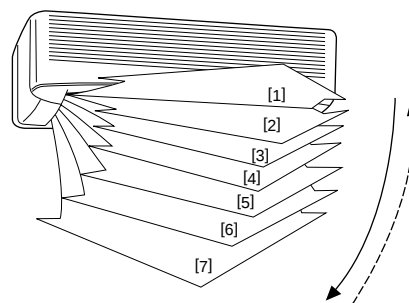
The Remote Control Unit's display does not change.



COMPACT SII TYPE



UNIVERSAL TYPE



WALL MOUNTED TYPE

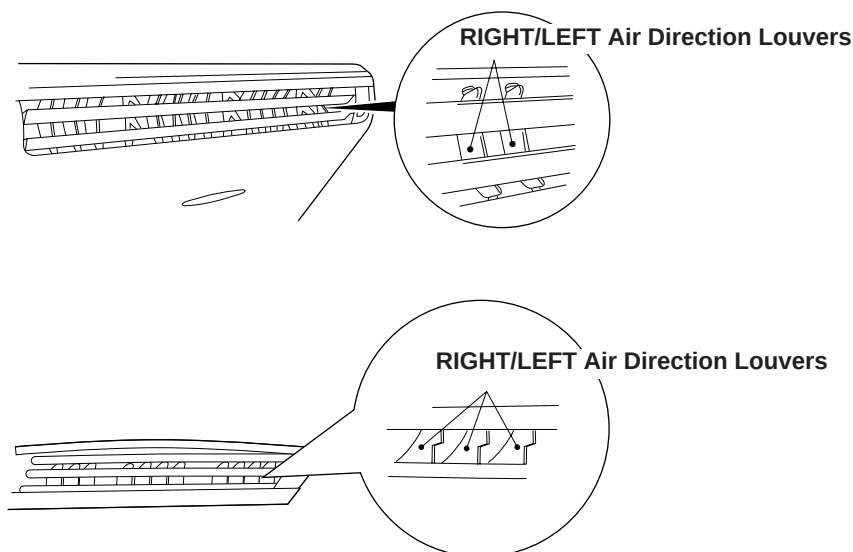
- Use the air direction adjustments within the ranges shown above.
- The vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.
 - During Cooling/Dry mode : Horizontal flow [1]
 - During Heating mode : Downward flow [7]
- During AUTO mode operation, for the first minute after beginning operation, airflow will be horizontal [1]; the air direction cannot be adjusted during this period.

1.3.16 HORIZONTAL AIR DIRECTION ADJUSTMENT

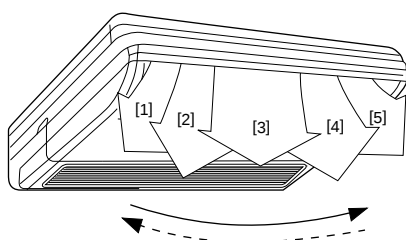
Each time the button is pressed, the air direction range will change as follows:

[1] ↔ [2] ↔ [3] ↔ [4] ↔ [5]

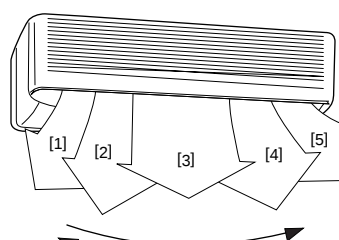
The Remote Controller's display does not change.



- Use the air direction adjustments within the ranges shown above.



UNIVERSAL TYPE



WALL MOUNTED TYPE

1.3.17 VERTICAL AIRFLOW SWING OPERATION

- The range of swing is relative to the currently set airflow direction.

Air flow direction set	Range of swing		
	SII Series	MII Series	AS&AB Series
[1]	[1] to [2]	[1] to [3]	[1] to [3]
[2]	[1] to [3]	[1] to [4]	[1] to [4]
[3]	[2] to [3]	[2] to [5]	[2] to [5]
[4]	[4] to [5]	[3] to [6]	[3] to [6]
[5]	[4] to [6]	[4] to [7]	[4] to [7]
[6]	[5] to [6]	[5] to [7]	[5] to [7]
[7]	—	[6] to [7]	[1] to [7] (All range)

- If the swing range is not as desired, use the Remote Control Unit's AIR FLOW DIRECTION VERTICAL SET button to change the range of swing.
- The SWING Operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speeds.
- During use of the Cooling and Dry modes, do not set the Air UP/DOWN Direction Flaps, in the Heating range ([5] to [7]) for long periods of time, since water vapor may condense near the outlet louvers and drops of water may drip from the air conditioner.

1.3.18 HORIZONTAL AIRFLOW SWING OPERATION

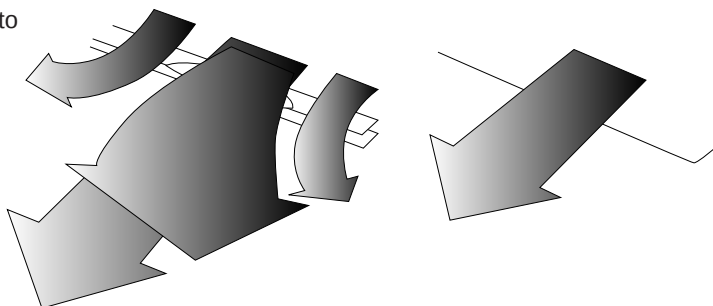
- The range of swing is relative to the currently set airflow direction.

Air flow direction set	Range of swing
[1]	[1] to [5] (All range)
[2]	[1] to [3]
[3]	[2] to [4]
[4]	[3] to [5]
[5]	[1] to [5] (All range)

- If the swing range is not as desired, use the Remote Control Unit's AIR FLOW DIRECTION HORIZONTAL SET button to change the range of swing.
- The SWING Operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speeds.

1.3.19 SUPER VANE

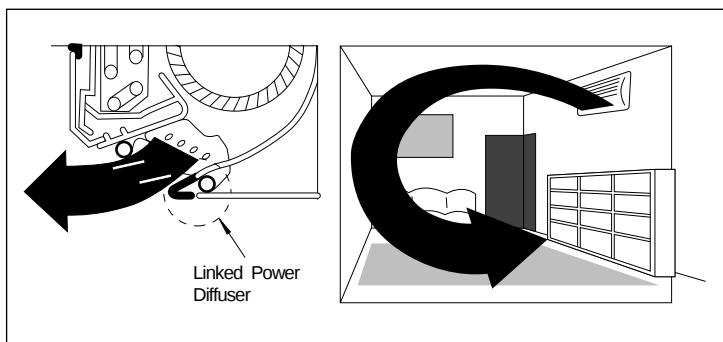
Our newly developed "Super Vane" configuration boosts air flow by sending cool air quickly to every corner of the room.



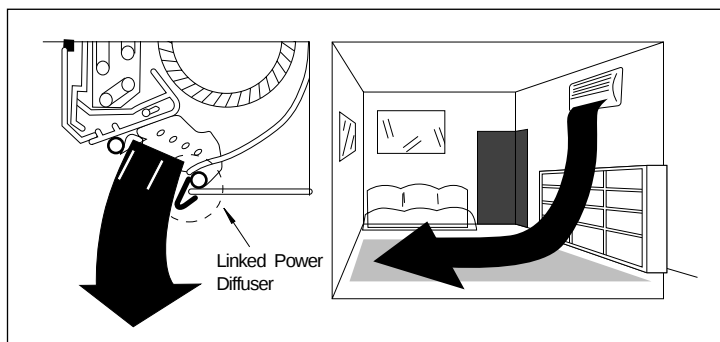
1.3.20 LINKED POWER DIFFUSER

By means of our new design of "Power Diffuser" the floor level heating efficiency is considerably improved. By movement of the up/down direction panels in conjunction with the power diffuser greater comfort can be obtained.

● Horizontal Cooling Air Flow



● Vertical Heating Air Flow



1.3.21 AUTOMATIC SHUT FLAPS

- The upper and lower flaps shut automatically so that dust or foreign matter does not enter the inside of the unit, while the unit halts.
- The unit looks simple on the outside, as the blow-out section of the air shuts.

1.3.22 COOLING OPERATION EVEN AT A LOW OUTDOOR TEMPERATURE

Cooling operation is possible down to 0°C.

1.3.23 MOLD PREVENTION FILTER

The air filter are specially treated with a mold inhibiting compound.
This stops mold and mildew from forming inside the indoor unit.

1.3.24 AIR PURIFYING FILTER (OPTIONAL)

The electrostatic filter removes dust and minute particles to purify the air in a room.
This is perfect for smokers and for people with allergies during pollen season.

1.3.25 AUTO RESTART

Auto restart function makes the unit to restart automatically in the same operating mode as before after recovery from stoppage due to a temporary power failure.

1.3.26 QUIET

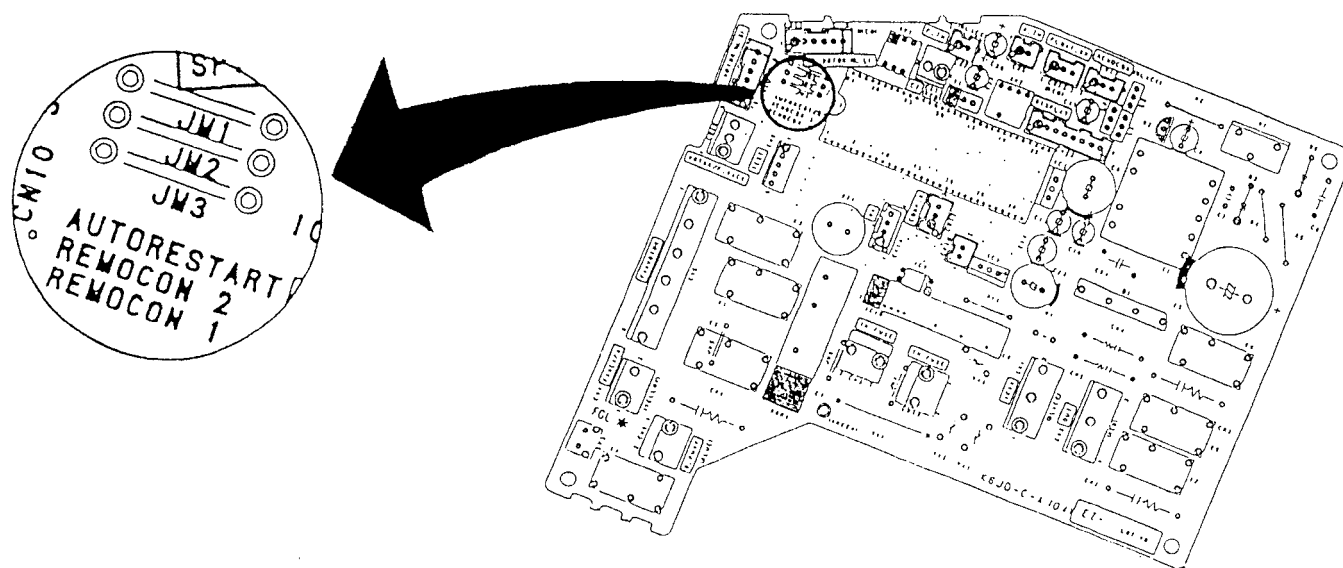
The large-diameter cross fan can send a larger volume of air while turning more slowly than before. Through the air suction from the top, smooth air flow and center mount structure, ultimate quietness has been realized while maintaining the ample air volume and speed.

1.4 PRINTED WIRING BOARD SETTINGS

<APPLICATION MODEL>

- ※ AS*20A, 20R, 24A, 24R, 30A, 30R
- ・ AB*14A, 14R, 18A, 18R, 24A, 24R

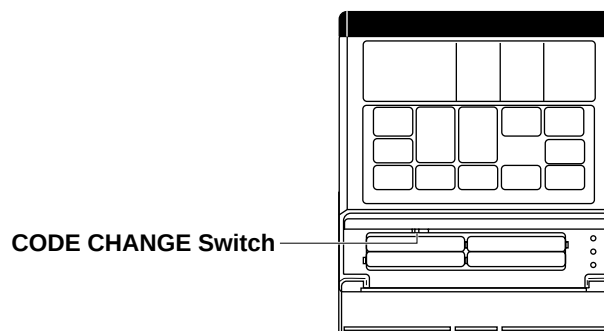
1.4.1 AUTO-RESTART & REMOTE CONTROLLER CODE



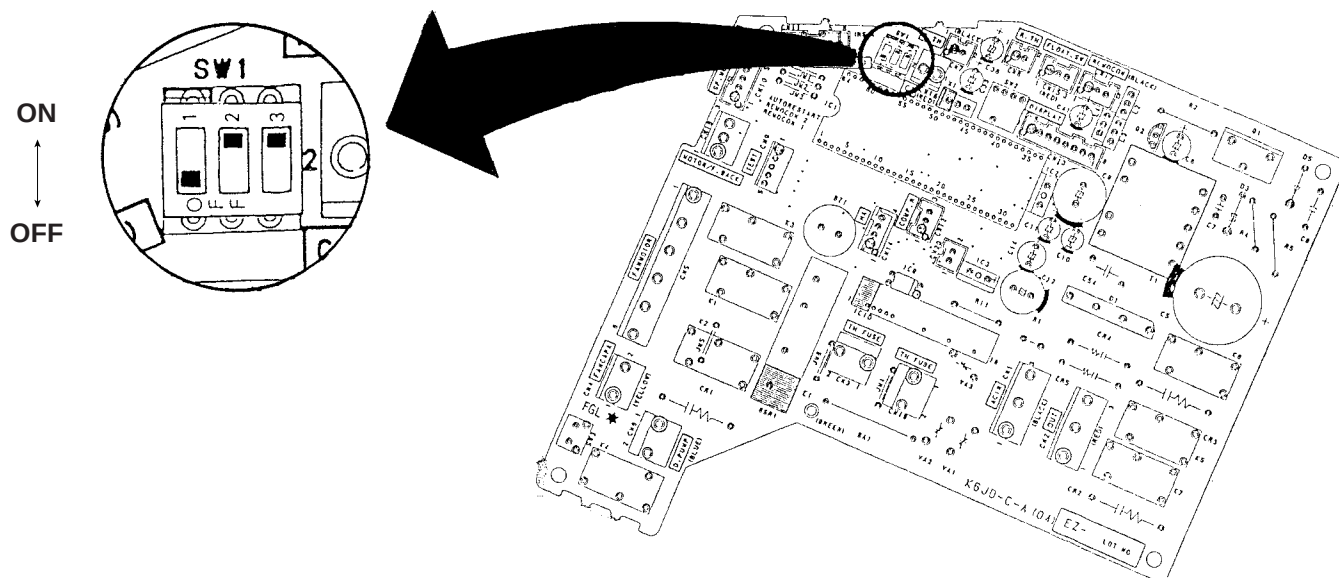
	JM1
Auto - Restart Enable (default)	Disconnect
Auto - Restart Disable	Connect

☆	JM2	JM3
Remote - Controller Code-A (default)	Connect	Connect
Remote - Controller Code-B	Disconnect	Connect
Remote - Controller Code-C	Connect	Disconnect
Remote - Controller Code-D	Disconnect	Disconnect

- ☆ Confirm the remote controller's "CODE CHANGE Switch" selection and printed wiring board setting.
- ・ If these are not confirmed, the remote controller cannot be operated for the air conditioner.



1.4.2 COMPENSATION (HEATING CORRECTION COEFFICIENT)



Compensation	DIP2	DIP3	Application (AB model only)
-2°C	ON	OFF	for floor console
±0°C	OFF	ON	
+2°C	OFF	OFF	for under ceiling
+4°C(default)	ON	ON	

☆ The function of DIP1 does not work on AS and AB models.
Turn the DIP1 off anytime.

2. SPECIFICATIONS

2.1 COMPACT SII & MII SERIES (AS * 7A, 7R, 9A, 9R, 12A, 12R)

2.1.1 AS * 7A / AO * 7A, AS * 7R / AO * 7R

MODEL				WALL MOUNTED TYPE		COMPACT TYPE SII-CHASSIS (7,000 BTU/h)		
				Indoor unit	AS * 7A		AS * 7R	
				Outdoor unit	AO * 7A		AO * 7R	
Power Supply	[V]			220 - 240		220 - 240		
Phase-Cycles	ϕ -[Hz]			1 ϕ - 50		1 ϕ - 50		
Capacity	Cooling	[kW]		1.95 - 1.95		2.05 - 2.05		
	Cooling	[BTU/h]		6,700 - 6,700		7,000 - 7,000		
	Heating	[kW]		—		2.30 - 2.30		
	Heating	[BTU/h]		—		7,900 - 7,900		
Electrical Specifications	Current	Cooling	[A]	2.8 - 2.9		3.3 - 3.3		
		Heating	[A]	—		3.1 - 3.1		
	Input	Cooling	[kW]	0.590 - 0.635		0.70 - 0.73		
		Heating	[kW]	—		0.65 - 0.69		
	Starting Current		[A]	19		19		
EER	Cooling	[kW/kW]		3.31 - 3.07		2.93 - 2.81		
	Heating	[kW/kW]		—		3.54 - 3.33		
Moisture Removal		[ℓ /hr] (Pints/hr)		0.7 (1.5)		0.8 (1.8)		
Air Circulation (Fan)	Indoor	Hi	[m³/h]	340		350		
			[C.F.M]	200		205		
		Med	[m³/h]	315		320		
			[C.F.M]	185		190		
		Low	[m³/h]	290		290		
			[C.F.M]	170		170		
	Outdoor		[m³/h]		1,330 - 1,400		1,330 - 1,400	
Operation Sound (Cool/Heat)	Indoor	Hi	[dB]	37.0 / —		37.0 / 39.0		
		Med	[dB]	35.0 / —		35.0 / 37.0		
		Low	[dB]	33.0 / —		33.0 / 34.0		
	Outdoor		[dB]		42 - 43 / —		43 - 44 / 45 - 46	
Compressor	Type		Rotary		Rotary			
	Capacity [kW]		1.93		2.29			
	Output [W]		600		700			
Dimensions (H X W X D)	Net	Indoor	[mm]	248 X 808 X 163		248 X 808 X 163		
		Outdoor	[mm]	535 X 650 X 250		535 X 650 X 250		
	Gross	Indoor	[mm]	248 X 852 X 302		248 X 852 X 302		
		Outdoor	[mm]	590 X 725 X 330		590 X 725 X 330		
Weight	Net	Indoor	[kg]	7.5		7.5		
		Outdoor	[kg]	24		25		
	Gross	Indoor	[kg]	10.0		10.0		
		Outdoor	[kg]	27		28		
Pipe Size CD	Liquid	Indoor	[mm]	6.35		6.35		
	Gross	Outdoor	[mm]	9.52		9.52		
Connection Pipe Set				UTP-5FDG, UTP-7FDG		UTP-5FKG, UTP-7FKG		
Connection Method				Flare				
Color				White				

※ Permissible range of outdoor temperature — Cooling : 18°C ~ 43°C
 Heating : -5°C ~ 21°C

2.1.2 AS * 9A, 9R, 12A, 12R / AO * 9A, 9R, 12A, 12R

MODEL				WALL MOUNTED TYPE COMPACT TYPE MII-CHASSIS (9,000/12,000 BTU/h)					
				Indoor unit		AS * 9A	AS * 9R	AS * 12A	AS * 12R
				Outdoor unit		AO * 9A	AO * 9R	AO * 12A	AO * 12R
Power Supply	[V]			220 - 240	220 - 240	220 - 240	220 - 240		
Phase-Cycles	ϕ -[Hz]			1 ϕ - 50	1 ϕ - 50	1 ϕ - 50	1 ϕ - 50		
Capacity	Cooling	[kW]		2.70 - 2.75	2.70 - 2.75	3.45 - 3.50	3.45 - 3.50		
	Cooling	[BTU/h]		92,00 - 9,400	9,200 - 9,400	11,800 - 12,000	11,800 - 12,000		
	Heating	[kW]		—	3.30 - 3.35	—	4.00 - 4.10		
	Heating	[BTU/h]		—	11,300 - 11,400	—	13,600 - 14,000		
Electrical Specifications	Current	Cooling	[A]	4.6 - 4.7	4.6 - 4.5	6.0 - 6.0	5.8 - 5.9		
		Heating	[A]	—	4.2 - 4.1	—	5.7 - 5.9		
	Input	Cooling	[kW]	0.97 - 1.03	0.98 - 1.03	1.255 - 1.315	1.22 - 1.27		
		Heating	[kW]	—	0.89 - 0.94	—	1.19 - 1.27		
	Starting Current		[A]	21	21	35	35		
EER	Cooling	[kW/kW]		2.78 - 2.67	2.76 - 2.67	2.75 - 2.66	2.83 - 2.76		
	Heating	[kW/kW]		—	3.71 - 3.56	—	3.36 - 3.23		
Moisture Removal		[ℓ/hr] (Pints/hr)		1.3 (2.9)	1.3 (2.9)	1.8 (4.0)	1.8 (4.0)		
Air Circulation (Cool/Heat)	Indoor	Hi	[m³/h]	430 - 465	Note : See the list shown below.	475 - 500	Note : See the list shown below.		
			[C.F.M]	253 - 274		280 - 294			
		Med	[m³/h]	365 - 415		420 - 460			
			[C.F.M]	215 - 244		247 - 271			
		Low	[m³/h]	320 - 375		370 - 415			
			[C.F.M]	188 - 221		218 - 244			
	Outdoor		[m³/h]		1,520 - 1,630	1,555 - 1,670	1,555 - 1,670	1,365 - 1,475	
Operation Sound (Cool/Heat)	Indoor	Hi	[dB]	38 - 39	39 - 39 / 39 - 39	39 - 40	40 - 40 / 39 - 39		
		Med	[dB]	36 - 37	37 - 37 / 36 - 36	37 - 38	39 - 39 / 36 - 36		
		Low	[dB]	34 - 35	36 - 36 / 31 - 31	35 - 37	37 - 37 / 31 - 31		
	Outdoor		[dB]		43 - 44	44 - 45 / 45 - 46	44 - 45	45 - 46 / 46 - 47	
Compressor	Type		Rotary		Rotary	Rotary	Rotary		
	Capacity		[kW]		3.005 / 3.035	3.045 / 3.070	3.895 / 3.942	3.895 / 3.942	
	Output		[W]		850	950	1,100	1,100	
Dimensions (H X W X D)	Net	Indoor	[mm]	260 X 815 X 168	260 X 815 X 168	260 X 815 X 168	260 X 815 X 168		
		Outdoor	[mm]	535 X 695 X 250	535 X 695 X 250	535 X 695 X 250	535 X 665 X 250		
	Gross	Indoor	[mm]	248 X 866 X 302	248 X 866 X 302	248 X 866 X 302	248 X 866 X 302		
		Outdoor	[mm]	600 X 785 X 320	605 X 785 X 320	600 X 785 X 320	600 X 785 X 320		
Weight	Net	Indoor	[kg]	8	8	8	8		
		Outdoor	[kg]	27	30	30	34		
	Gross	Indoor	[kg]	10	10	10	10		
		Outdoor	[kg]	30	33	33	37		
Pipe Size CD	Liquid	Indoor	[mm]	6.35	6.35	6.35	6.35		
	Gross	Outdoor	[mm]	9.52	9.52	12.7	12.7		
Connection Pipe Set				UTP-5FDG, UTP-7FDG	UTP-5FKG, UTP-7FKG	UTP-5FEG, UTP-7FEG	UTP-5FLG, UTP-7FLG		
Connection Method				Flare					
Color				White					

※ Permissible range of outdoor temperature — Cooling : 18°C~43°C
 — Heating : -5°C~21°C

Air Circulation (Cool/Heat)	Models			AS * 9R		AS * 12R	
	Fan Guard			With	Without	With	Without
	Indoor	Hi	[m³/h]	480 - 480 / 495 - 495	495 - 495 / 495 - 495	495 - 495 / 495 - 495	510 - 510 / 510 - 510
			[C.F.M]	282 - 282 / 291 - 291	291 - 291 / 291 - 291	291 - 291 / 291 - 291	300 - 300 / 300 - 300
		Med	[m³/h]	445 - 445 / 430 - 430	460 - 460 / 440 - 440	465 - 465 / 430 - 430	475 - 475 / 440 - 440
			[C.F.M]	262 - 262 / 253 - 253	271 - 271 / 259 - 259	274 - 274 / 253 - 253	280 - 280 / 259 - 259
	Low		[m³/h]	420 - 420 / 375 - 375	425 - 425 / 380 - 380	435 - 435 / 375 - 375	450 - 450 / 380 - 380
			[C.F.M]	247 - 247 / 221 - 221	250 - 250 / 224 - 224	256 - 256 / 221 - 221	265 - 265 / 224 - 224

2.1.3 ASP9A, 9R, 12A, 12R / AOP9A, 9R, 12A, 12R

MODEL				WALL MOUNTED TYPE COMPACT TYPE MII-CHASSIS											
				Indoor unit		ASP9ASB-W		ASP9RSB-W		ASP12ASB-W		ASP12RAB-W			
				Outdoor unit		AOP9ANB		AOP9RSB		AOP12ASB		AOP12RSB			
Power Supply				[V]		220		220		220		220			
Phase-Cycles				ϕ -[Hz]		1 ϕ - 50		1 ϕ - 50		1 ϕ - 50		1 ϕ - 50			
Capacity		Cooling		[kW]		2.70		2.65		3.35		3.30			
		Cooling		[BTU/h]		9,200		9,000		11,400		11,300			
		Heating		[kW]		—		3.30		—		4.00			
		Heating		[BTU/h]		—		11,300		—		13,600			
Electrical Specifications		Current		Cooling		[A]		4.9		4.6		6.0		5.8	
				Heating		[A]		—		4.2		—		5.8	
		Input		Cooling		[kW]		1.03		0.98		1.255		1.21	
				Heating		[kW]		—		0.89		—		1.21	
		Starting Current				[A]		21		21		35		35	
EER		Cooling		[kW/kW]		2.62		2.70		2.67		2.73			
		Heating		[kW/kW]		—		3.71		—		3.31			
Moisture Removal				[ℓ/hr]		(Pints/hr)		1.3(2.9)		1.3(2.9)		1.8(4.0)		1.8(4.0)	
Air Circulation (Fan)		Indoor		Hi		[m³/h]		430		480 / 495		475		495 / 495	
						[C.F.M]		253		282 / 291		280		291 / 291	
				Med		[m³/h]		370		445 / 430		425		465 / 430	
						[C.F.M]		218		262 / 253		250		274 / 253	
				Low		[m³/h]		320		420 / 375		380		435 / 375	
						[C.F.M]		188		247 / 221		224		256 / 221	
		Outdoor						[m³/h]		1,520		1,555 / 1,555		1,550	
Operation Sound (Cool)		Indoor		Hi		[dB]		38		39 / 39		39		40 / 39	
				Med		[dB]		36		37 / 36		37		39 / 36	
				Low		[dB]		34		36 / 31		35		37 / 31	
		Outdoor						[dB]		43		44 / 45		44	
Compressor		Type				Rotary		Rotary		Rotary		Rotary			
		Capacity		[kW]		3.045		3.045		3.895		3.895			
		Output		[W]		850		950		1,100		1,100			
Dimensions (H X W X D)		Net		Indoor		[mm]		260 X 815 X 168		260 X 815 X 168		260 X 815 X 168		260 X 815 X 168	
				Outdoor		[mm]		535 X 695 X 250		535 X 695 X 250		535 X 695 X 250		535 X 695 X 250	
		Gross		Indoor		[mm]		248 X 866 X 302		248 X 866 X 302		248 X 866 X 302		248 X 866 X 302	
				Outdoor		[mm]		605 X 785 X 320		605 X 785 X 320		605 X 785 X 320		605 X 785 X 320	
Weight		Net		Indoor		[kg]		8		8		8		8	
				Outdoor		[kg]		27		30		30		34	
		Gross		Indoor		[kg]		10		10		10		10	
				Outdoor		[kg]		30		33		33		37	
Pipe Size CD		Liquid		Indoor		[mm]		6.35		6.35		6.35		6.35	
		Gross		Outdoor		[mm]		9.52		9.52		12.7		12.7	
Connection Pipe Set								UTP-5FDG, UTP-7FDG		UTP-5FKG, UTP-7FKG		UTP-5FEG, UTP-7FEG		UTP-5FLG, UTP-7FLG	
Connection Method								Flare							
Color								White							

※ Permissible range of outdoor temperature — Cooling : 18°C~43°C
 — Heating : -5°C~21°C

2.2 WALL MOUNTED LARGE AS-SERIES (AS * 20A, 20R, 24A, 24R, 30A, 30R)

2.2.1 AS □ 20A, 20R, 24A, 24R, 30A, 30R

MODEL				WALL MOUNTED TYPE (WIRELESS)								
				AS □ 20A	AS □ 20R	AS □ 24A	AS □ 24R	AS □ 30A	AS □ 30R			
Capacity	Cooling	kW		5.55 - 5.70	5.55 - 5.70	6.75 - 6.85	6.70 - 6.80	8.05 - 8.20	7.80 - 8.00			
		BTU/h		19,000 - 19,500	19,000 - 19,500	23,000 - 23,400	22,900 - 23,200	27,500 - 28,000	26,600 - 27,300			
	Heating	kW		—	5.65 - 5.80	—	7.60 - 7.70	—	8.55 - 8.80			
		BTU/h		—	19,300 - 19,800	—	26,000 - 26,300	—	29,200 - 30,000			
Power supply				1 ϕ - 50Hz / 220-240V								
Total input	Cooling	kW		2.10 - 2.20	2.10 - 2.20	2.52 - 2.64	2.57 - 2.67	2.84 - 2.96	2.84 - 2.96			
	Heating	kW		—	1.80 - 1.90	—	2.41 - 2.50	—	2.80 - 2.90			
Total current	Cooling	A		9.9 - 9.3	9.9 - 9.3	12.0 - 12.4	12.2 - 12.6	14.3 - 14.8	14.3 - 14.8			
	Heating	A		—	8.5 - 8.0	—	11.5 - 12.0	—	14.0 - 14.4			
EER	Cooling	kW/kW		2.64 - 2.59	2.64 - 2.59	2.68 - 2.59	2.61 - 2.55	2.83 - 2.77	2.75 - 2.70			
	Heating	kW/kW		—	3.14 - 3.05	—	3.15 - 3.08	—	3.05 - 3.03			
Starting current		A		50	50	61	61	82	82			
Indoor unit	Fan speed	Hi	r.p.m.	1,060 - 1,110	1,060 - 1,110	1,220 - 1,290	1,220 - 1,290	1,280 - 1,340	1,280 - 1,340			
		Med		890 - 970	890 - 970	1,050 - 1,130	1,050 - 1,130	1,120 - 1,200	1,120 - 1,200			
		Low		740 - 810	740 - 810	890 - 970	890 - 970	970 - 1,050	970 - 1,050			
	Air circulation	Hi	m³/h	820 - 860	820 - 860	940 - 1,000	940 - 1,000	1,000 - 1,060	1,000 - 1,060			
		Med		690 - 740	690 - 740	810 - 870	810 - 870	860 - 930	860 - 930			
		Low		570 - 620	570 - 620	690 - 740	690 - 740	730 - 810	730 - 810			
	Noise level (Sound pressure)	Hi	dB(A)	41 - 42	41 - 42	45 - 46	45 - 46	47 - 48	47 - 48			
		Med		37 - 38	37 - 38	41 - 42	41 - 42	44 - 45	44 - 45			
		Low		33 - 34	33 - 34	37 - 38	37 - 38	39 - 40	39 - 40			
	Heat exchanger	Type		Plate fin coil								
		Face area	m²	0.274	0.274	0.274	0.274	0.274	0.274			
	Fin		inch	17	17	17	17	17	17			
	Fan type x Q'ty				Cross flow fan x 2							
	Fan motor output		W		20	20	27	27	32	32		
	Operation control				Remote control							
	Dimensions	H	mm(inch)		320 (12 - 5/8)							
		W	mm(inch)		1,250 (49 - 3/16)							
D		mm(inch)		195 (7 - 11/16)								
Weight		Net/Gross		18 / 26								
Outdoor unit	Fan speed	Hi	r.p.m.	690 - 735	690 - 735	690 - 735	690 - 735	730 - 790	730 - 790			
		Low	r.p.m.	—	250 - 280	—	250 - 280	410 - 450	410 - 450			
	Air circulation	Hi	m³/h	2,430 - 2,590	2,430 - 2,590	2,430 - 2,590	2,430 - 2,590	5,500 - 5,900	5,500 - 5,900			
	Noise level	dB(A)		55 - 56	55 - 56	55 - 56	55 - 56	57 - 58	57 - 58			
	Heat exchanger	Type		Plate fin coil								
		Face area	m²	0.563	0.549	0.549	0.549	1.112	1.112			
	Fin		inch	17	14	14	14	17	17			
	Fan type x Q'ty				Propeller x 1				Propeller x 2			
	Fan motor output		W		60	60	60	60	63 x 2	63 x 2		
	Compressor type				Hermetic (Recipro)							
	Motor output	W		1,500				2,000		2,700		
		Protection		Internal protector (OCR), High pressure relief valve								
	Dimensions	H	mm(inch)		643 (25 - 5/16)			643 (25 - 5/16)		1,152 (45 - 3/8)		
		W	mm(inch)		840 (33 - 1/16)			840 (33 - 1/16)		940 (37)		
		D	mm(inch)		336 (13 - 1/4)			336 (13 - 1/4)		370 (14 - 9/16)		
	Weight		Net/Gross		kg	66 / 74	68 / 76	67 / 75	68 / 76	94 / 108	96 / 110	
Refrigerant circuit	Operation mode			Cooling	Cooling	Heating	Cooling	Cooling	Heating	Cooling	Cooling	Heating
	Disch. pressure	kg/cm²G		19.7 - 19.5	19.9 - 19.7	17.0 - 16.9	20.1 - 19.8	20.1 - 19.8	20.3 - 20.3	17.9 - 17.8	17.6 - 17.5	19.0 - 19.0
	Suct. pressure	kg/cm²G		5.0 - 5.0	5.2 - 5.2	4.2 - 4.2	4.7 - 4.7	4.8 - 4.8	3.8 - 3.8	4.6 - 4.6	4.7 - 4.7	4.3 - 4.3
	Discharge temp.	°C		87 - 89	95 - 97	82 - 85	91 - 94	98 - 101	90 - 95	86 - 88	90 - 92	89 - 90
	Condensing temp.	°C		51.5 - 51	51.5 - 51	45 - 51	51.5 - 51	51.5 - 51	50 - 50	47 - 47	46.5 - 46.5	48 - 48
	Suction temp.	°C		6 — 6	7 — 7	1 — -1	4 — 4	9 — 11	-2 — -2	7 — 8	7 — 8	-2 — -2
	Refr. pipe length	m		5								
	Disch. air temp.	°C		13.5 - 13.5	13.5 - 13.5	40 - 40	12.5 - 12.5	12.5 - 12.5	43 - 43	12 - 12	12 - 12	44 - 44
Condition	Indoor entering air temp.	Cool	DB/WB	27°C / 19°C								
		Heat	DB/WB	20°C / 15°C								
	Outdoor entering air temp.	Cool	DB/WB	35°C / 24°C								
		Heat	DB/WB	7°C / 6°C								
Piping	Refrigerant charge			kg(oz)	1.24 (43.7)	1.80 (63.5)	1.95 (68.8)	2.07 (73.0)	1.80 (63.5)	1.70 (60.0)		
	Pipe size (O.D.)	Liquid	mm(inch)	9.52 (3/8)								
		Gas	mm(inch)	15.88 (5/8)								
	Connection method				Flare							
	Between	Height	m		8			15			15	
Pipe length		m		20			20			30		

Note : In the above square, put the letter T, Y, or G by a destination.

2.2.2 ASS20A, 20R, 24A, 24R, 30A, 30R

MODEL				WALL MOUNTED TYPE (WIRELSS)														
				ASS20A		ASS20R		ASS24A		ASS24R		ASS30A		ASS30R				
Capacity	Cooling	W(SSA)		4,500		4,500		5,700		5,700		6,700		6,700				
		BTU/h		19,500		19,500		24,000		24,000		30,000		30,000				
	Heating	W		—		5,300		—		7,100		—		9,000				
		BTU/h		—		19,800		—		24,200		—		30,800				
Power supply				1 ϕ - 60Hz / 220V														
Total input	Cooling	W		2,400		2,400		3,030		3,100		3,650		3,650				
	Heating	W		—		2,000		—		2,550		—		3,150				
Total current	Cooling	A		11.1		11.1		13.9		14.3		17.0		17.0				
	Heating	A		—		9.2		—		12.0		—		15.0				
EER	Cooling	W/W		1.88		1.88		1.88		1.84		1.84		1.84				
	Heating	W/W		—		2.65		—		2.78		—		2.86				
Starting current		A		53		53		66		66		67		67				
Indoor unit	Fan speed	Hi	r.p.m.	1,095		1,095		1,275		1,275		1,300		1,300				
		Med		950		950		1,120		1,120		1,150		1,150				
		Low		790		790		945		945		990		990				
	Air circulation	Hi	m³/h	860		860		1,000		1,000		1,060		1,060				
		Med		740		740		870		870		900		900				
		Low		620		620		740		740		780		780				
	Noise level (Sound pressure)	Hi	dB(A)	42		42		46		46		48		48				
		Med		38		38		42		42		45		45				
		Low		34		34		38		38		40		40				
	Heat exch-anger	Type		Plate fin coil														
		Face area	m²	0.274														
			Fin	inch	17													
	Fan type x Q'ty		Cross flow fan x 2															
	Fan motor output		W		20		20		27		27		32		32			
	Operation control				Remote control													
	Dimensions	H	mm(inch)		320 (12 - 5/8)													
		W	mm(inch)		1,250 (49 - 3/16)													
		D	mm(inch)		195 (7 - 11/16)													
	Weight		Net/Gross		kg		18 / 16											
	Outdoor unit	Fan speed	Hi	r.p.m.	735		735		735		735		620		620			
Low			r.p.m.	—		—		—		—		—		—				
Air circulation		Hi	m³/h	2,590		2,590		2,590		2,590		5,000		5,000				
Noise level				dB(A)		56		56		56		56		57		58		
Heat exch-anger		Type		Plate fin coil														
		Face area	m²	0.563		0.549		0.549		0.549		1.112		1.112				
		Fin	inch	17		14		14		17		17		17				
Fan type x Q'ty		Propeller x 1												Propeller x 2				
Fan motor output		W		60		60		60		60		63 x 2		63 x 2				
Compressor type				Hermetic (Recipro)														
		Motor output	W		1,500				1,900				3,000					
			Protection		Internal protector (OCR), High pressure relief valve													
Dimensions		H	mm(inch)		643 (25 - 5/16)								1,152 (45 - 3/8)					
		W	mm(inch)		840 (33 - 1/16)								940 (37)					
		D	mm(inch)		336 (13 - 1/4)								370 (14 - 9/16)					
Weight		Net/Gross	kg		66 / 74		68 / 76		67 / 75		68 / 76		94 / 108		96 / 110			
Refrige-rant circuit	Operation mode			Cooling		Cooling : Heating		Cooling		Cooling : Heating		Cooling		Cooling : Heating				
	Disch. pressure	kg/cm²G		25.1		24.9 : 17.4		25.2		25.4 : 19.6		23.0		23.2 : 19.8				
	Suct. pressure	kg/cm²G		5.3		5.4 : 4.3		5.3		5.4 : 3.8		4.9		4.8 : 3.7				
	Discharge temp.	°C		88		96 : 78		97		108 : 81		88		99 : 90				
	Condensing temp.	°C		61		60.5 : 45.5		61.5		62.5 : 49.5		57		58 : 50				
	Suction temp.	°C		7		7 : -2		7		7 : -2		5		4 : -3				
	Refr. pipe length	m		5														
	Disch. air temp.	°C		14.5		14.5 : 40		14		14 : 42		13.5		13.5 : 44				
Condition	Indoor entering air temp.	Cool	DB/WB	29°C / 19°C														
		Heat	DB/WB	20°C / (15)°C														
	Ourdoor entering air temp.	Cool	DB/WB	46°C / 24°C														
		Heat	DB/WB	7°C / 6°C														
Piping	Refrigerant charge		kg(oz)	1.29 (45.5)		1.69 (59.6)		1.75 (61.7)		2.07 (73.0)		1.80 (63.5)		1.80 (63.5)				
	Pipe size (O.D.)	Liquid	mm(inch)	9.52 (3/8)														
		Gas	mm(inch)	15.88 (5/8)														
	Connection method			Flare														
	Between	Height	m	8				8				15						
		Pipe length	m	20				20				30						

2.2.3 ACS-7502, ACS-7602

MODEL				WALL MOUNTED TYPE (WIRELESS)				
				ACS-7502		ACS-7602		
Capacity	Cooling	kcal/h		5,000		6,000		
		BTU/h		19,850		23,820		
	Heating	kcal/h		—		—		
		BTU/h		—		—		
Power supply				1 ϕ - 60Hz / 220V				
Total input	Cooling	W		2,280		2,600		
	Heating	W		—		—		
Total current	Cooling	A		10.6		12.0		
	Heating	A		—		—		
EER	Cooling	kcal/hW		2.19		2.31		
	Heating	kcal/hW		—		—		
Starting current		A		55		65		
Indoor unit	Fan speed	Hi	r.p.m.	1,095		1,275		
		Med		950		1,120		
		Low		790		945		
	Air circulation	Hi	m³/h	860		1,000		
		Med		740		870		
		Low		620		740		
	Noise level (Sound pressure)	Hi	dB(A)	42		46		
		Med		38		42		
		Low		34		38		
	Heat exch-anger	Type		Plate fin coil				
		Face area	m²	0.274		0.274		
		Fin	inch	17		17		
	Fan type x Q'ty		Cross flow fan x 2					
	Fan motor output		W		20			
	Operation control		Remote control					
	Dimensions	H	mm(inch)		320(12-5/8)			
		W	mm(inch)		1,250(49-3/16)			
		D	mm(inch)		195(7-11/16)			
	Weight	Net/Gross	kg		18/26			
	Outdoor unit	Fan speed	Hi	r.p.m.	735			
Low			r.p.m.	—				
Air circulation		Hi	m³/h	2,590				
Noise level		dB(A)		55		56		
Heat exch-anger		Type		Plate fin coil				
		Face area	m²	0.549				
		Fin	inch	14				
Fan type x Q'ty		Propeller x 1						
Fan motor output		W		60				
Compressor type		Hermetic (Rotary)				Hermetic (Recipro)		
		Motor output	W		1,500		2,385	
		Protection		Internal protector (OCR), High pressure relief valve				
Dimensions		H	mm(inch)		643(25-5/16)			
		W	mm(inch)		840(33-1/16)			
		D	mm(inch)		336(13-1/14)			
Weight		Net/Gross	kg		66/74		67/75	
Refrige-rant circuit	Operation mode		Cooling					
	Disch. pressure	kg/cm²G		18.4		19.8		
	Suct. pressure	kg/cm²G		4.9		4.9		
	Discharge temp.	°C		93		90		
	Condensing temp.	°C		48		51		
	Suction temp.	°C		7				
	Refr. pipe length	m		5				
	Disch. air temp.	°C		12				
Condition	Indoor entering air temp.	Cool	DB/WB	27.0°C / 19.5°C				
		Heat	DB/WB	20.0°C /(15.0)°C				
	Ourdoor entering air temp.	Cool	DB/WB	35.0°C / 24.0°C				
		Heat	DB/WB	7.0°C / 6.0°C				
Piping	Refrigerant charger		kg(oz)	1.87(66.0)		2.02(71.3)		
	Pipe size (O.D.)	Liquid	mm(inch)	9.52(3/8)				
		Gas	mm(inch)	15.88(5/8)				
	Connection method			Flare				
	Between	Height	m	8				
Pipe length		m	20					

2.3 UNIVERSAL AB-SERIES (AB * 14A, 14R, 18A, 18R, 24A, 24R)

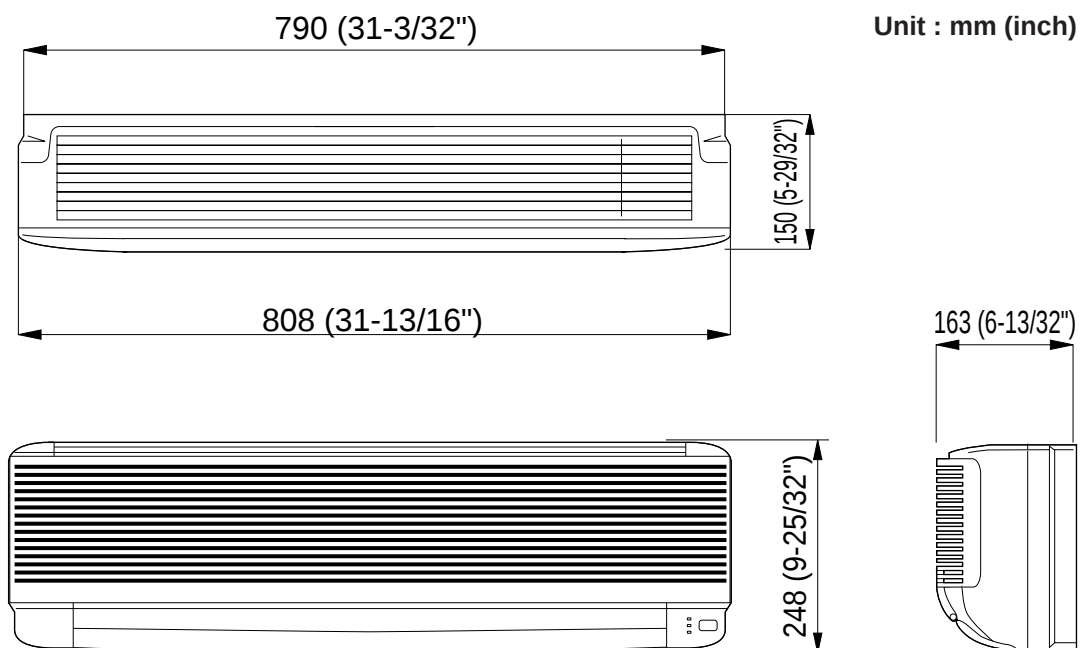
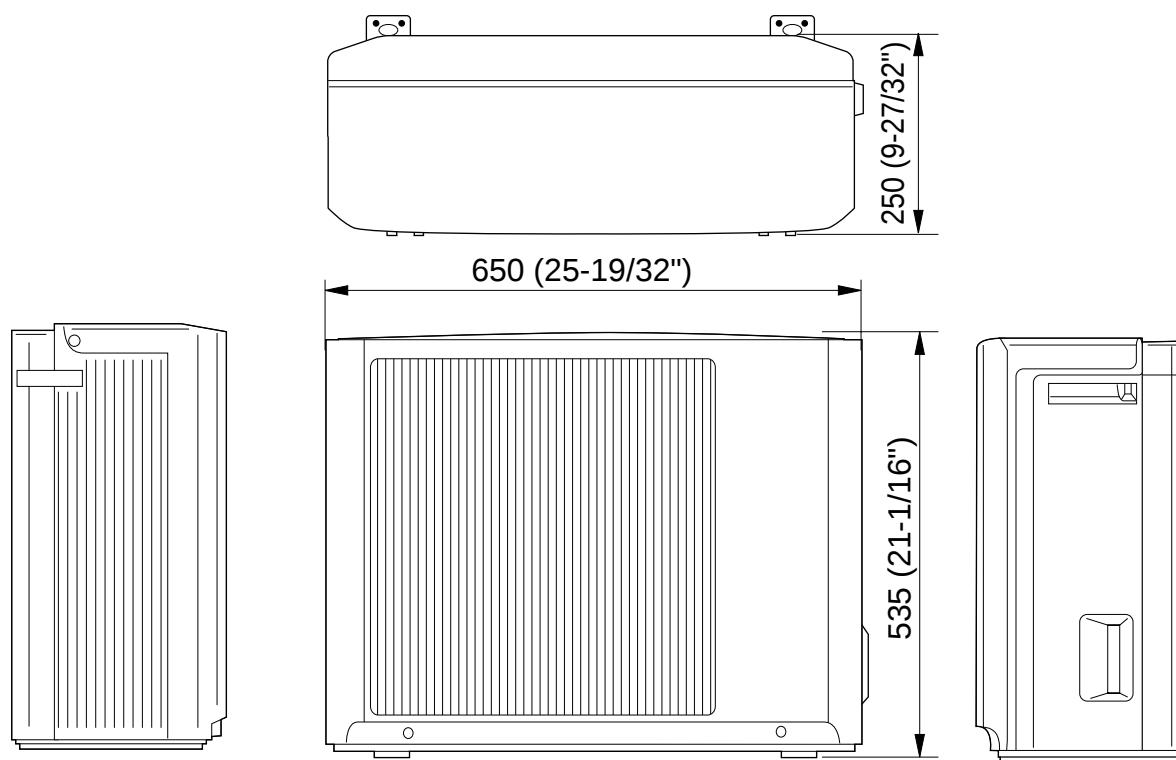
2.3.1 AB * 14A, 14R, 18A, 18R, 24A, 24R

MODEL				FLOOR / CEILING UNIVERSAL TYPE											
				AB * 14A		AB * 14R		AB * 18A		AB * 18R		AB * 24A		AB * 24R	
Capacity	Cooling	kW		4.00 - 4.10		3.95 - 4.05		5.30 - 5.40		5.20 - 5.30		6.55 - 6.65		6.50 - 6.60	
		BTU/h		13,700 - 14,000		13,500 - 13,800		18,100 - 18,400		17,800 - 18,100		22,400 - 22,700		22,200 - 22,500	
	Heating	kW		—		4.90 - 5.00		—		5.50 - 5.60		—		7.60 - 7.70	
BTU/h		—		16,700 - 17,100		—		18,800 - 19,100		—		25,900 - 26,300			
Power supply				1 ~ 220-240V 50Hz											
Total input	Cooling	kW		1.67 - 1.80		1.62 - 1.76		2.15 - 2.20		2.15 - 2.20		2.58 - 2.68		2.60 - 2.70	
	Heating	kW		—		1.61 - 1.73		—		2.00 - 2.10		—		2.49 - 2.59	
Total current	Cooling	A		7.9 - 8.3		7.6 - 8.0		9.9 - 9.4		9.9 - 9.4		12.2 - 12.7		12.5 - 13.0	
	Heating	A		—		7.6 - 8.0		—		9.2 - 8.9		—		12.0 - 12.5	
EER	Cooling	kW/kW		2.39 - 2.28		2.44 - 2.30		2.47 - 2.45		2.42 - 2.41		2.54 - 2.48		2.50 - 2.44	
	Heating	kW/kW		—		3.04 - 2.89		—		2.75 - 2.67		—		3.05 - 2.97	
Starting current		A		33				50				61			
Indoor unit	Fan speed	Hi	r.p.m.	790 - 850				950 - 1,030				1,120 - 1,180			
		Med		700 - 760				820 - 890				980 - 1,040			
		Low		620 - 670				700 - 770				840 - 900			
	Air circulation	Hi	m³/h	580 - 640				720 - 800				830 - 900			
		Med		500 - 560				610 - 680				710 - 780			
		Low		430 - 480				500 - 560				590 - 660			
	Noise level (Sound pressure)	Hi	dB(A)	40.0 - 41.0				46.0 - 47.0				48.0 - 49.0			
		Med		37.0 - 38.0				41.5 - 42.5				44.0 - 45.0			
		Low		34.0 - 35.0				37.0 - 38.0				40.0 - 41.0			
	Heat exchanger			Plate fin coil											
	Fan type x Q'ty			Sirocco fan x 2											
	Fan motor output		kW	0.016				0.030				0.040			
	Operation control			Remote control											
	Dimensions	H	mm	199											
		W	mm	990											
		D	mm	655											
	Weight Net/Gross		kg	28 / 37				28 / 37				30 / 39			
Outdoor unit	Fan speed	Hi	r.p.m.	750				735				735			
		Low	r.p.m.	—				—		280		—		280	
	Air circulation		m³/h	1,600				2,590				2,590			
	Noise level	Hi	dB(A)	49.0				56.0				56.0			
	Heat exchanger			Plate fin coil											
	Fan type x Q'ty			Propeller x 1											
	Fan motor output		kW	0.022				0.060				0.060			
	Compressor type			Hermetic (rotary)				Hermetic (recipro)							
	Motor output	kW		1.400				1.500				1.875			
		Protection			Internal protector (OCR)				Internal protector (OCR), High pressure relief valve						
	Dimensions	H	mm	530				643				643			
		W	mm	750				840				840			
		D	mm	250				336				336			
	Weight (Net/Gross)		kg	37 / 39		38 / 40		66 / 74		68 / 76		67 / 75		68 / 76	
Refrige-rant circuit	Discharge pressure		kg/cm²	Cooling	Cooling	Heating	Cooling	Cooling	Heating	Cooling	Cooling	Heating			
				19.5	19.5	19.8	19.0	19.0	20.0	20.0	20.1	20.7			
	Suction pressure		kg/cm²	5.1	5.1	4.3	4.9	4.9	4.2	4.8	4.9	4.0			
	Discharge temp.		°C	92	89	95	92	97	84	91	98	87			
	Suction temp.		°C	10	10	1	7	8	1	4	6	1			
	Refr. pipe length		m	5											
Condition	Indoor air temp.	Cool	DB/WB	27.0°C / 19.0°C											
		Heat	DB/WB	20.0°C / (15.0)°C											
	Ourdoor air temp.	Cool	DB/WB	35.0°C / 24.0°C											
		Heat	DB/WB	7.0°C / 6.0°C											
Piping	Refrigerant charge		kg	1.000		1.050		1.140		1.690		1.950		2.070	
	Pipe size (O.D.)	Liquid	mm	6.35		6.35		9.35		9.53		9.53		9.53	
		Gas	mm	12.7		12.7		15.88		15.88		15.88		15.88	
	Connection method			Flare											
	Height difference		m	5				15				15			
	Pipe length		m	10				20				20			

2.3.2 ABS24A, ABS24R

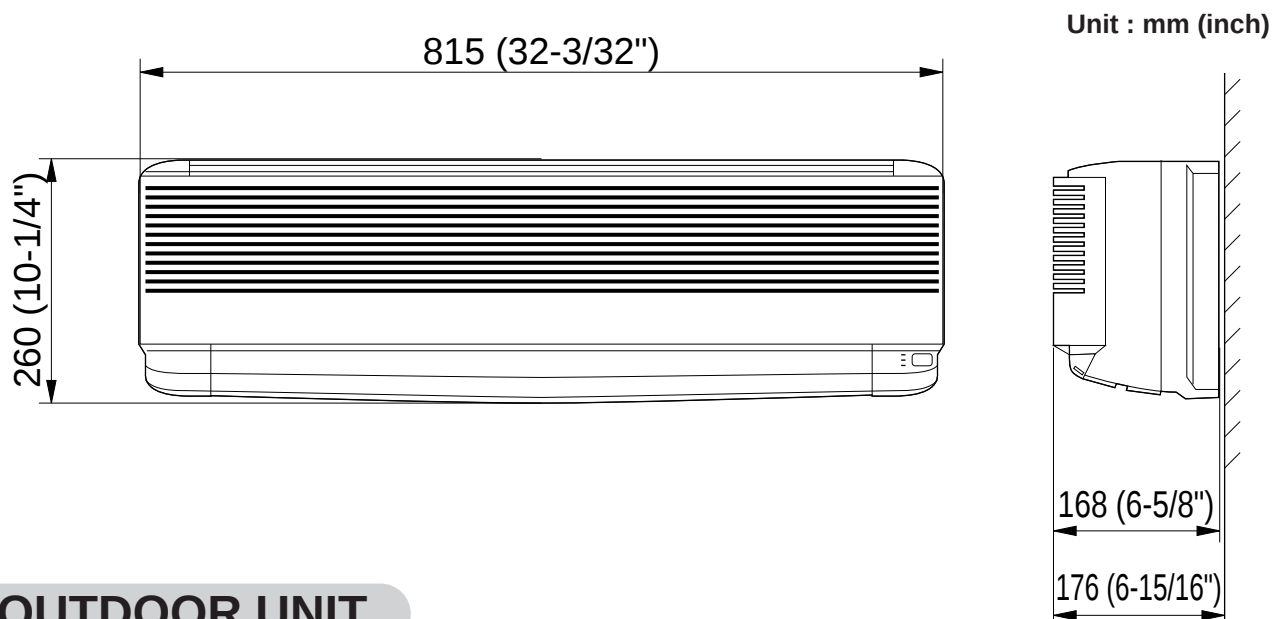
MODEL				FLOOR / CEILING UNIVERSAL TYPE			
				ABS24A		ABS24R	
Capacity	Cooling	W		5,300		5,300	
	Heating	W		—		7,100	
Power supply				1 ~ 220V 60Hz			
Total input	Cooling	W		3,100		3,100	
	Heating	W		—		2,650	
Total Current	Cooling	A		14.6		14.6	
	Heating	A		—		12.5	
EER	Cooling	W/W		1.71		1.71	
	Heating	W/W		—		2.68	
Starting current		A		66			
Indoor unit	Fan speed	Hi	r.p.m.	1,150			
		Med		990			
		Low		870			
	Air circulation	Hi	m³/h	900			
		Med		780			
		Low		660			
	Noise level (Sound pressure)	Hi	dB(A)	49.0			
		Med		45.0			
		Low		41.0			
	Heat exchanger			Plate fin coil			
	Fan type x Q'ty			Sirocco fan x 2			
	Fan motor output		kW	0.040			
	Operation control			Remote control			
	Dimensions	H	mm	199			
		W	mm	990			
		D	mm	655			
	Weight (Net/Gross)		kg	30 / 39			
Outdoor unit	Fan speed		r.p.m.	735			
	Air circulation		m³/h	2,590			
	Noise level	Hi	dB(A)	56.0			
	Heat exchanger			Plate fin coil			
	Fan type x Q'ty			Propeller x 1			
	Fan motor output		kW	0.060			
	Compressor type			Hermetic (Recipro)			
	Motor output		kW	1.900			
	Protection			Internal protector (OCR), High pressure relief valve			
	Dimensions	H	mm	643			
		W	mm	840			
		D	mm	336			
	Weight (Net/Gross)		kg	67 / 75		68 / 76	
Refrige-rant circuit	Disch. pressure		kg/cm²	Cooling 24.5		Cooling 24.9	Heating 19.7
	Suct. pressure		kg/cm²	4.9		4.9	4.0
	Discharge temp.		°C	91		102	77
	Suction temp.		°C	8		7	1
	Refr. pipe length		m	5			
	Disch. air temp.		°C	13		13	45
Condition	Indoor air temp.	Cool	DB/WB	29.0°C / 19.0°C			
		Heat	DB/WB	21.0°C / (15.5)°C			
	Ourdoor air temp.	Cool	DB/WB	46.0°C / 24.0°C			
		Heat	DB/WB	7.0°C / 6.0°C			
Piping	Refrigerant charge		kg	1.750		2.070	
	Pipe size (O.D.)	Liquid	mm	9.53			
		Gas	mm	15.88			
	Connection method			Flare			
	Height difference		m	15			
	Pipe length		m	20			

3. OUTLINE AND DIMENSIONS

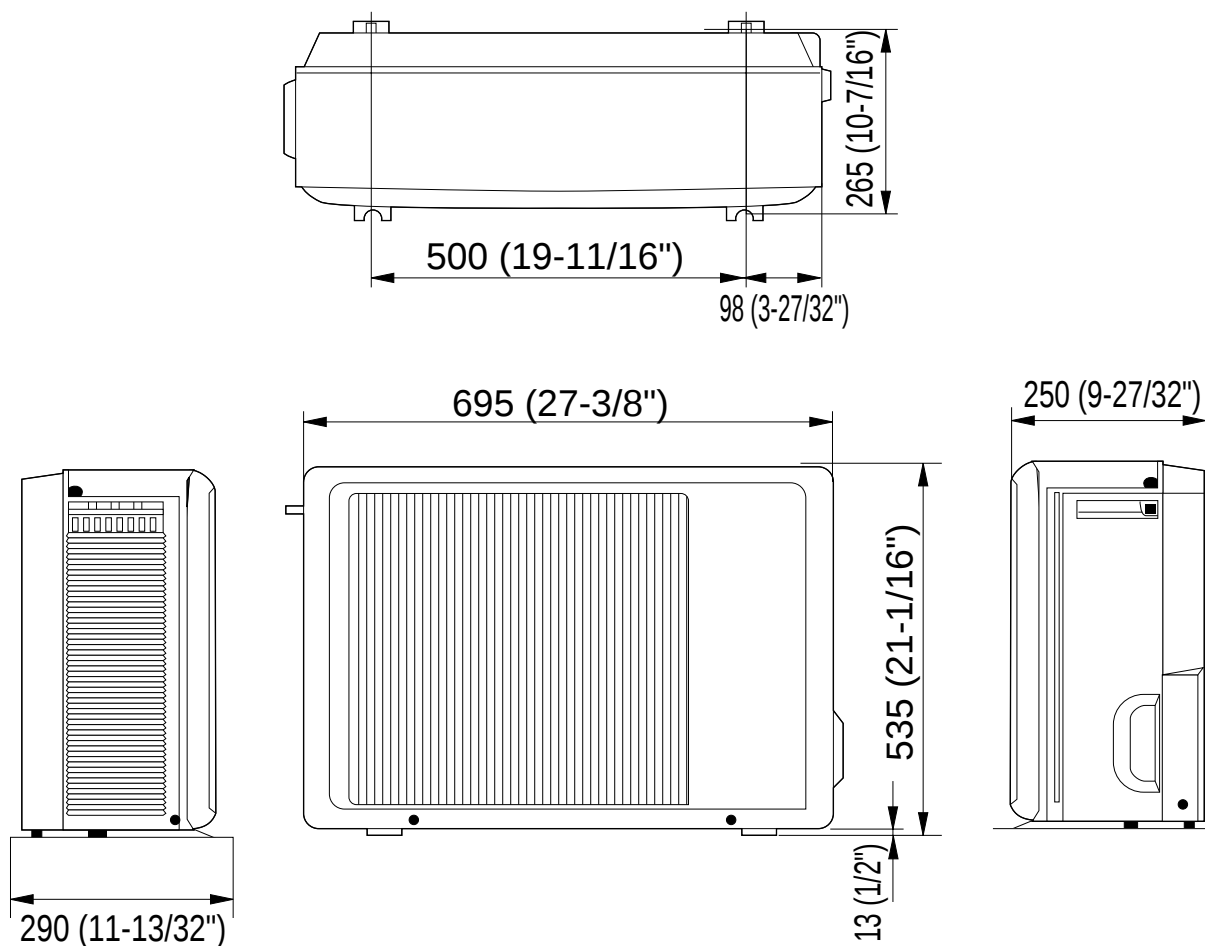
3.1 MODELS : AS * 7A, AS * 7R**3.1.1 INDOOR UNIT****3.1.2 OUTDOOR UNIT**

3.2 MODELS : AS * 9A, 9R, 12A, 12R

3.2.1 INDOOR UNIT



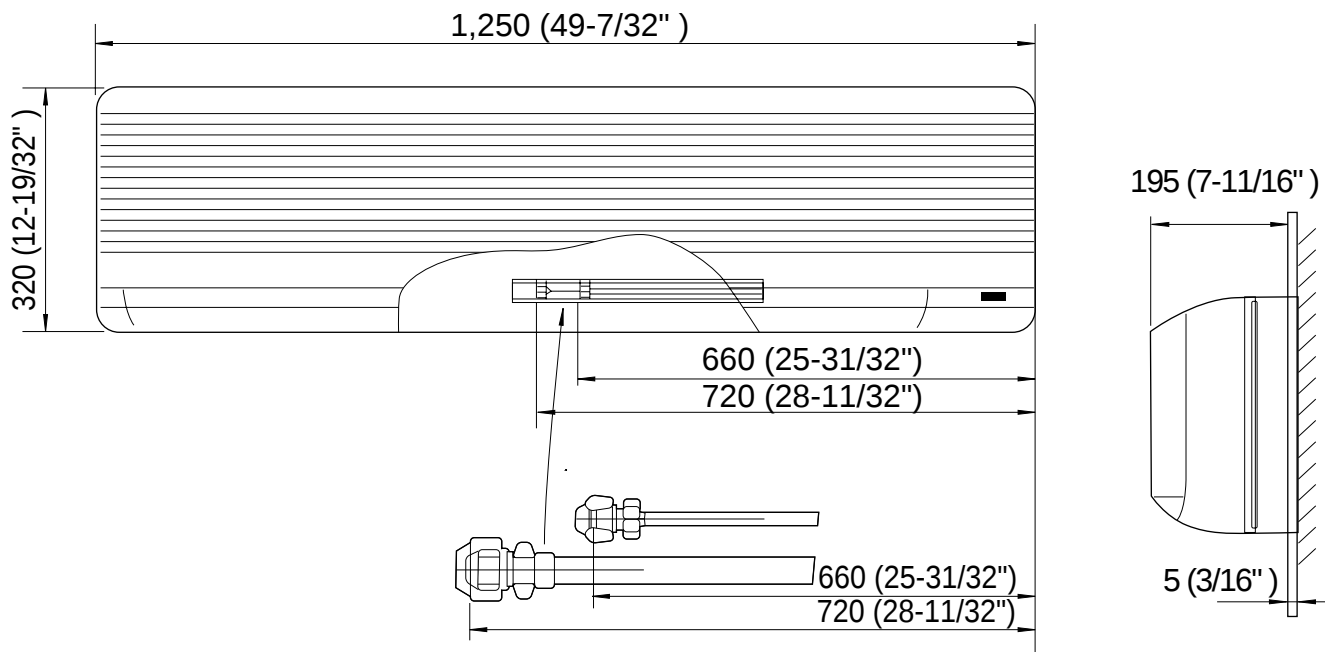
3.2.2 OUTDOOR UNIT



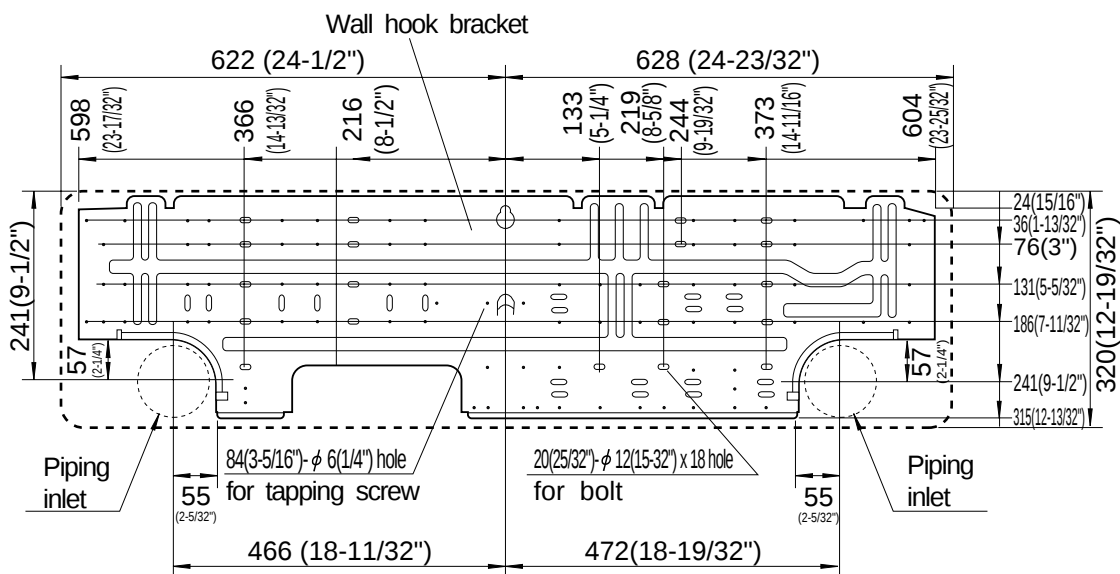
3.3 MODELS : AS * 20A, 20R, 24A, 24R, 30A, 30R, ACS-7502, ACS-7602

3.3.1 INDOOR UNIT

Unit : mm (inch)



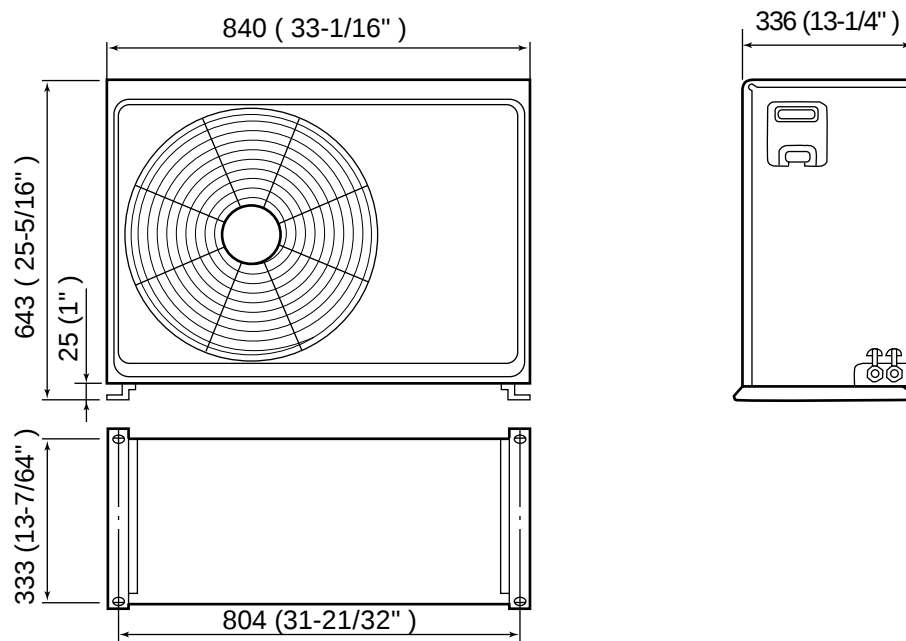
Connecting pipe	Gas	φ15.88 (5/8")
	Liquid	φ9.52 (3/8")
Drain pipe	φ 16 (5/8")	



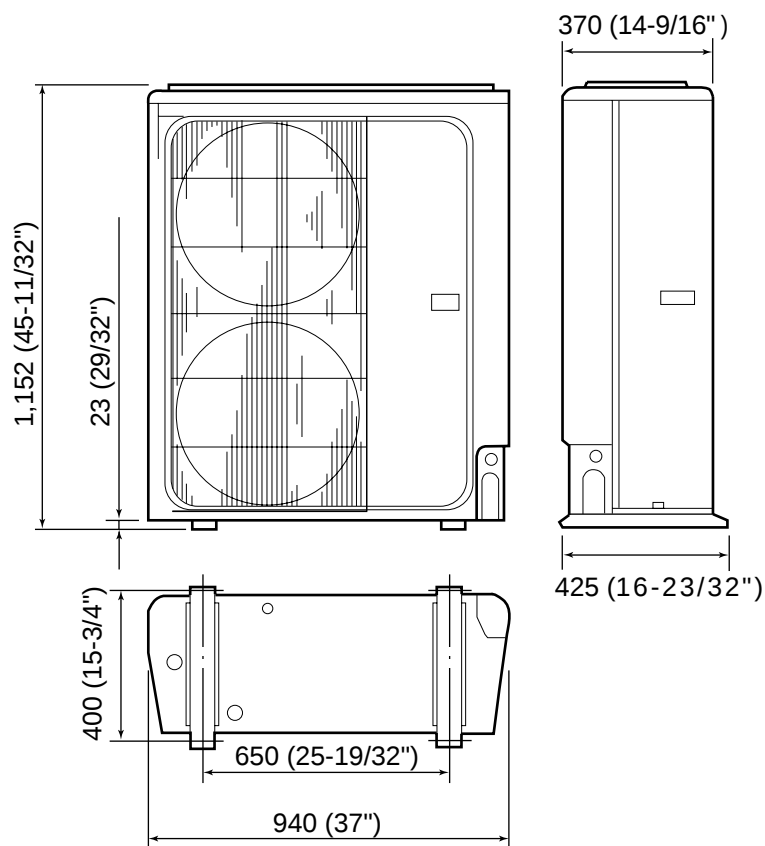
3.3.2 OUTDOOR UNIT

Models : AO * 20A, 20R, 24A, 24R, ACO-7502, ACO-7602

Unit : mm (inch)

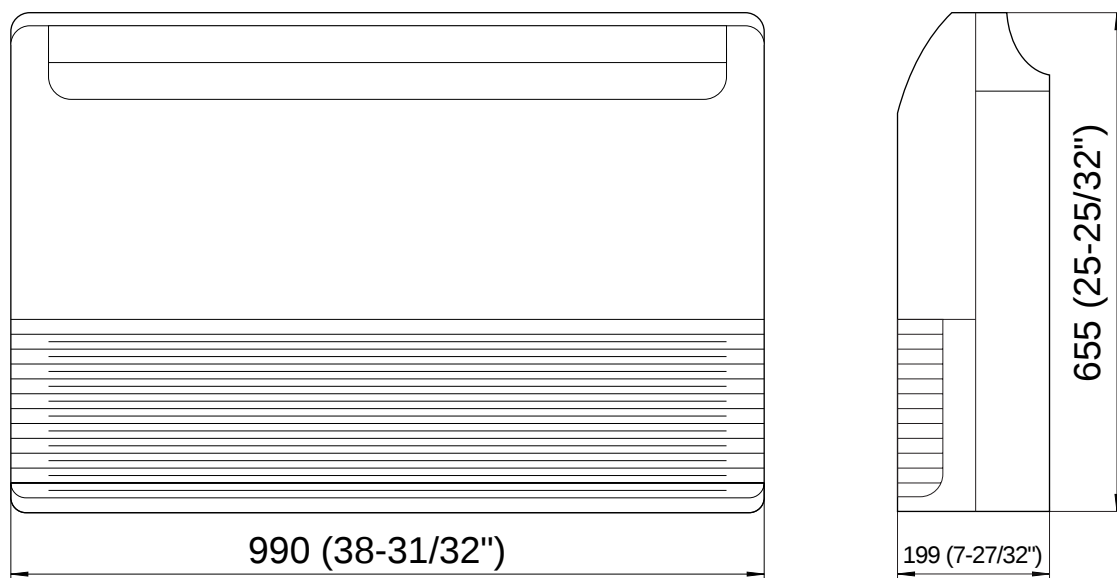


Models : AO * 30A, 30R

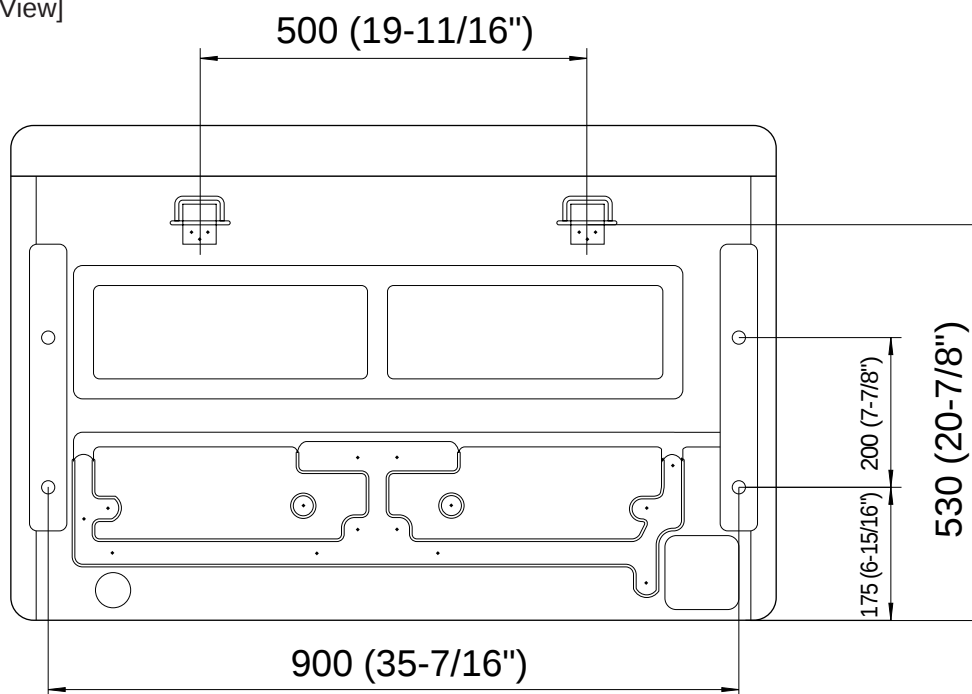


3.4 MODELS : AB * 14A, 14R, 18A, 18R, 24A, 24R**3.4.1 INDOOR UNIT**

Unit : mm (inch)



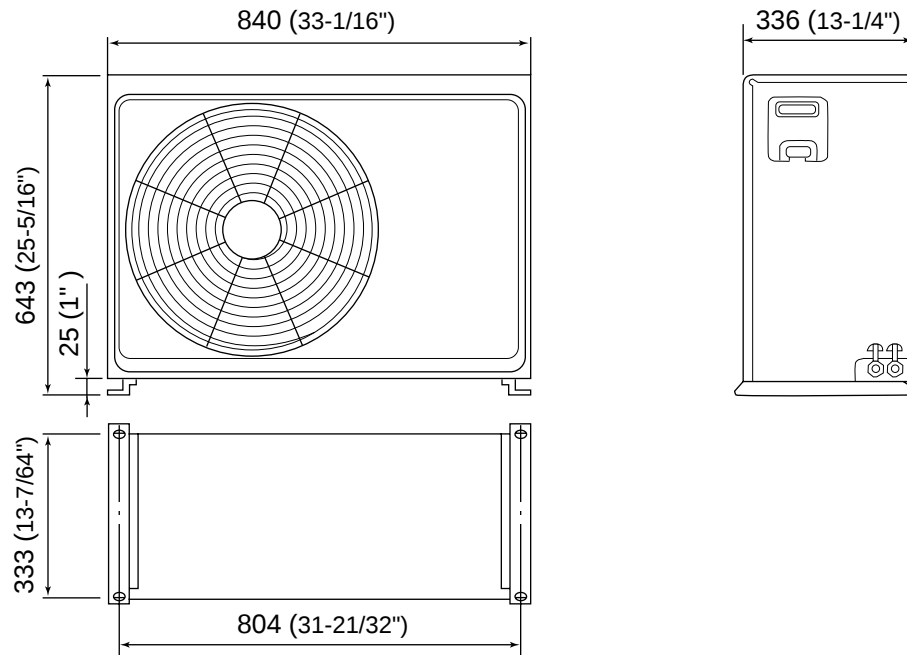
[Rear View]



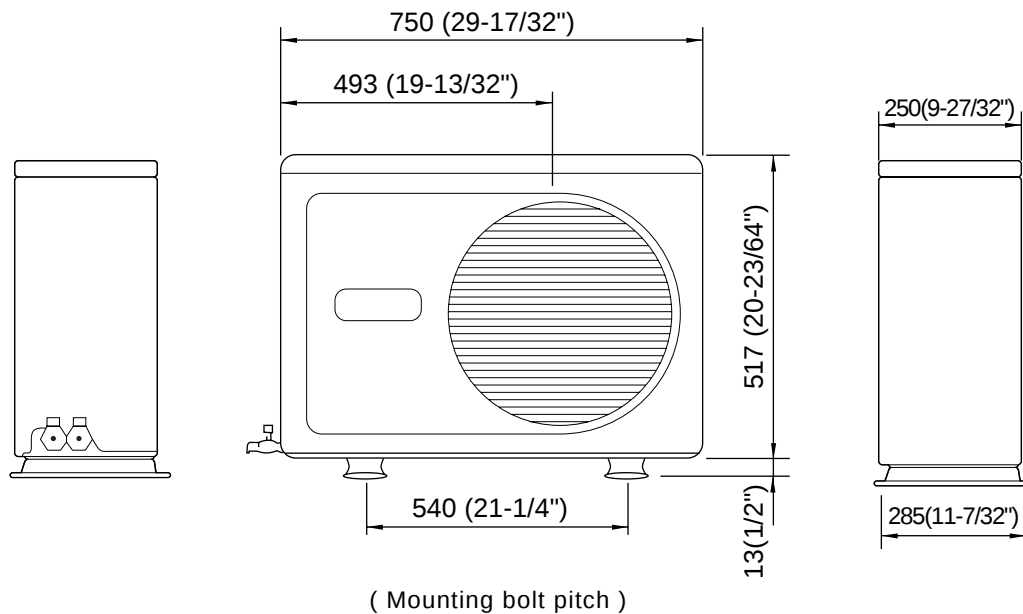
3.4.2 OUTDOOR UNIT

Models : AO * 18A, 18R, 24A, 25R

Unit : mm (inch)



Models : AO * 14A, 14R

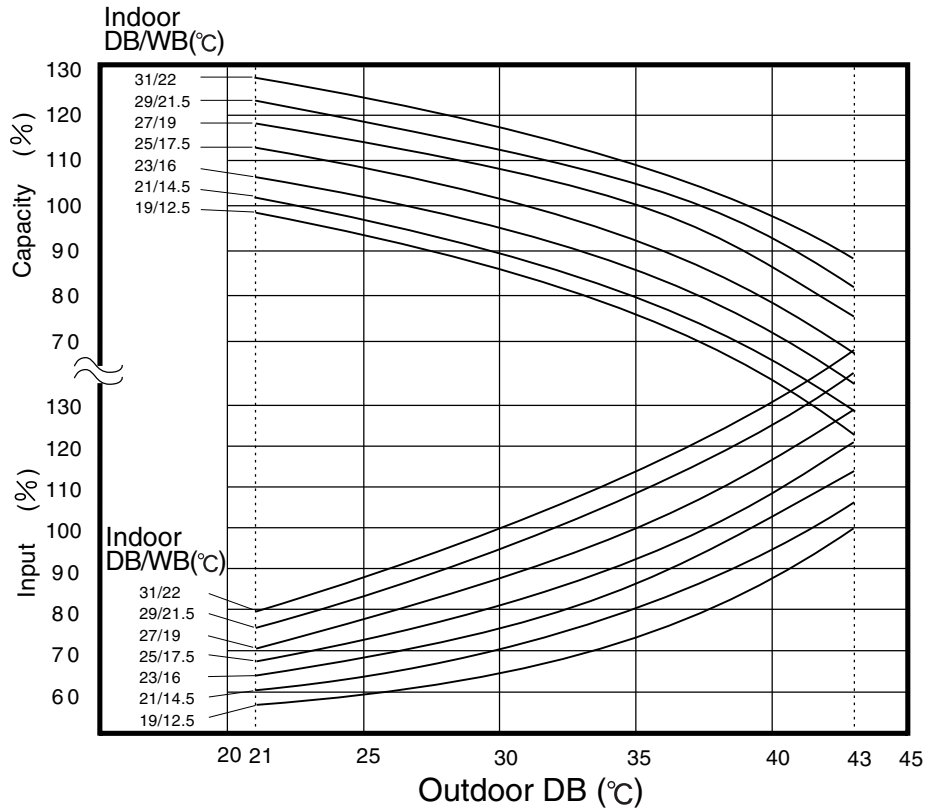


4. DATA

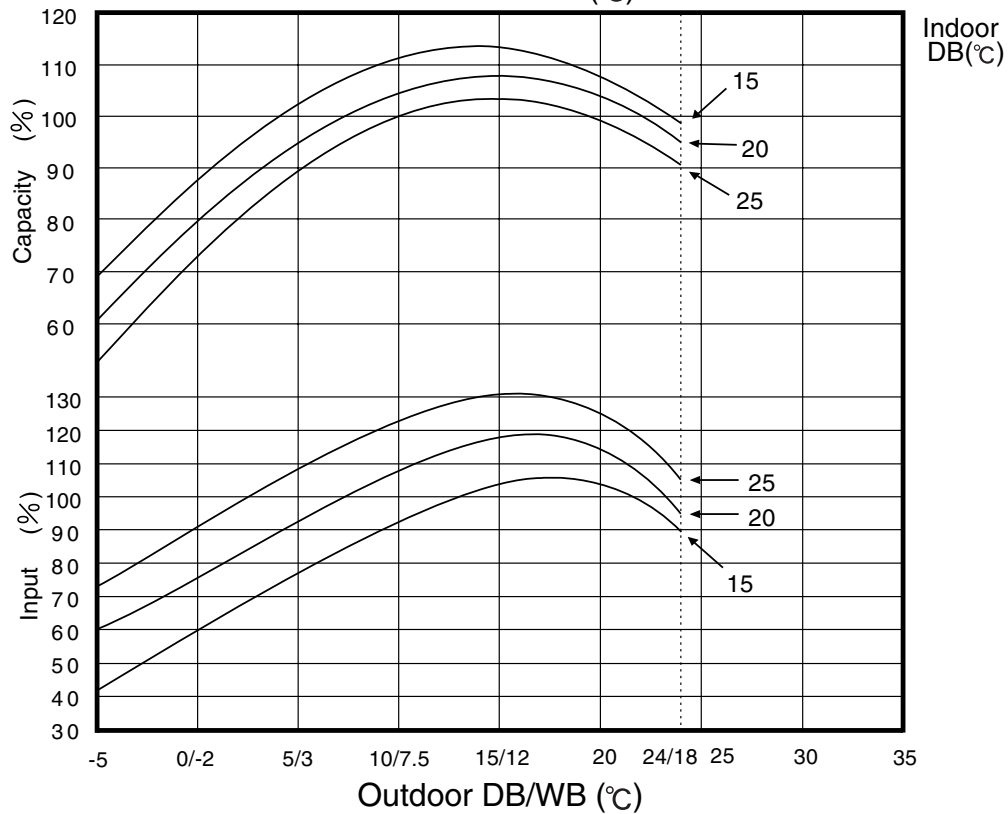
4.1 PERFORMANCE CURVE

4.1.1 MODEL : COMPACT SII & MII SERIES

Cooling

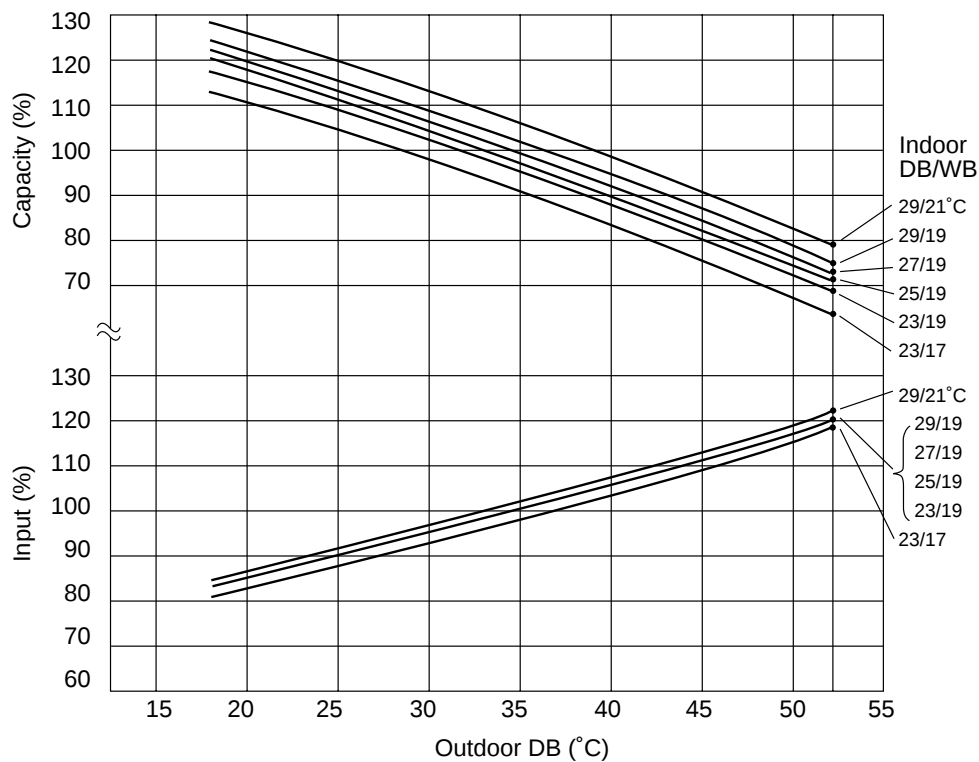


Heating



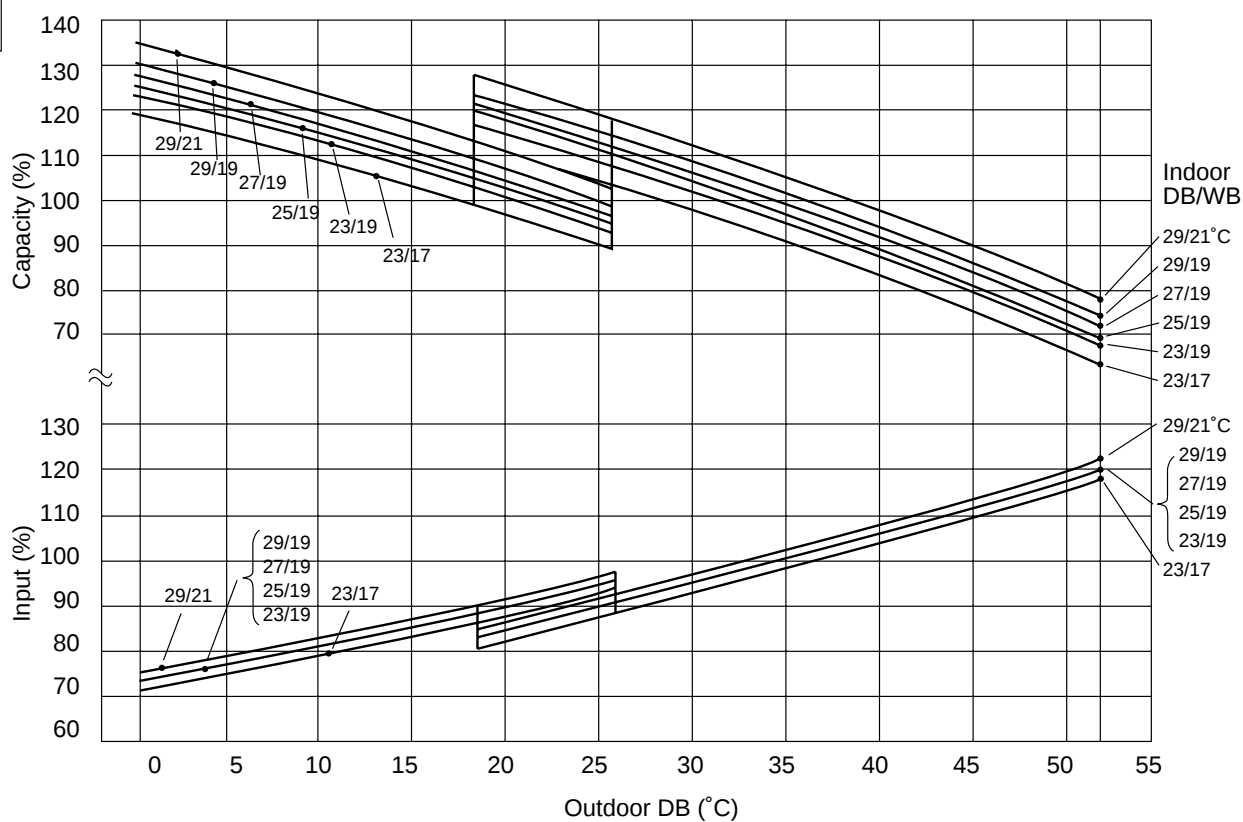
4.1.2 AS * 20A, AS * 24A (50Hz models)

Cooling



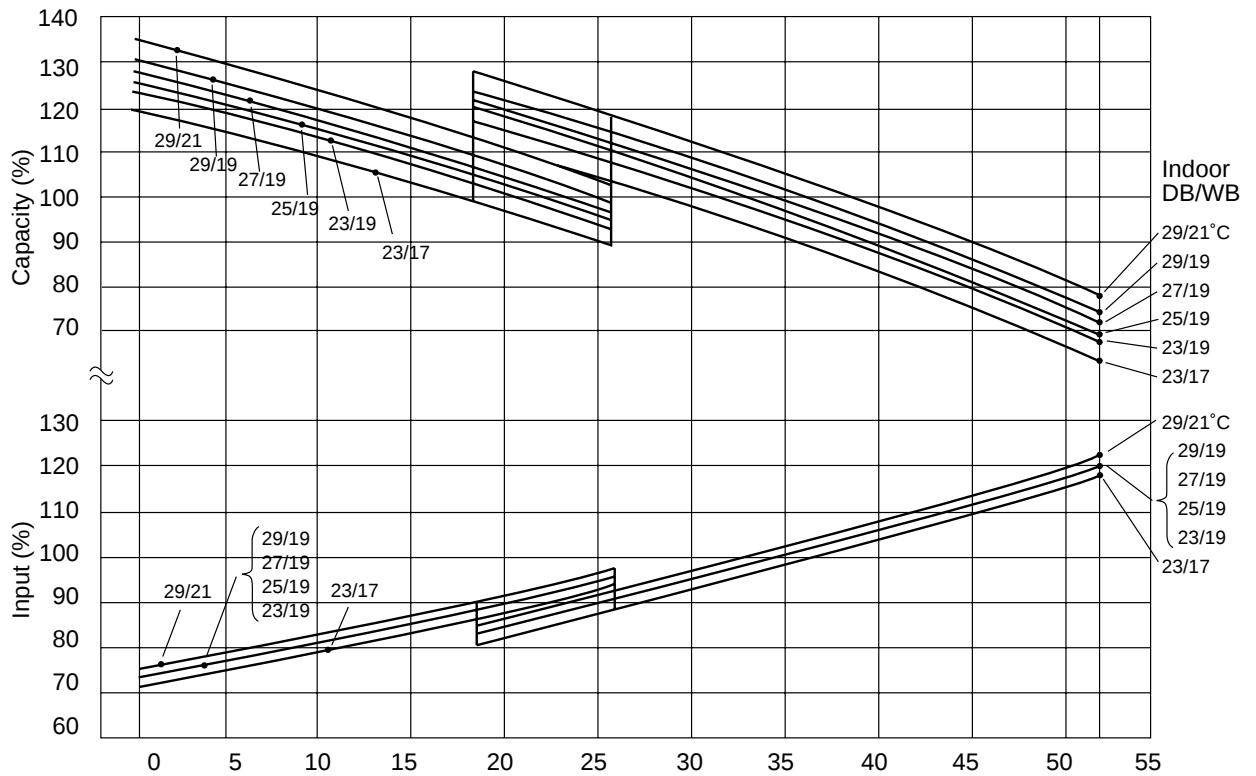
4.1.3 AS * 30A (50Hz models)

Cooling

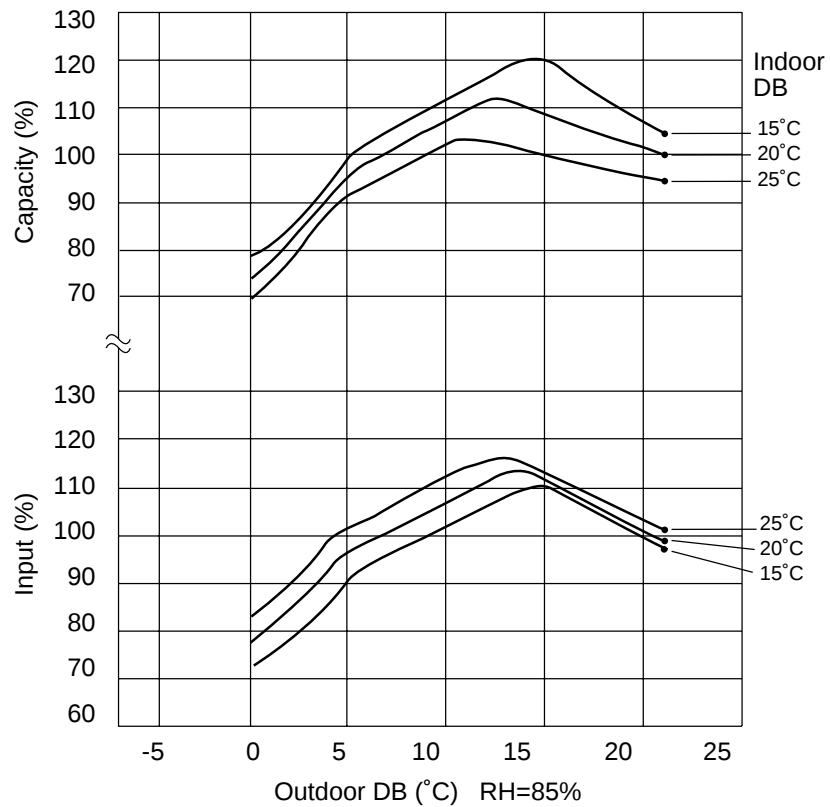


4.1.4 AS * 20R, AS * 24R, AS * 30R (50Hz models)

Cooling

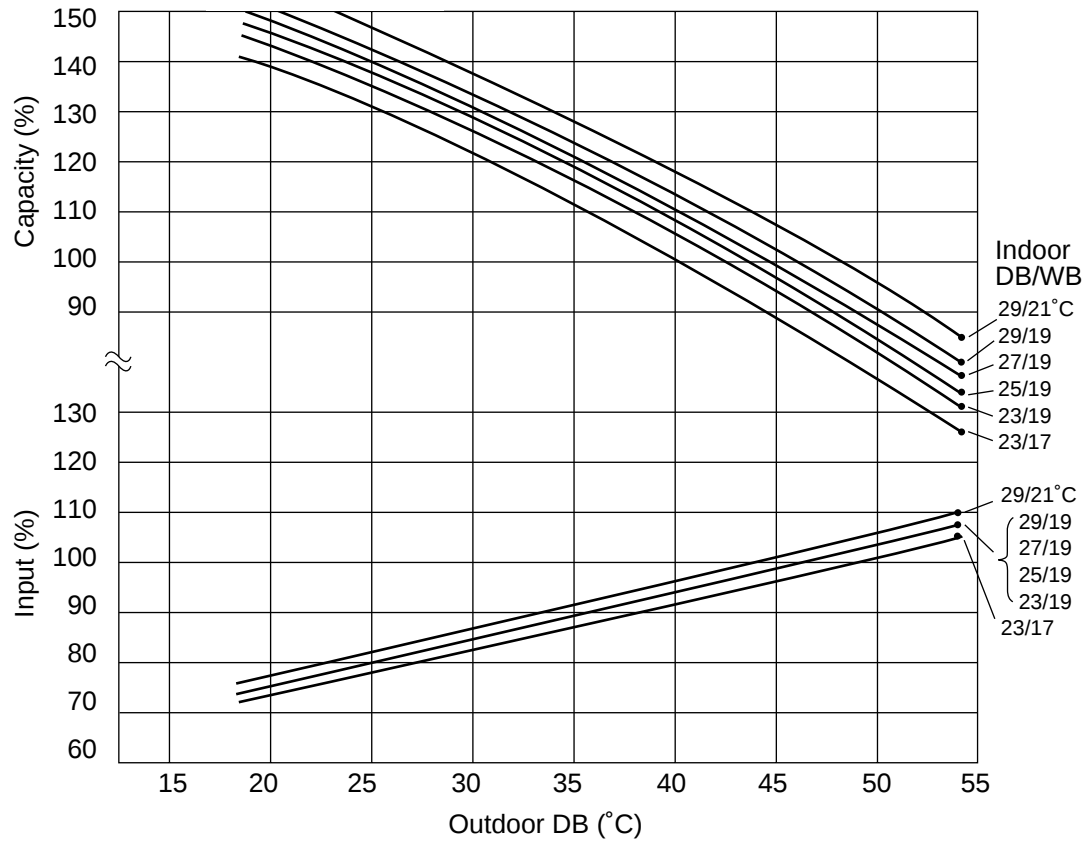


Heating

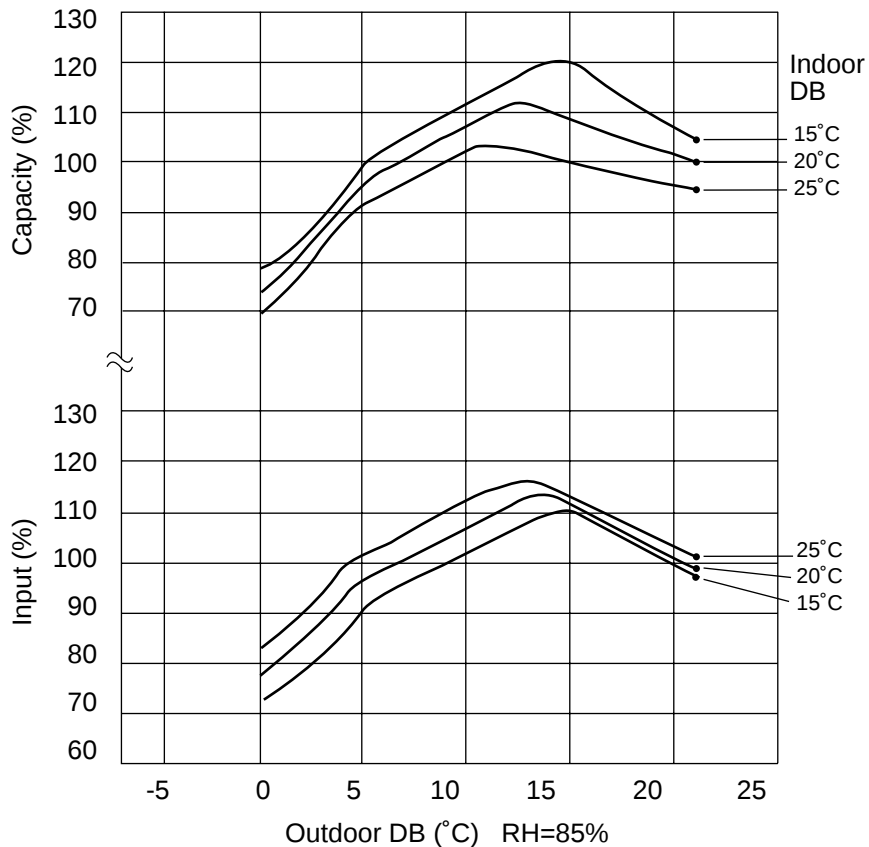


4.1.5 ASS20R, ASS24R, ASS30R (60Hz models)

Cooling

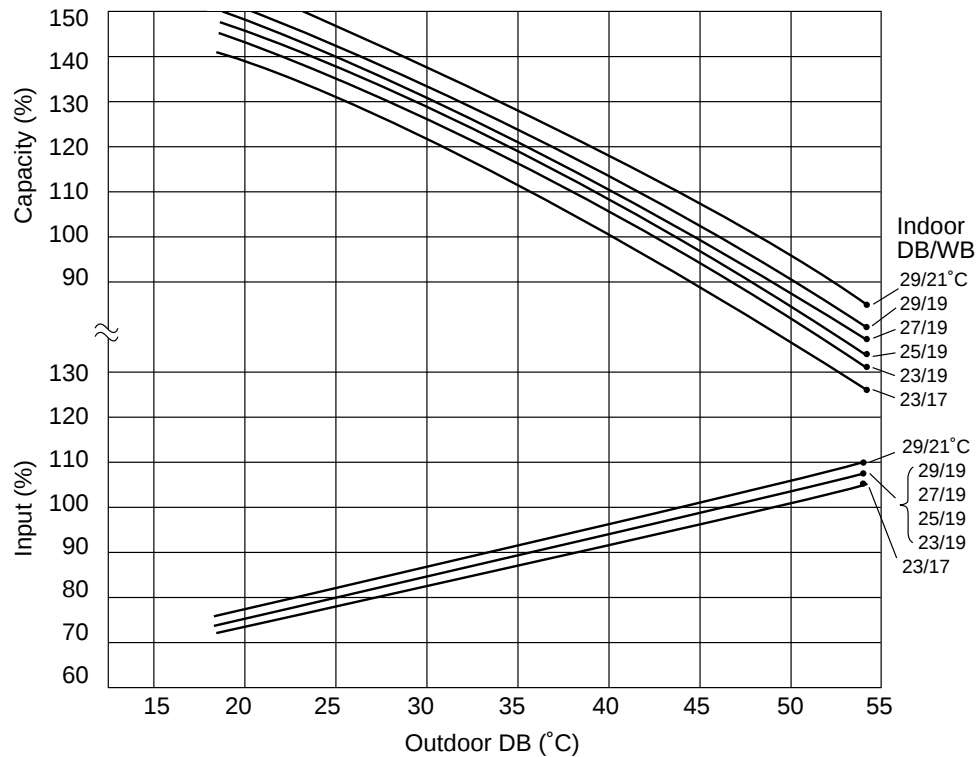


Heating



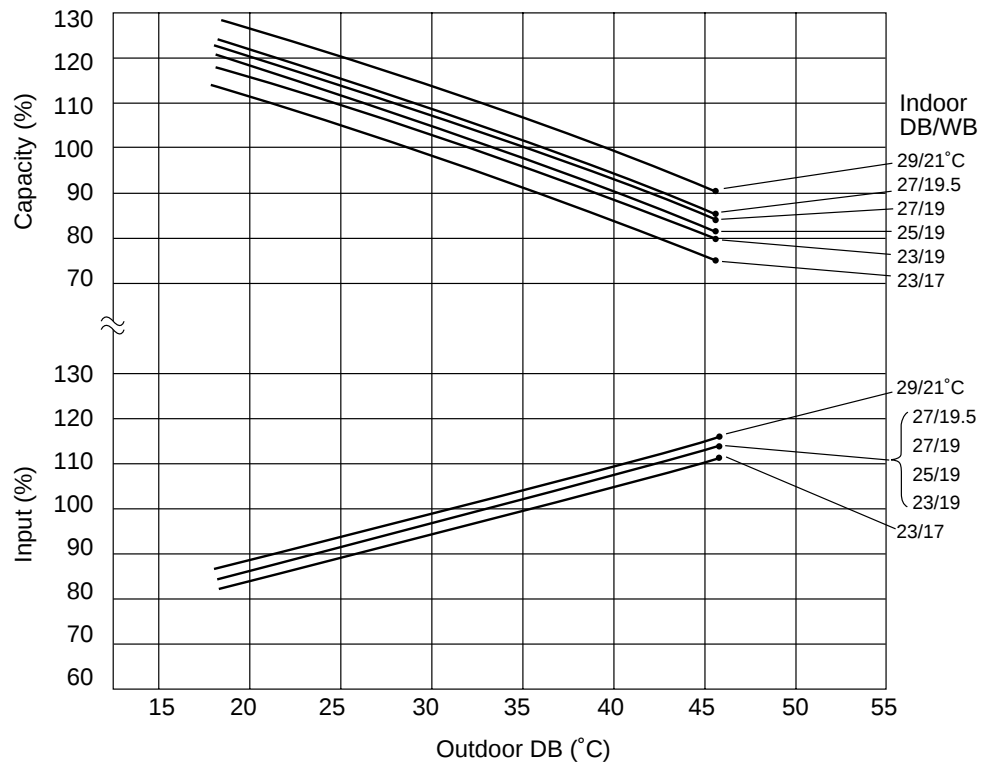
4.1.6 ASS20A, ASS24A, ASS30A (60Hz models)

Cooling



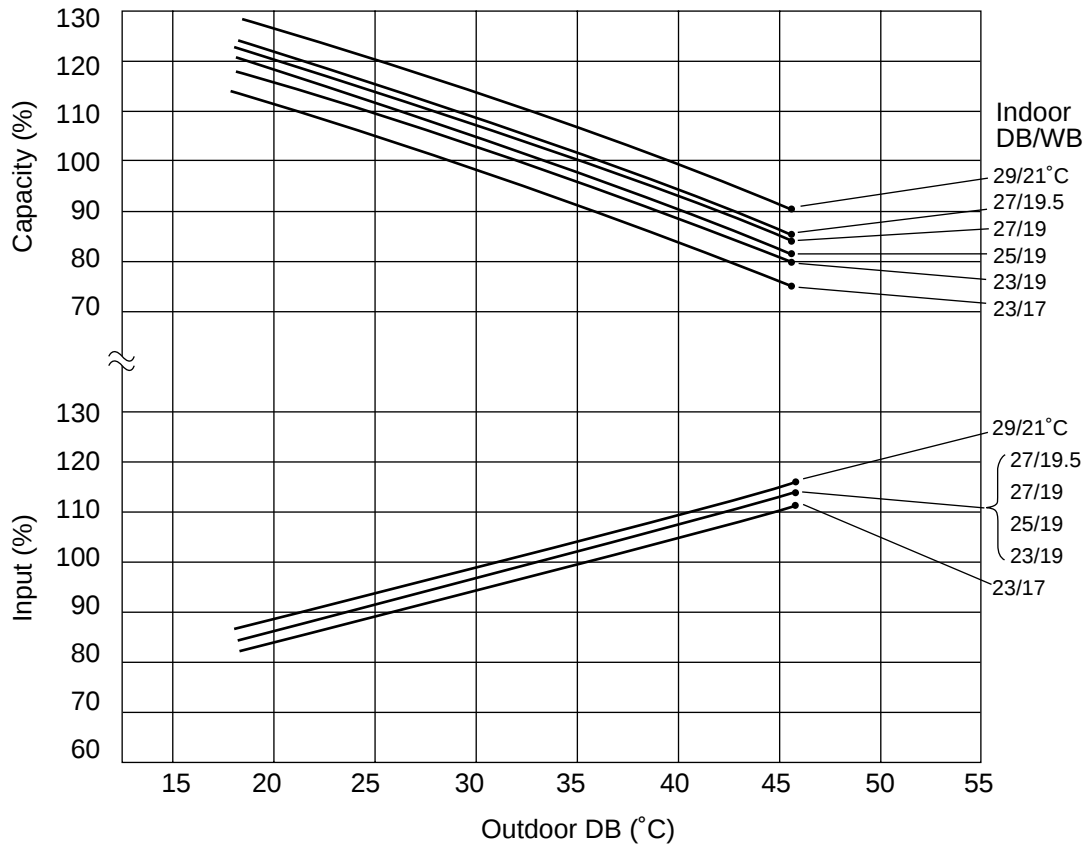
4.1.7 ACS-7502, ACS-7602 (60Hz models)

Cooling

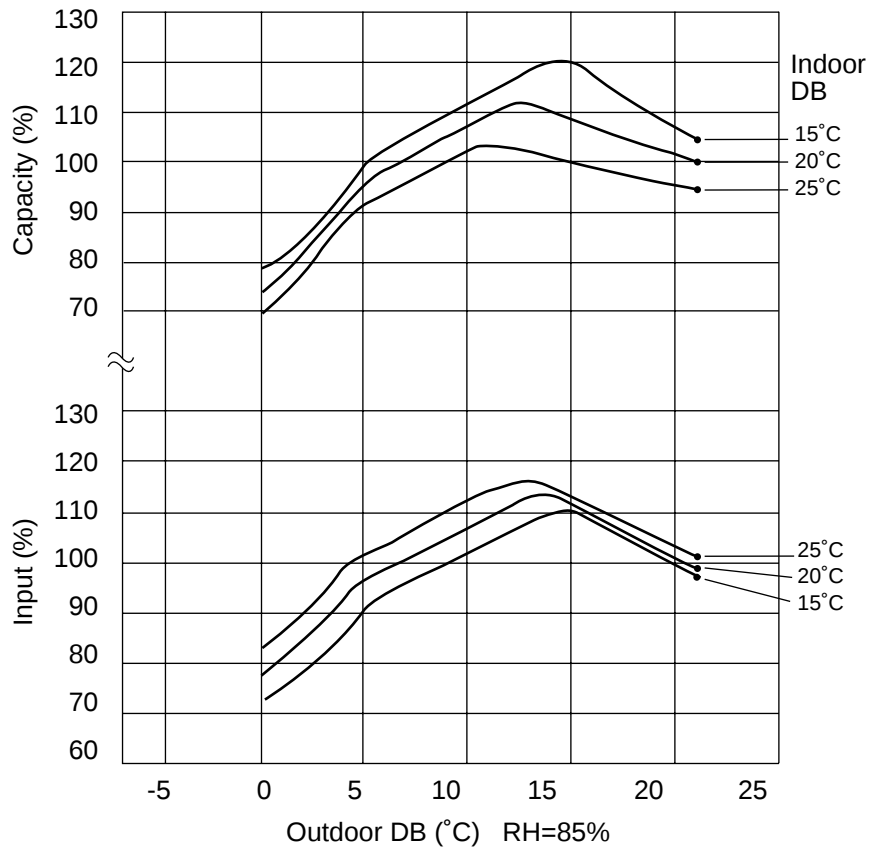


4.1.8 AB * 14R (50Hz models)

Cooling

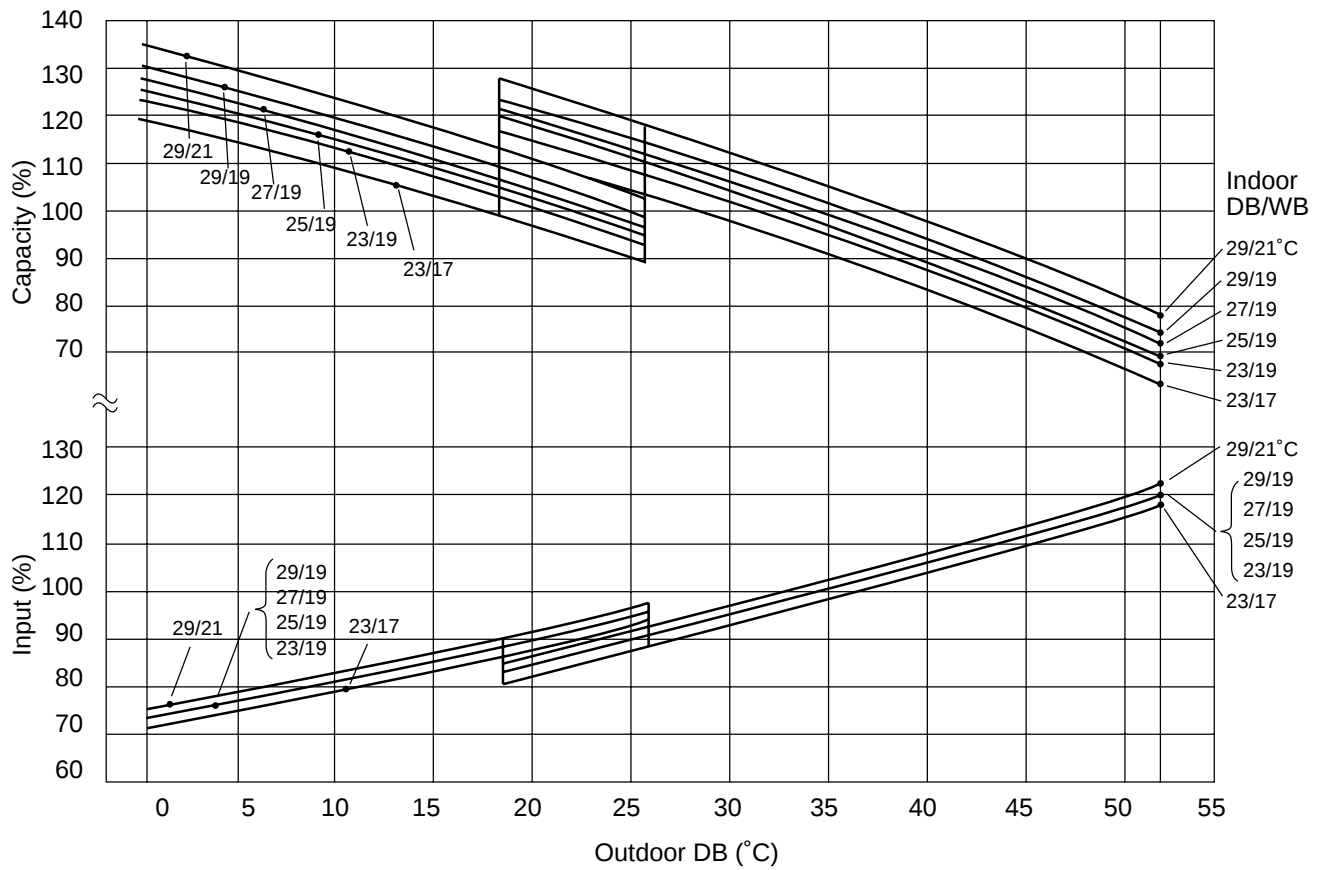


Heating

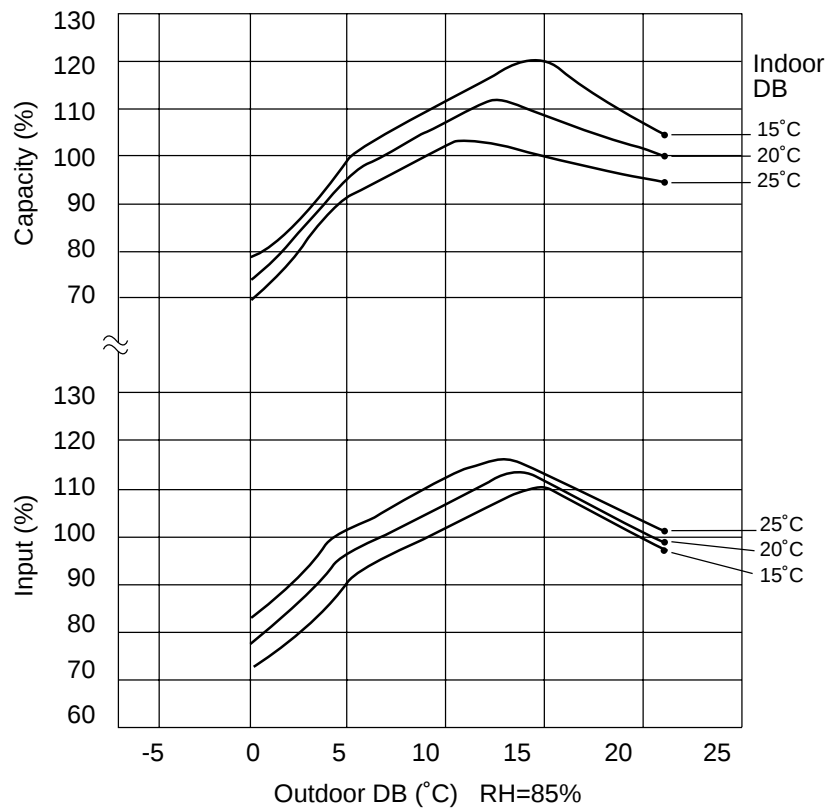


4.1.9 AB * 18R, AB * 24R (50Hz models)

Cooling

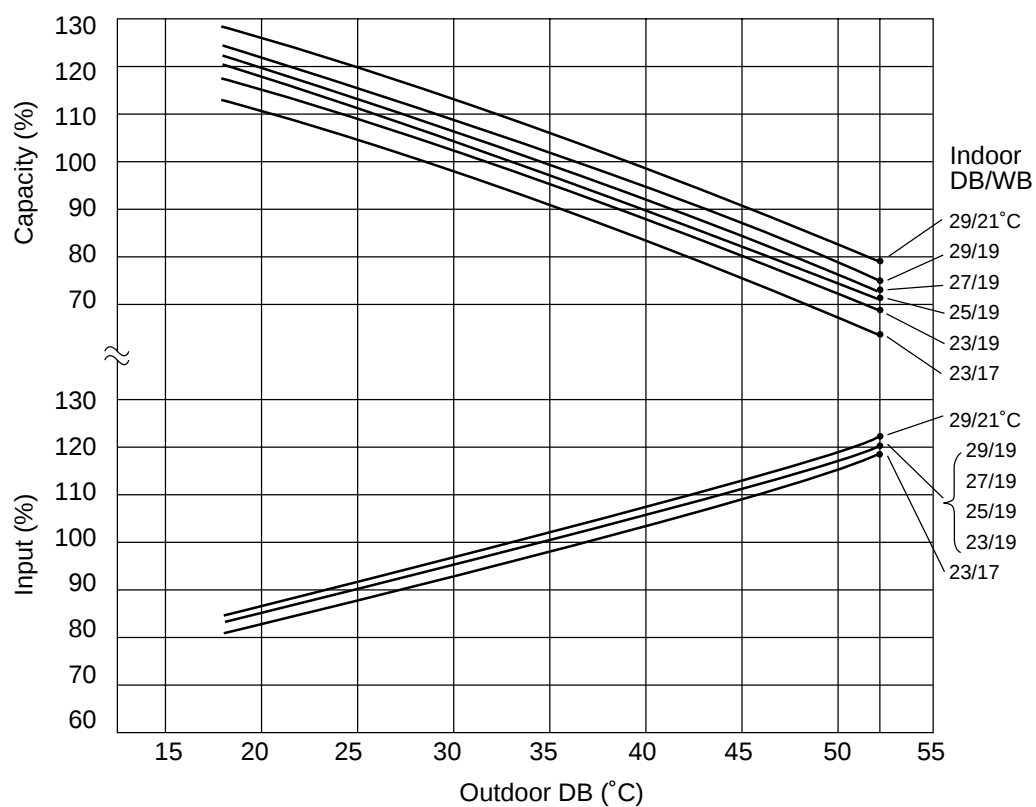


Heating



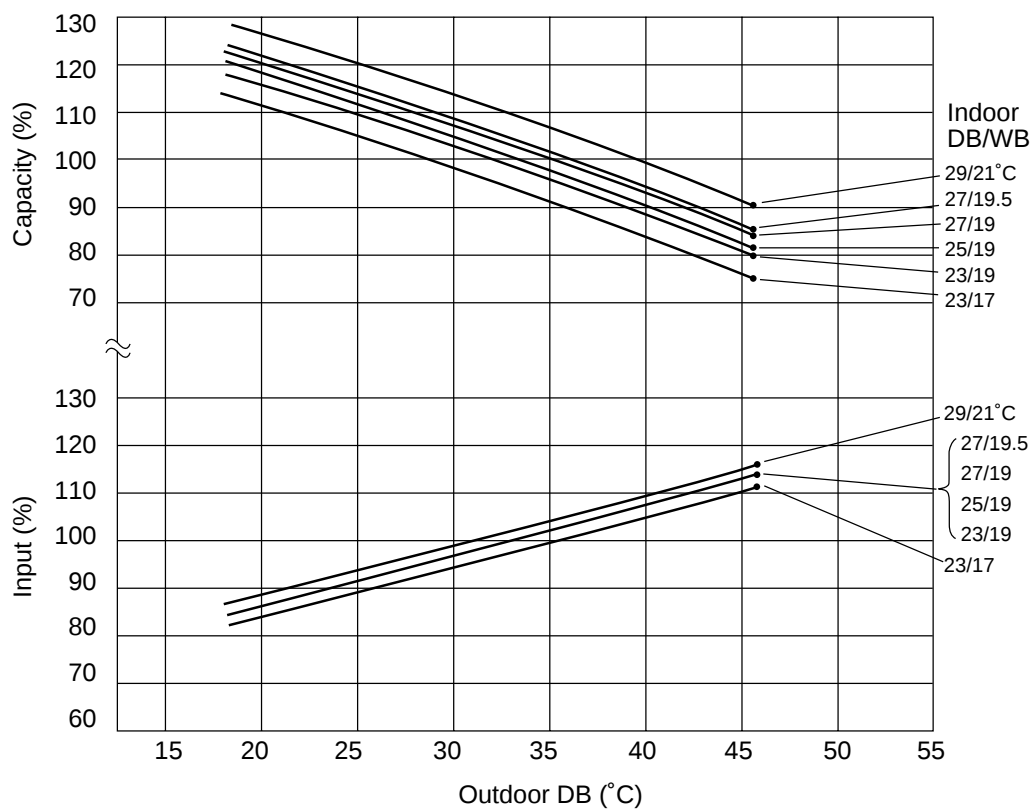
4.1.10 AB * 18A, AB * 24A (50Hz models)

Cooling



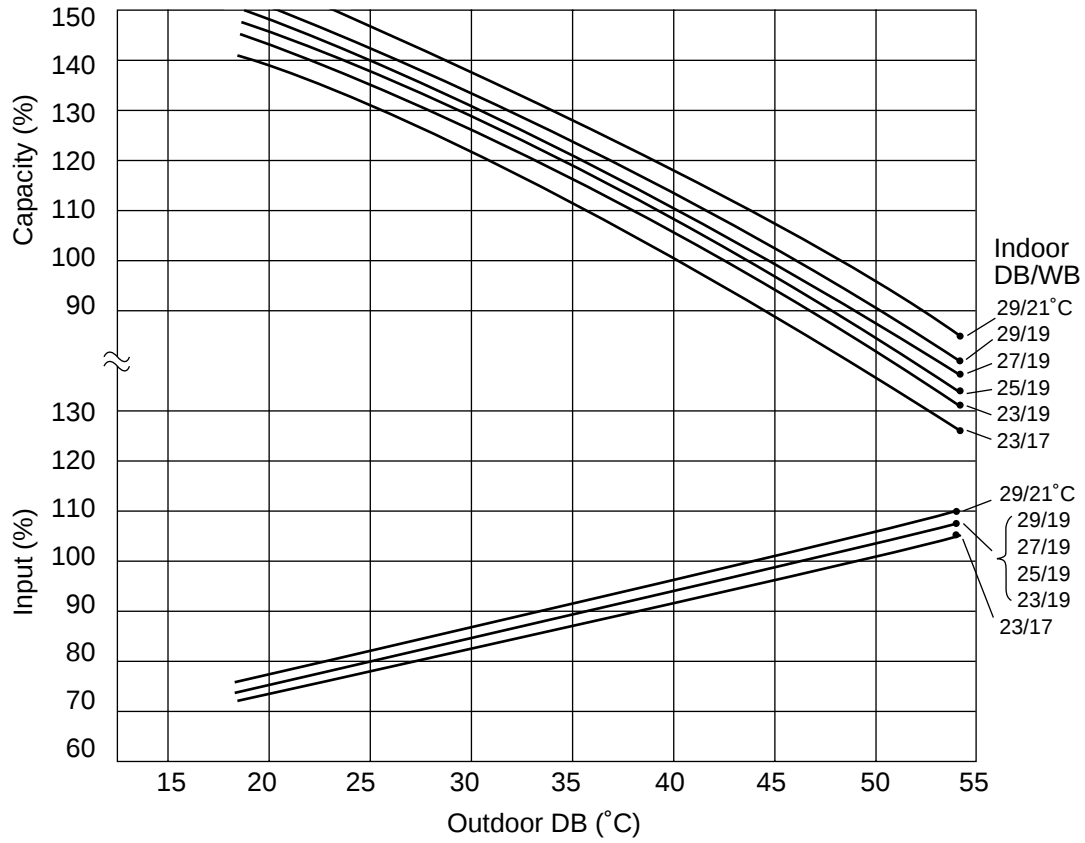
4.1.11 AB * 14A (50Hz models)

Cooling



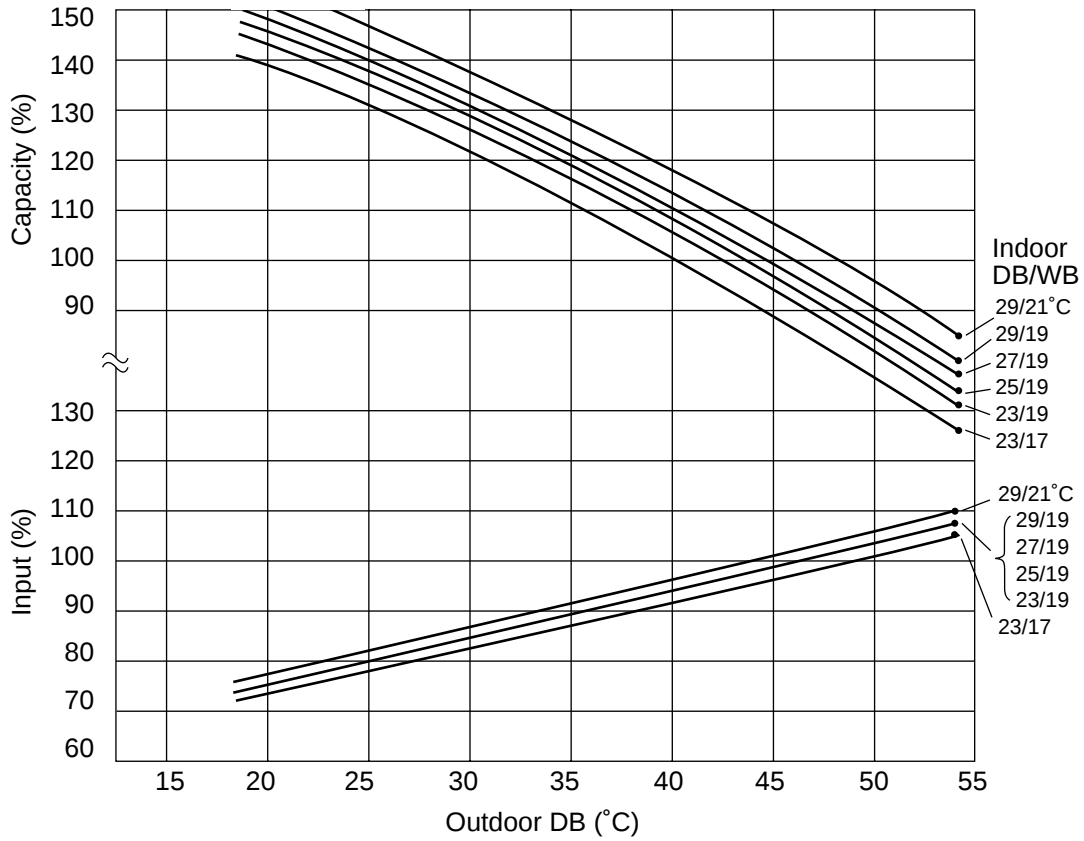
4.1.12 ABS24A (60Hz models)

Cooling

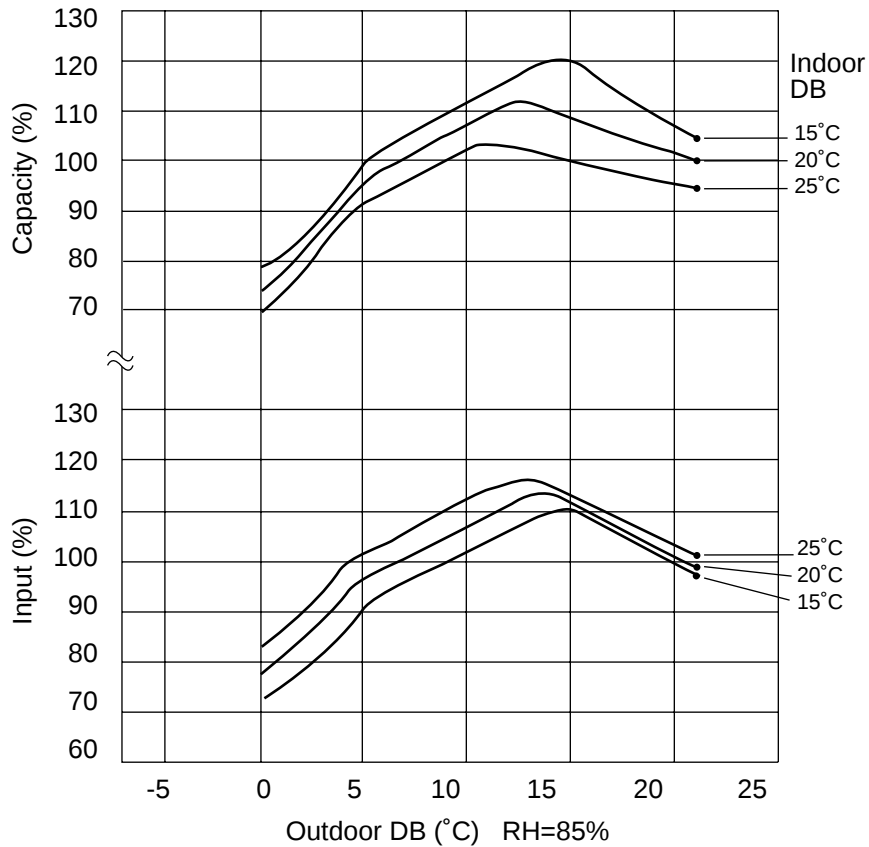


4.1.13 ABS24R (60Hz models)

Cooling



Heating



4.2 TEMPERATURE RANGE

MODEL		TEMPERATURE RANGE	
		INDOOR UNIT	OUTDOOR UNIT
AS*7A AS*9A AS*12A	COOL DRY	Approx. 18°C to 32°C	Approx. 18°C to 43°C
AS*7R AS*9R AS*12R	COOL HEAT	Approx. 18°C to 32°C Approx. 16°C to 30°C	Approx. 18°C to 43°C Approx. -5°C to 21°C
AS*20A, ASS30A AS*24A (except ACS-7502 and ACS-7602)	COOL DRY	Approx. 18°C to 32°C	Approx. 18°C to 52°C
ACS-7502 ACS-7602	COOL DRY	Approx. 18°C to 32°C	Approx. 18°C to 43°C
ASG30A ASY30A	COOL DRY	Approx. 18°C to 32°C	Approx. 0°C to 52°C
AS*20R AS*24R	COOL DRY HEAT	Approx. 18°C to 32°C Approx. 30°C or less	Approx. 0°C to 52°C Approx. 0°C to 21°C
AS*30R	COOL DRY HEAT	Approx. 18°C to 32°C Approx. 30°C or less	Approx. 0°C to 52°C Approx. 0°C to 21°C
AB*14A	COOL DRY	Approx. 18°C to 32°C	Approx. 21°C to 43°C
AB*18A AB*24A	COOL DRY	Approx. 18°C to 32°C	Approx. 21°C to 52°C
AB*14R	COOL DRY HEAT	Approx. 18°C to 32°C Approx. 16°C to 30°C	Approx. 21°C to 43°C Approx. 0°C to 21°C
AB*18R AB*24R	COOL DRY HEAT	Approx. 18°C to 32°C Approx. 16°C to 30°C	Approx. 0°C to 52°C Approx. 0°C to 21°C

Note: · Outdoor Unit

Standard model ————— 21 to 43°C (Cooling)
0 to 21°C (Heating)

Tropicalized model ————— 21 to 52°C (Cooling)

Tropicalized model with
low ambient cooling operation — 0 to 52°C (Cooling)

4.3 REFRIGERANT CHARGING

4.3.1 COMPACT SII & MII SERIES

Pipe length		16ft (5m)	23ft (7m)	33ft (10m)	Additional refrigerant g/m
Models					
ADDITIONAL REFRIGERANT	AS*7A, AS*7R AS*9A, AS*9R AS*12A, AS*12R	None	32g	80g	16 g

Note: When the piping is longer than 5m, additional charging is necessary.

4.3.2 WALL MOUNTED LARGE AS-SERIES

Pipe length		16ft (5m)	33ft (10m)	49ft (15m)	66ft (20m)	82ft (25m)	98ft (30m)	Additional refrigerant g/m(oz/ft)
Models								
FULL CHARGE AMOUNT	AST 20A ASY 20A ASG 20A	1,240g (43.7 oz)	1,300g (45.9 oz)	1,360g (48.0 oz)	1,420g (50.1 oz)			12g (0.42 oz)
	ASS 20A	1,290g (45.5 oz)	1,350g (47.6 oz)	1,410g (49.7 oz)	1,470g (51.9 oz)			12g (0.42 oz)
	ACS-7502	1,870g (66.0 oz)	1,930g (68.1 oz)	1,990g (70.2 oz)	2,050g (72.3 oz)			12g (0.42 oz)
	AST 20R ASY 20R ASG 20R	1,800g (63.5 oz)	2,050g (72.3 oz)	2,300g (81.1 oz)	2,550g (89.9 oz)			50g (1.76 oz)
	ASS 20R	1,690g (59.6 oz)	1,930g (68.1 oz)	2,170g (70.5 oz)	2,410g (85.0 oz)			48g (1.69 oz)
	AST 24A ASY 24A ASG 24A	1,950g (68.8 oz)	2,010g (70.9 oz)	2,070g (73.0 oz)	2,130g (75.1 oz)			12g (0.42 oz)
	ASS 24A	1,750g (61.7 oz)	1,810g (63.8 oz)	1,870g (66.0 oz)	1,930g (68.1 oz)			12g (0.42 oz)
	ACS-7602	2,020g (71.3 oz)	2,080g (73.4 oz)	2,140g (75.5 oz)	2,200g (77.6 oz)			12g (0.42 oz)
	AST 24R ASY 24R ASG 24R	2,070g (73.0 oz)	2,320g (81.8 oz)	2,570g (90.7 oz)	2,820g (99.5 oz)			50g (1.76 oz)
	ASS 24R	2,070g (73.0 oz)	2,240g (79.0 oz)	2,140g (85.0 oz)	2,580g (91.0 oz)			34g (1.20 oz)
	ASY 30A ASG 30A	1,800g (63.5 oz)	1,885g (66.5 oz)	1,970g (69.5 oz)	2,055g (72.5 oz)	2,140g (75.5 oz)	2,225g (78.5 oz)	17g (0.60 oz)
	ASS 30A	1,800g (63.5 oz)	1,885g (66.5 oz)	1,970g (69.5 oz)	2,055g (72.5 oz)	2,140g (75.5 oz)	2,225g (78.5 oz)	17g (0.60 oz)
	ASY 30R ASG 30R	1,700g (60.0 oz)	1,950g (66.5 oz)	2,200g (69.5 oz)	2,450g (72.5 oz)	2,700g (75.5 oz)		50g (1.76 oz)
	ASS 30R	1,800g (63.5 oz)	2,100g (74.1 oz)	2,400g (84.7 oz)	2,700g (95.2 oz)	3,000g (106.0 oz)	3,300g (116.4 oz)	60g (2.12 oz)

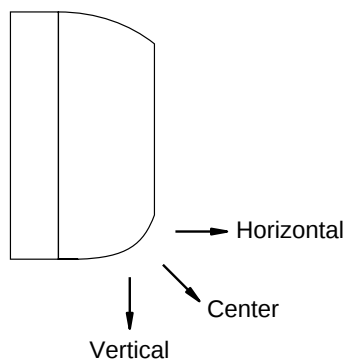
4.3.3 FLOOR / CEILING UNIVERSAL AB-SERIES

Pipe length Models		16ft (5m)	33ft (10m)	49ft (15m)	66ft (20m)	Additional refrigerant g/m(oz/ft)
FULL CHARGE AMOUNT	AB*14A	1,000g (35.2 oz)	1,150g (40.5 oz)			30g (1.06 oz)
	AB*14R	1,050g (36.9 oz)	1,200g (42.2 oz)			30g (1.06 oz)
	AB*18A	1,140g (40.1 oz)	1,200g (42.2 oz)	1,260g (44.4 oz)	1,320g (46.5 oz)	12g (0.42 oz)
	AB*18R	1,690g (59.5 oz)	1,940g (68.3 oz)	2,190g (77.1 oz)	2,440g (85.9 oz)	50g (1.76 oz)
	AB*24A (50Hz)	1,950g (68.6 oz)	2,010g (70.8 oz)	2,070g (72.9 oz)	2,130g (75.1 oz)	12g (0.42 oz)
	AB*24R (50Hz)	2,070g (72.9 oz)	2,320g (81.7 oz)	2,570g (90.5 oz)	2,820g (99.3 oz)	50g (1.76 oz)
	AB*24A (60Hz)	1,750g (61.6 oz)	1,810g (63.7 oz)	1,870g (65.8 oz)	1,930g (67.9 oz)	12g (0.42 oz)
	AB*24R (60Hz)	2,070g (72.9 oz)	2,320g (81.7 oz)	2,570g (90.5 oz)	2,820g (99.3 oz)	50g (1.76 oz)

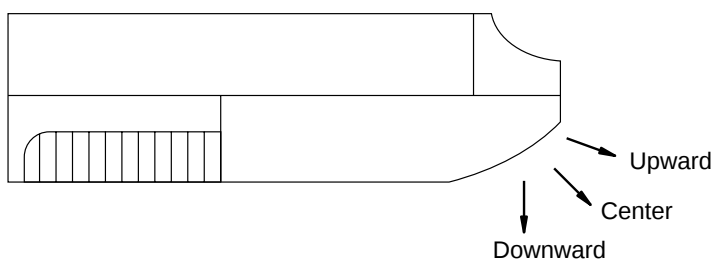
4.4 AIR VELOCITY DISTRIBUTION

4.4.1 AIR DISCHARGE ANGLE

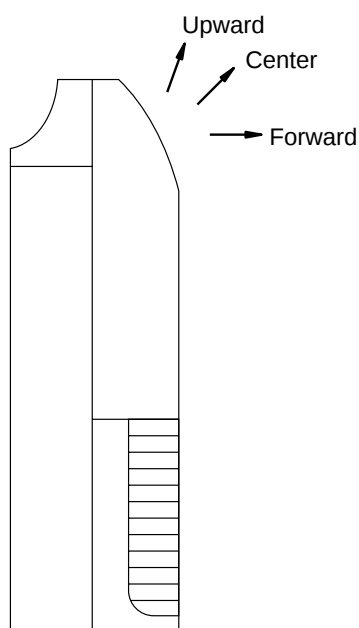
- AS : WALL MOUNTED



- AB : UNDER CEILING



- AB : FLOOR CONSOLE



4.4.2 COMPACT SII SERIES MODELS : AS * 7A, 7R

Note :

Fan speed : Hi

Operation : FAN

Voltage : 240V

Fig. 4.4.2-1

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

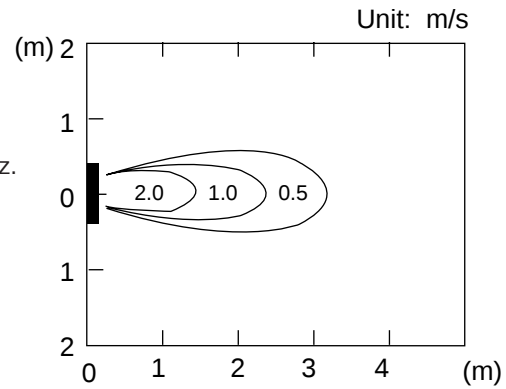


Fig. 4.4.2-2

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Right & Left

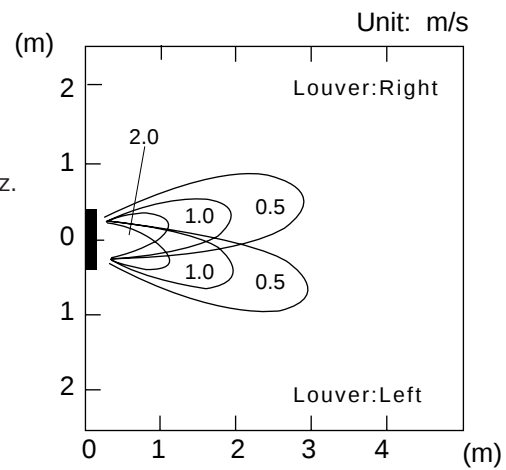


Fig. 4.4.2-3

SIDE VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

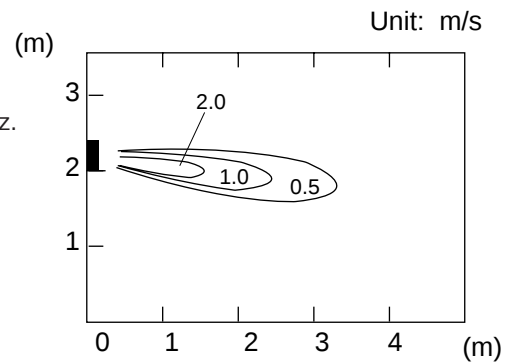
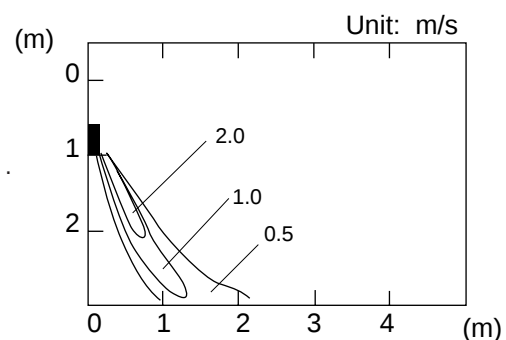


Fig. 4.4.2-4

SIDE VIEW

FLOW CONTROL PANEL : Vert .

LOUVER : Center



4.4.3 COMPACT MII SERIES MODELS : AS * 9A, 9R, 12A, 12R

Note :

Fan speed : Hi

Operation : FAN

Voltage : 240V

Fig. 4.4.3-1

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

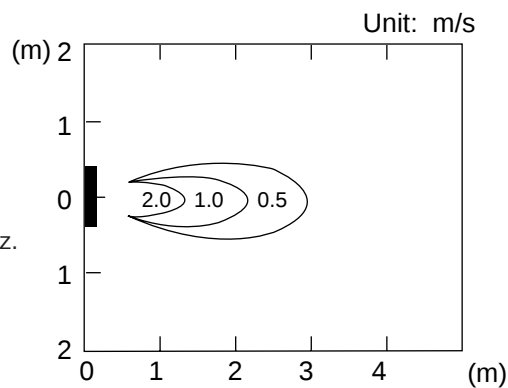


Fig. 4.4.3-2

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Right & Left

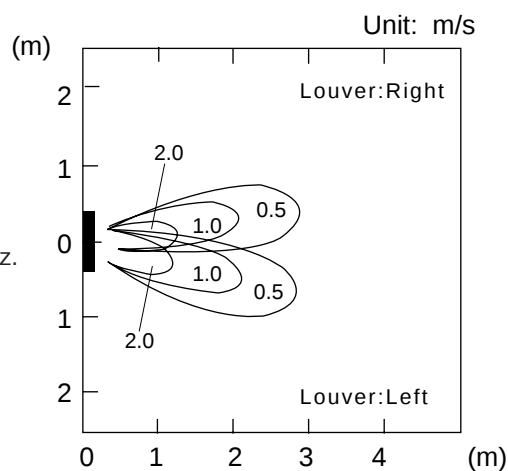


Fig. 4.4.3-3

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

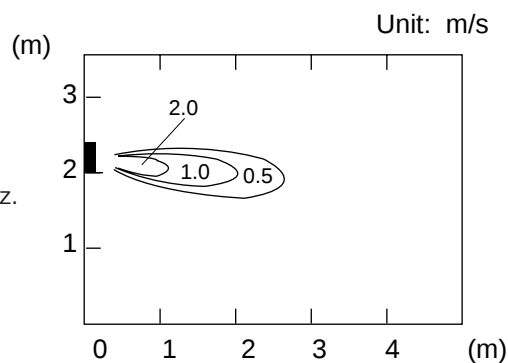
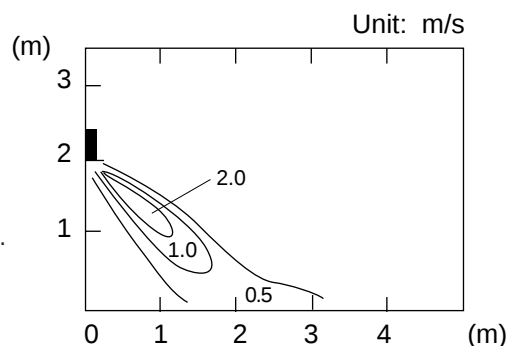


Fig. 4.4.3-4

TOP VIEW

FLOW CONTROL PANEL : Vert.

LOUVER : Center



4.4.4 AIR VELOCITY DISTRIBUTION

MODELS : AS * 20A, AS * 20R, ACS-7502 (50, 60Hz models)

Fig. 4.4.4-1

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

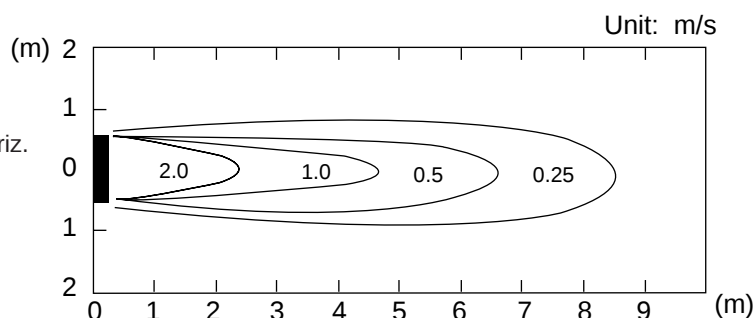
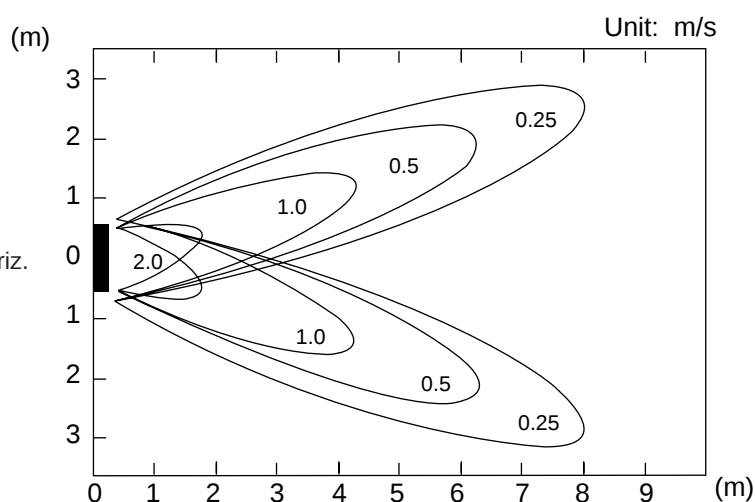


Fig. 4.4.4-2

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Right & Left



Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V

220V
(60Hz model)

Fig. 4.4.4-3

SIDE VIEW

FLOUNT CONTROL PANEL : Horiz.

LOUVER : Center

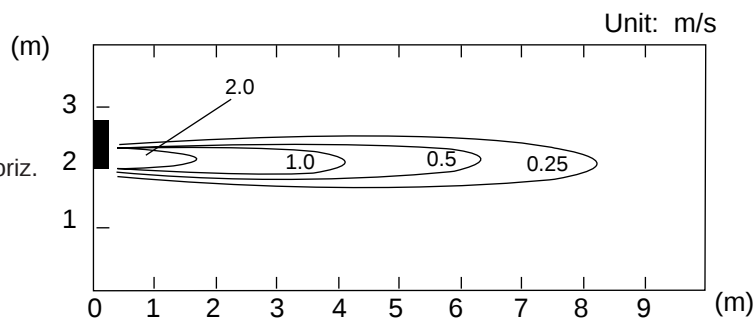
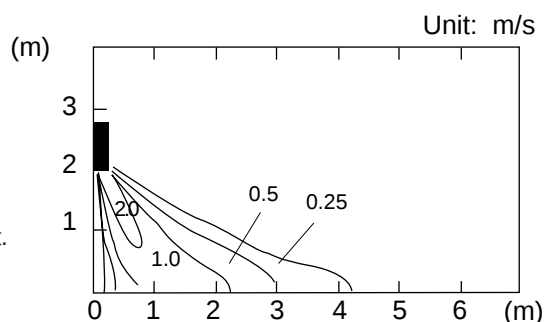


Fig. 4.4.4-4

SIDE VIEW

FLOW CONTROL PANEL : Vert.

LOUVER : Center



4.4.5 AIR VELOCITY DISTRIBUTION

MODELS : AS * 24A, AS * 24R, ACS-7602 (50, 60Hz models)

Fig. 4.4.5-1

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

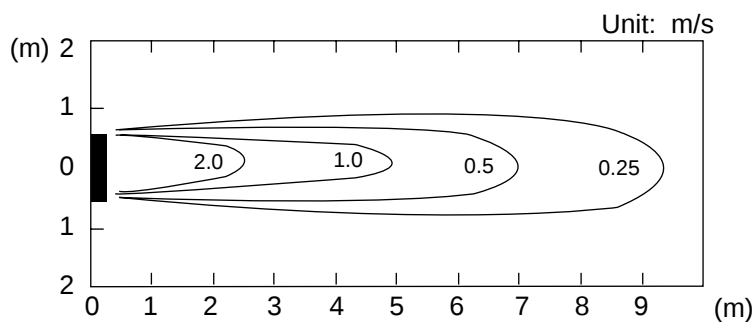
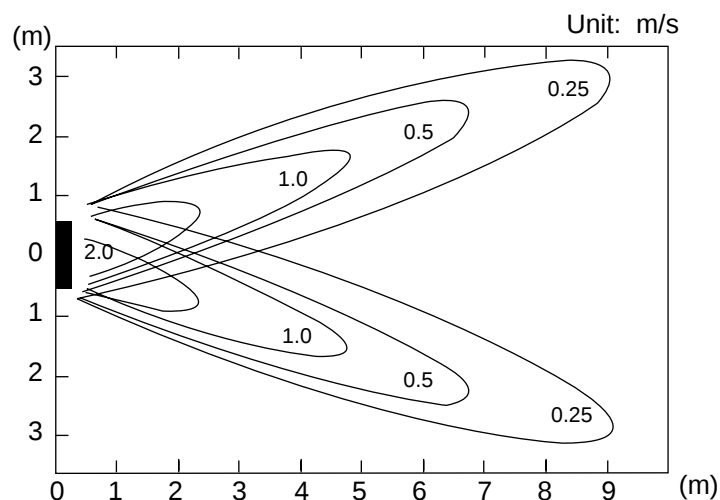


Fig. 4.4.5-2

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Right & Left



Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V

220V
(60Hz model)

Fig. 4.4.5-3

SIDE VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

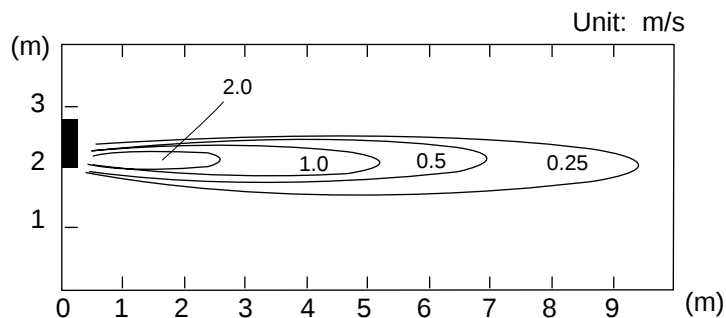
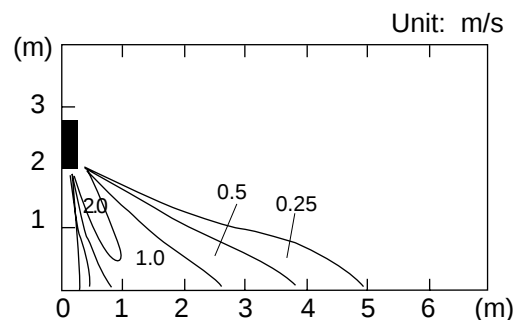


Fig. 4.4.5-4

SIDE VIEW

FLOW CONTROL PANEL : Vert.

LOUVER : Center



4.4.6 AIR VELOCITY DISTRIBUTION

MODELS : AS * 30A, AS * 30R (50, 60Hz models)

Fig. 4.4.6-1

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

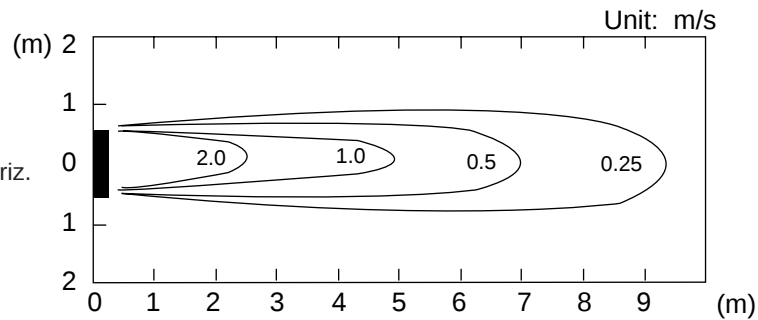
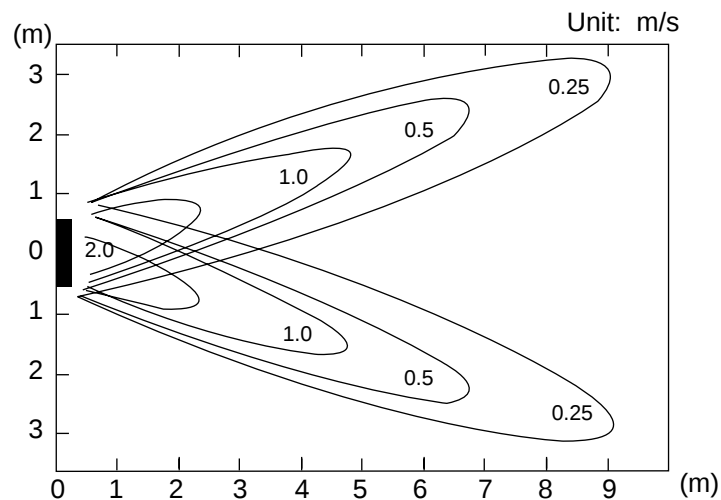


Fig. 4.4.6-2

TOP VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Right & Left



Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V

220V
(60Hz model)

Fig. 4.4.6-3

SIDE VIEW

FLOW CONTROL PANEL : Horiz.

LOUVER : Center

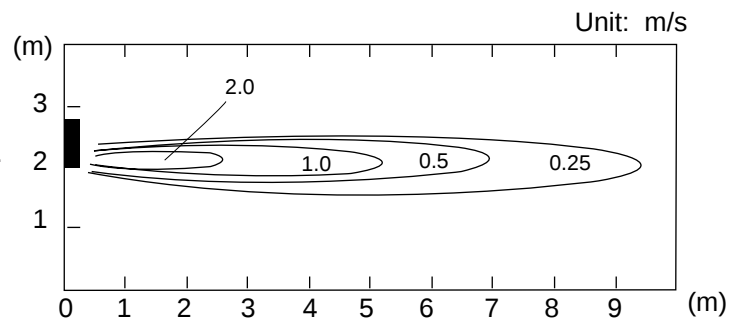
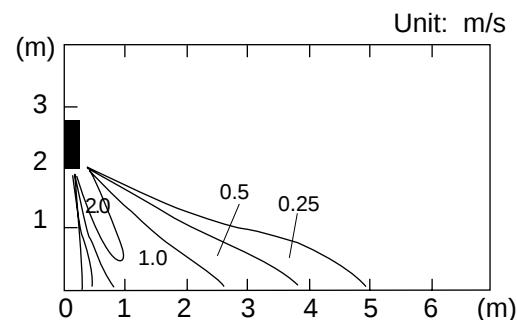


Fig. 4.4.6-4

SIDE VIEW

FLOW CONTROL PANEL : Vert.

LOUVER : Center



4.4.7 AIR VELOCITY DISTRIBUTION MODELS : AB * 14 (FLOOR CONSOLE)

Fig. 4.4.7-1
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

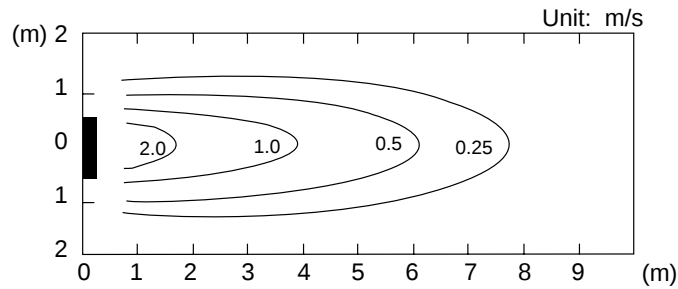
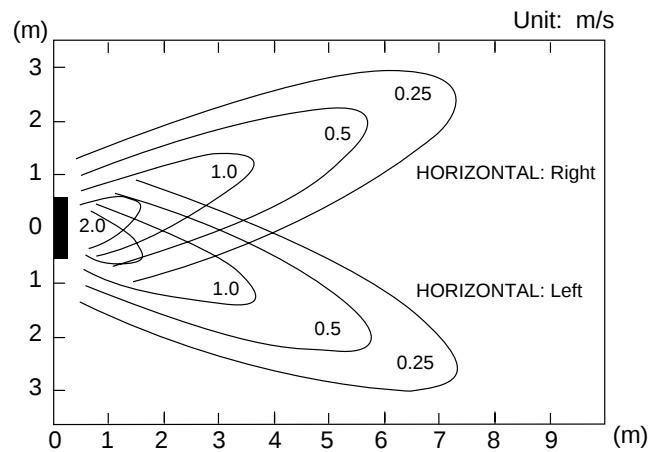


Fig. 4.4.7-2
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left



Note :
The location of vertical
louvers is shown on page
4-14.

Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V

Fig. 4.4.7-3
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

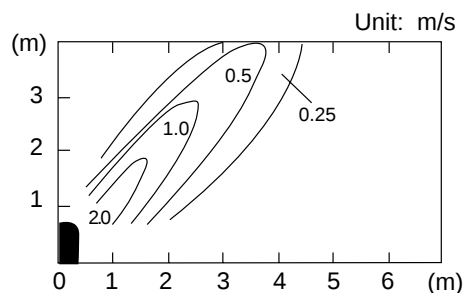
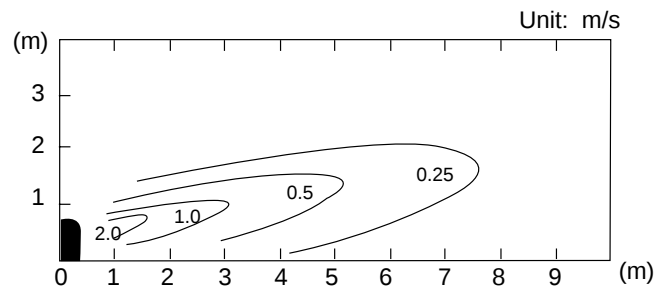


Fig. 4.4.7-4
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center

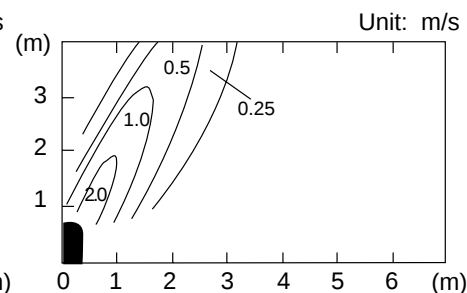


Fig. 4.4.7-5
SIDE VIEW
VERTICAL : Upward
HORIZONTAL : Center

4.4.8 AIR VELOCITY DISTRIBUTION MODELS : AB * 14 (UNDER CEILING)

Fig. 4.4.8-1
TOP VIEW
VERTICAL : Upward
HORIZONTAL : Center

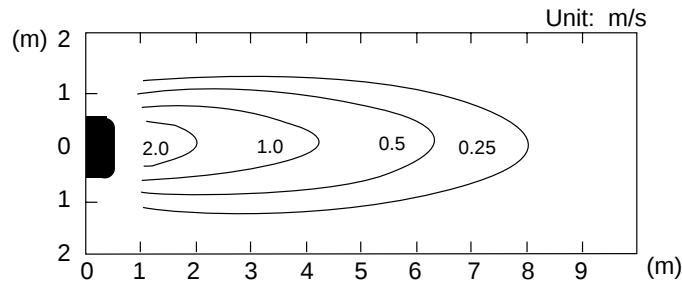
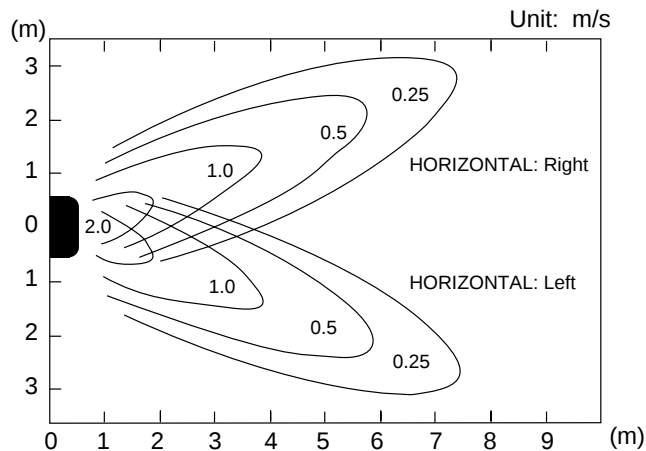


Fig. 4.4.8-2
TOP VIEW
VERTICAL : Upward
HORIZONTAL : Right & Left



Note :
The location of vertical
louvers is shown on page
4-14.

Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V

Fig. 4.4.8-3
SIDE VIEW
VERTICAL : Upward
HORIZONTAL : Center

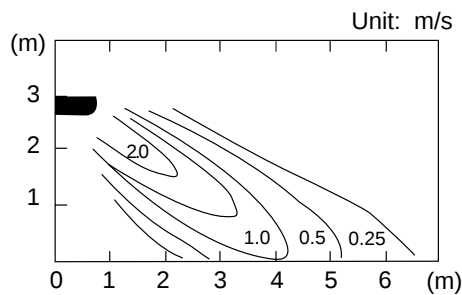
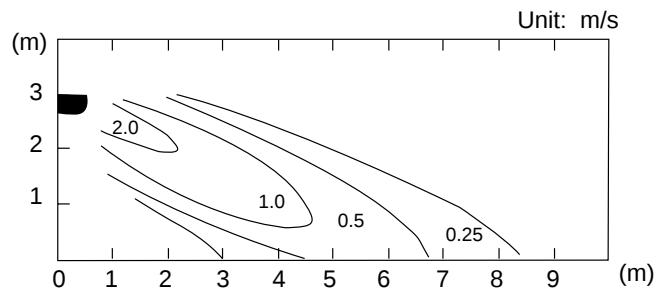


Fig. 4.4.8-4
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center

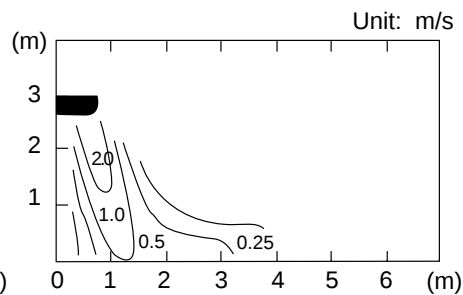


Fig. 4.4.8-5
SIDE VIEW
VERTICAL : Downward
HORIZONTAL : Center

4.4.9 AIR VELOCITY DISTRIBUTION MODELS : AB * 18 (FLOOR CONSOLE)

Fig. 4.4.9-1
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

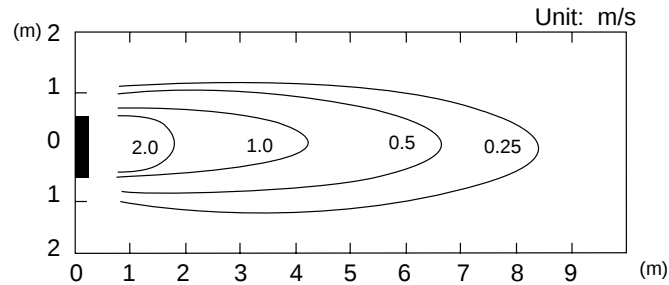
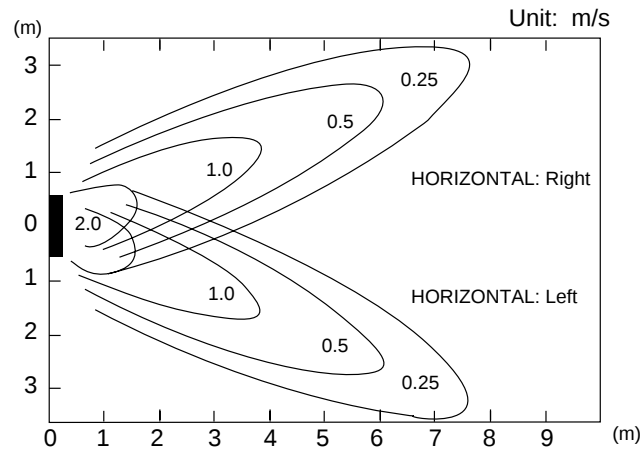


Fig. 4.4.9-2
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left



Note :
The location of vertical
louvers is shown on page
4-14.

Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V

Fig. 4.4.9-3
SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center

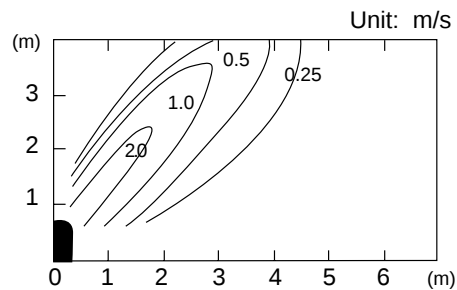
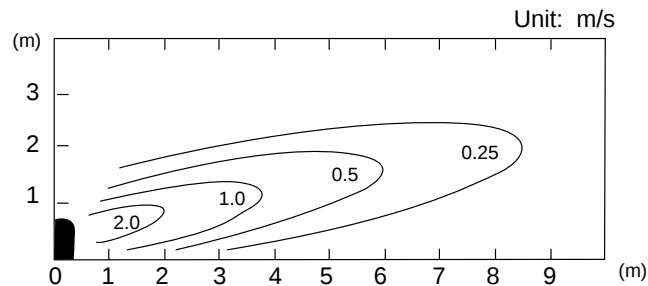


Fig. 4.4.9-4
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center

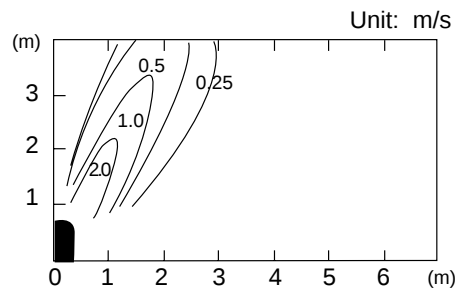


Fig. 4.4.9-5
SIDE VIEW
VERTICAL : Upward
HORIZONTAL : Center

4.4.10 AIR VELOCITY DISTRIBUTION MODELS : AB * 18 (UNDER CEILING)

Fig. 4.4.10-1

TOP VIEW

VERTICAL : Upward

HORIZONTAL : Center

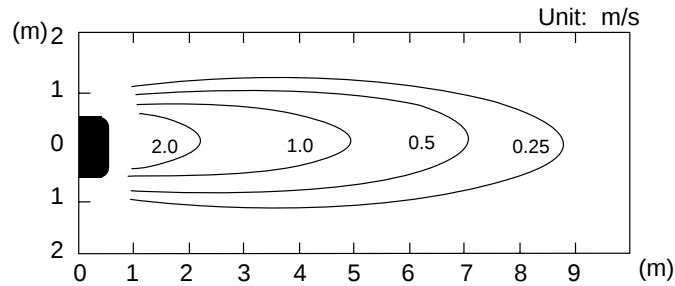
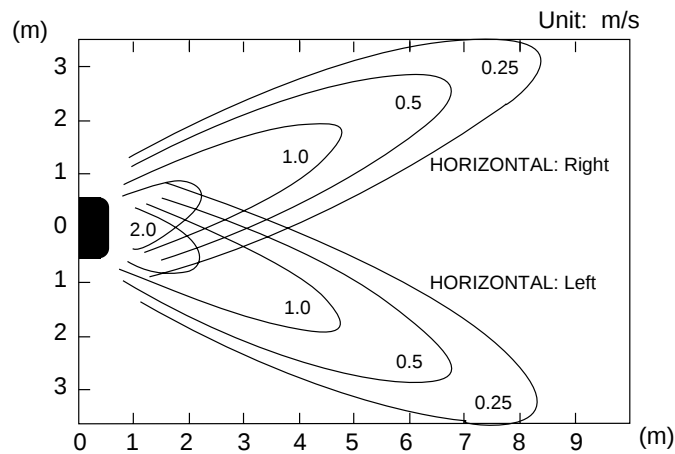


Fig. 4.4.10-2

TOP VIEW

VERTICAL : Upward

HORIZONTAL : Right & Left



Note :

The location of vertical
louvers is shown on page
4-14.

Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V

Fig. 4.4.10-3

SIDE VIEW

VERTICAL : Forward

HORIZONTAL : Center

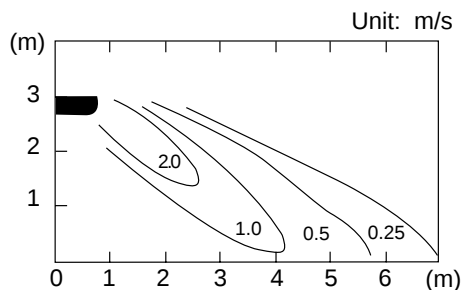
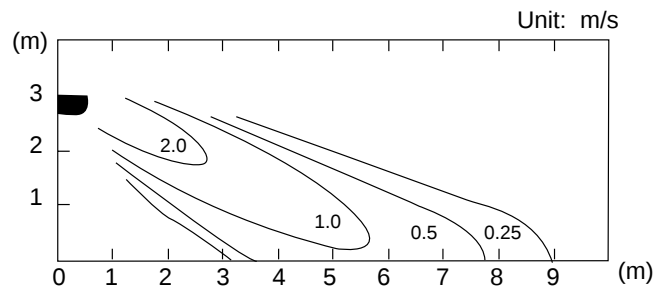


Fig. 4.4.10-4

SIDE VIEW

VERTICAL : Center

HORIZONTAL : Center

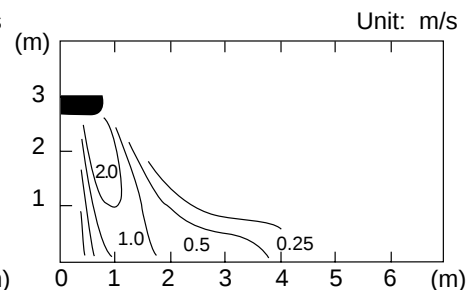


Fig. 4.4.10-5

SIDE VIEW

VERTICAL : Downward

HORIZONTAL : Center

4.4.11 AIR VELOCITY DISTRIBUTION MODELS : AB * 24 (FLOOR CONSOLE)

Fig. 4.4.11-1

TOP VIEW

VERTICAL : Forward

HORIZONTAL : Center

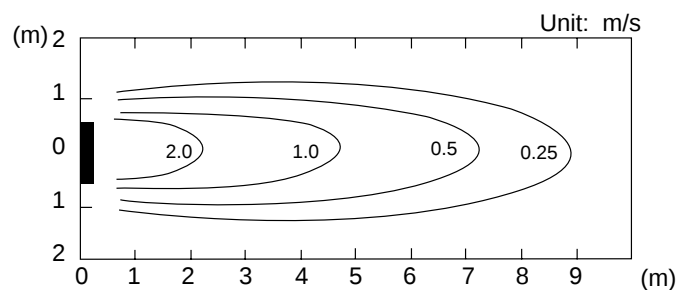
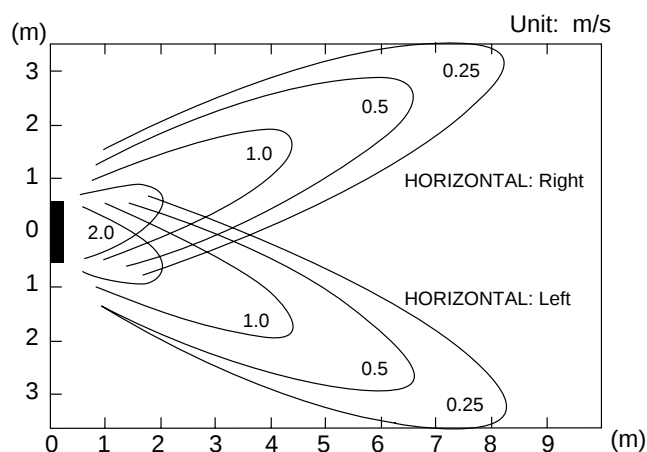


Fig. 4.4.11-2

TOP VIEW

VERTICAL : Forward

HORIZONTAL : Right & Left



Note :

The location of vertical
louvers is shown on page
4-14.

Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V (50Hz)

220V (60Hz)

Fig. 4.4.11-3

SIDE VIEW

VERTICAL : Forward

HORIZONTAL : Center

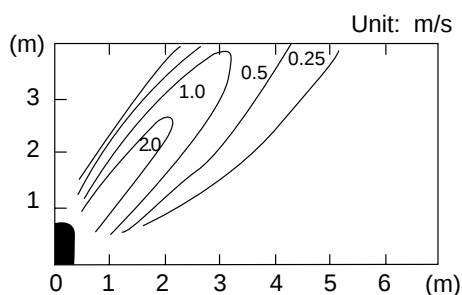
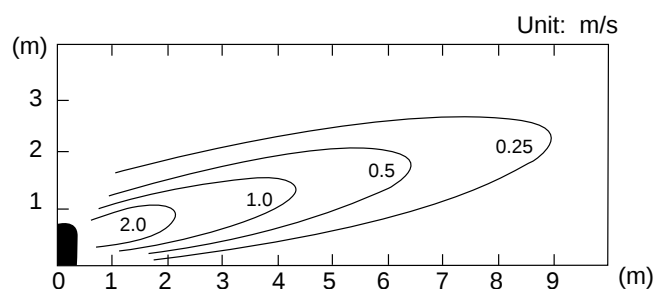


Fig. 4.4.11-4

SIDE VIEW

VERTICAL : Center

HORIZONTAL : Center

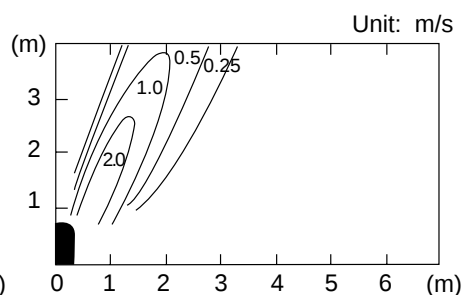


Fig. 4.4.11-5

SIDE VIEW

VERTICAL : Upward

HORIZONTAL : Center

4.4.12 AIR VELOCITY DISTRIBUTION MODELS : AB * 24 (UNDER CEILING)

Fig. 4.4.12-1

TOP VIEW

VERTICAL : Upward

HORIZONTAL : Center

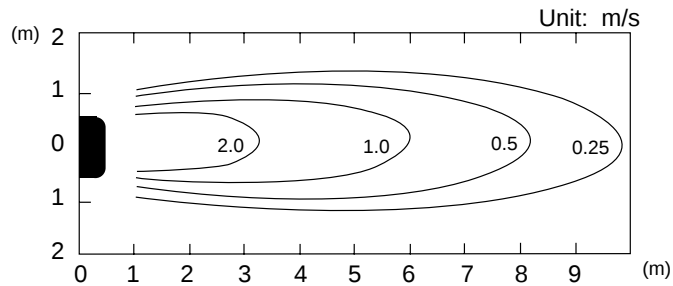
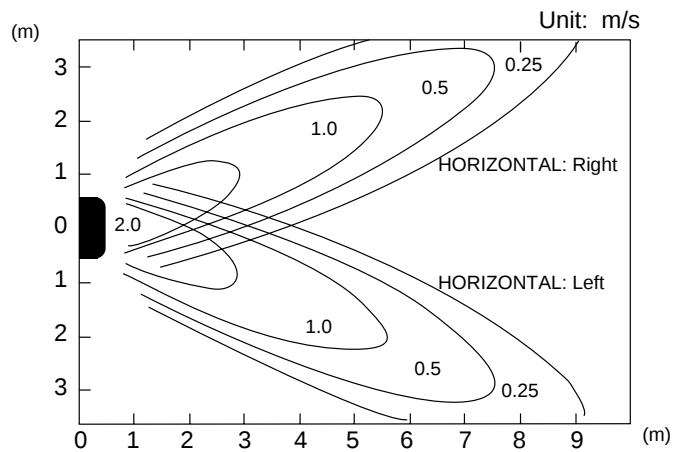


Fig. 4.4.12-2

TOP VIEW

VERTICAL : Upward

HORIZONTAL : Right & Left



Note :

The location of vertical
louvers is shown on page
4-14.

Condition

Fan speed : High

Operation mode : Fan

Voltage : 240V (50Hz)

220V (60Hz)

Fig. 4.4.12-3

SIDE VIEW

VERTICAL : Upward

HORIZONTAL : Center

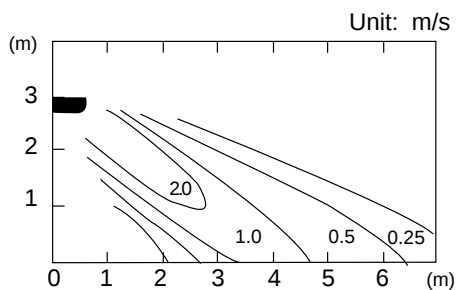
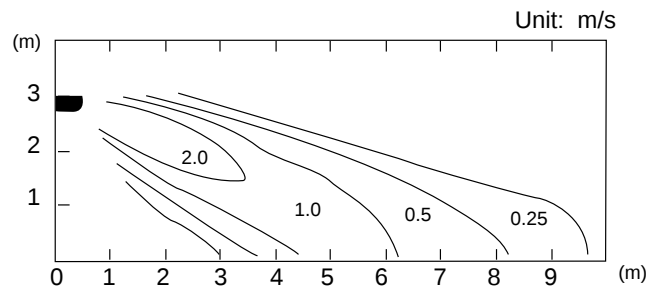


Fig. 4.4.12-4

SIDE VIEW

VERTICAL : Center

HORIZONTAL : Center

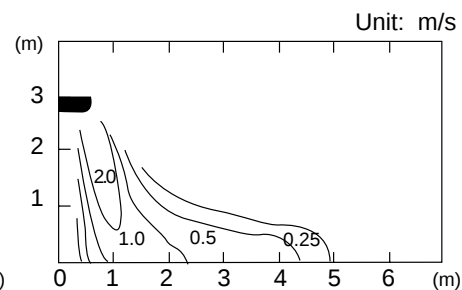


Fig. 4.4.12-5

SIDE VIEW

VERTICAL : Downward

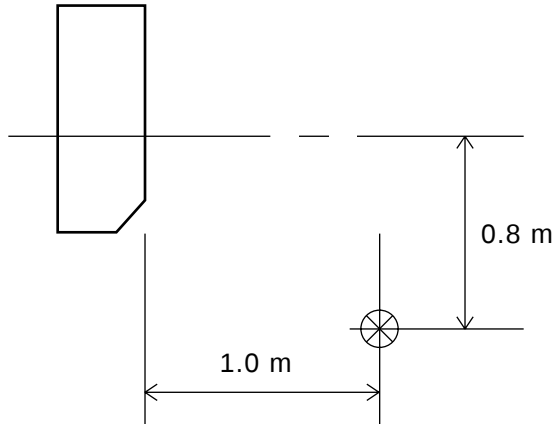
HORIZONTAL : Center

4.5 NOISE LEVEL MEASUREMENT

4.5.1 NOISE LEVEL CHECK POINTS

WALL MOUNTED TYPE

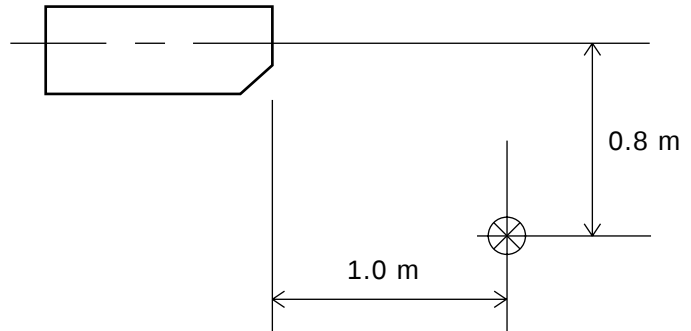
(1) INDOOR UNIT



UNIVERSAL TYPE

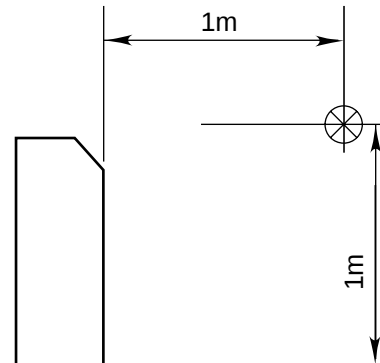
(1) INDOOR UNIT

UNDER CEILING TYPE

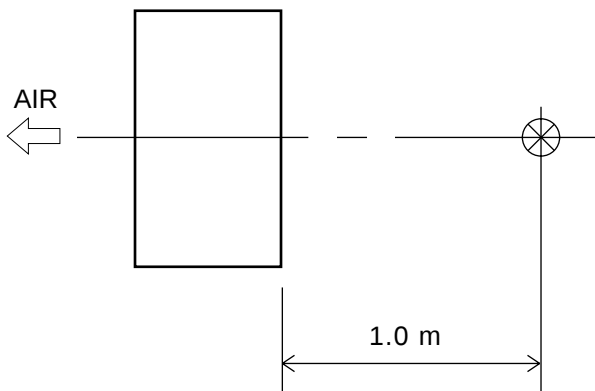


(1) INDOOR UNIT

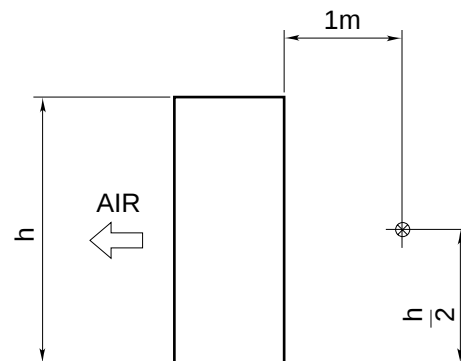
FLOOR CONSOLE TYPE



(2) OUTDOOR UNIT



(2) OUTDOOR UNIT



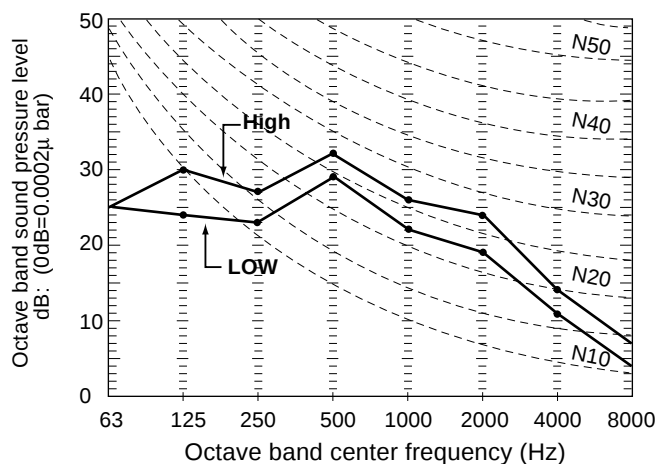
4.5.2 NOISE LEVEL CURVE COMPACT SII SERIES

MODELS : AS * 7A, 7R

INDOOR UNIT

Mode : Cool

240V / 50Hz

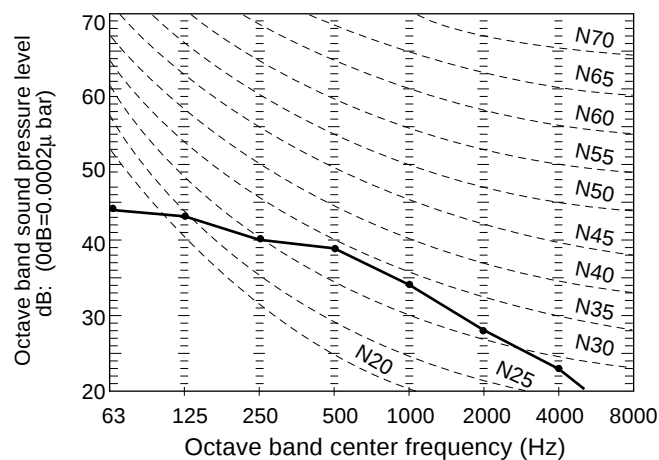


OUTDOOR UNIT

Mode : Cool

240V / 50Hz

Model : AS*7A

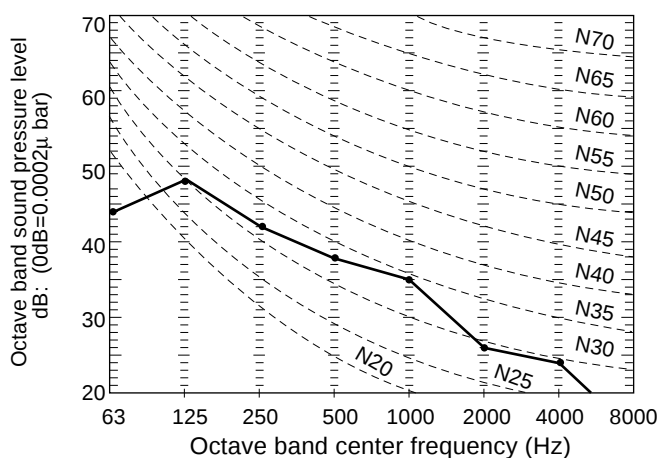


OUTDOOR UNIT

Mode : Cool

240V / 50Hz

Model : AS*7R

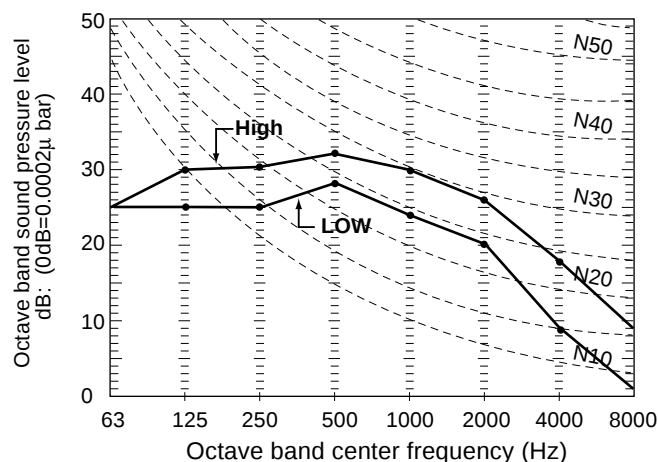


4.5.3 NOISE LEVEL CURVE COMPACT M II SERIES MODELS : AS * 9A, 9R, 12A, 12R

INDOOR UNIT

Mode : Cool

240V / 50Hz



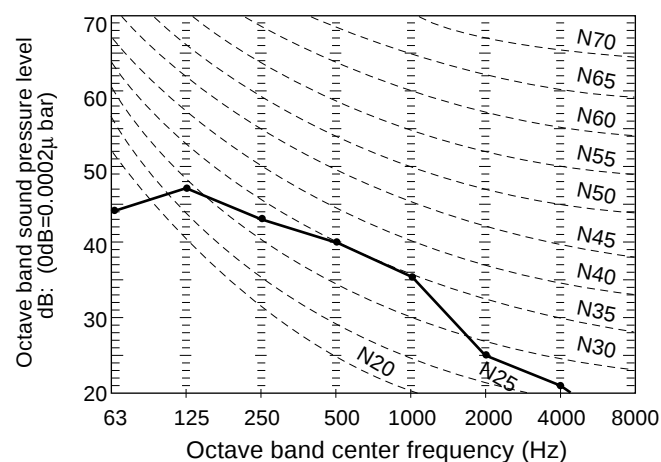
OUTDOOR UNIT

Mode : Cool

240V / 50Hz

Model : AO*9A

Model : AO*12A



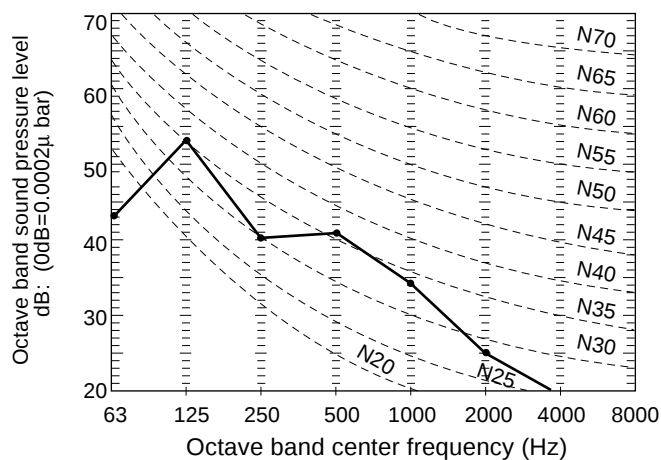
OUTDOOR UNIT

Mode : Cool

240V / 50Hz

Model : AO*9R

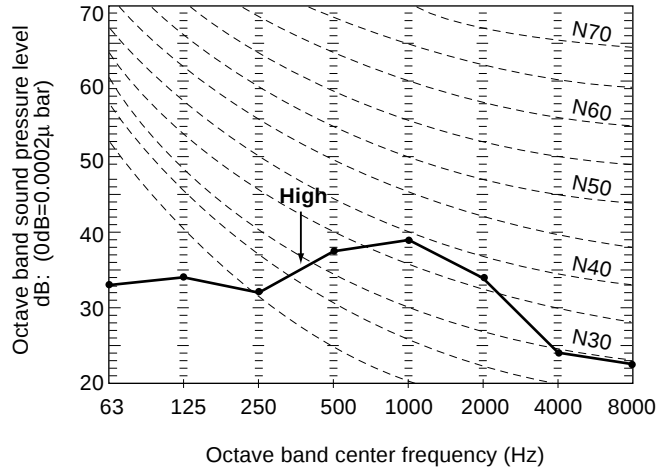
Model : AO*12R



4.5.4 NOISE LEVEL CURVE WALL MOUNTED LARGE TYPE

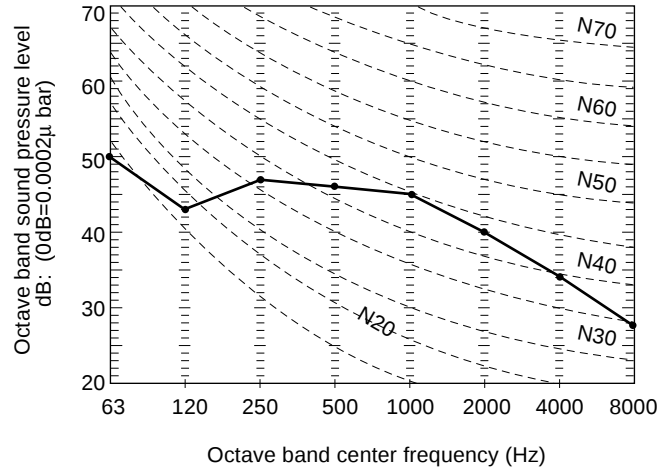
■ INDOOR UNIT SIDE

AS*20A, AS*20R (50Hz models)
ASS20A, ASS20R, ACS-7502 (60Hz models)

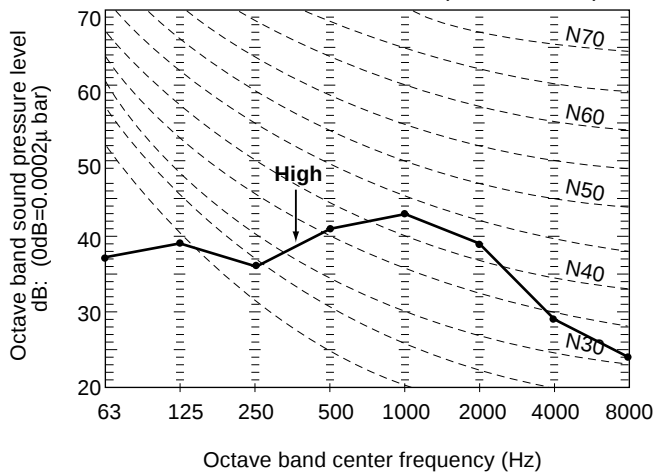


■ OUTDOOR UNIT SIDE

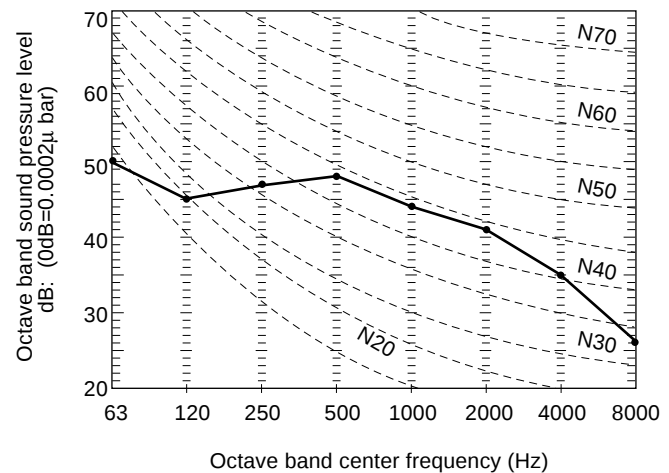
AO*20A, AO*20R



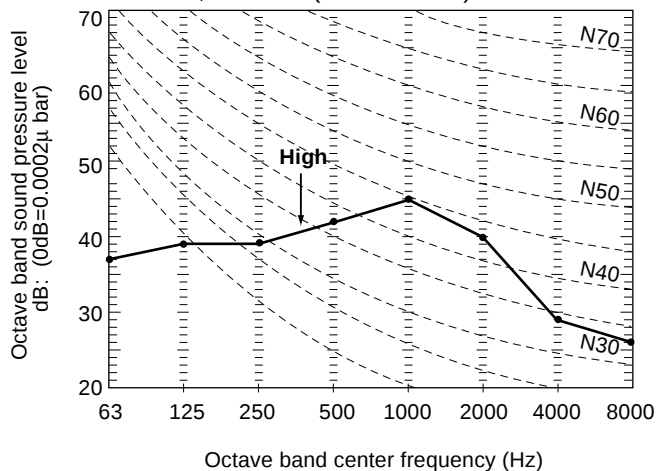
AS*24A, AS*24R (50Hz models)
ASS24A, ASS24R, ACS-7602 (60Hz models)



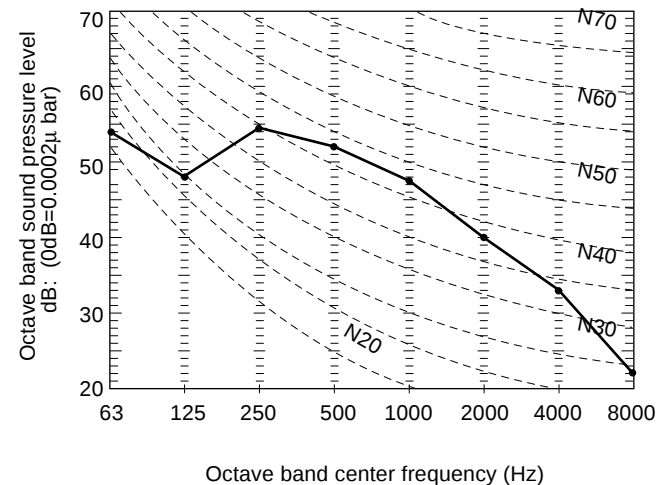
AO*24A, AO*24R



AS*30A, AS*30R (50Hz models)
ASS30A, ASS30R (60Hz models)



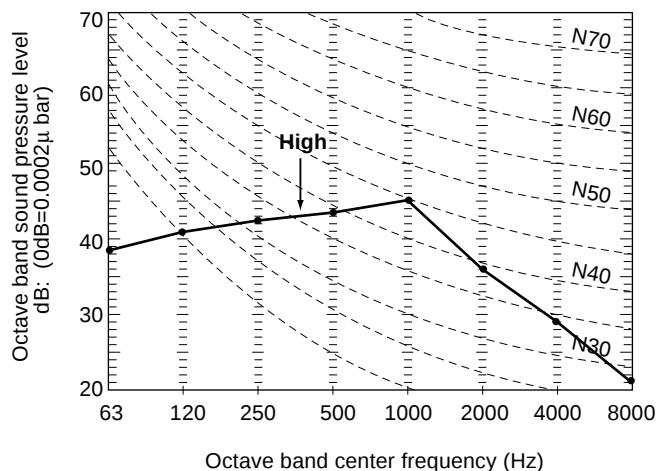
AO*30A, AO*30R



4.5.5 NOISE LEVEL CURVE FLOOR / CEILING UNIVERSAL TYPE

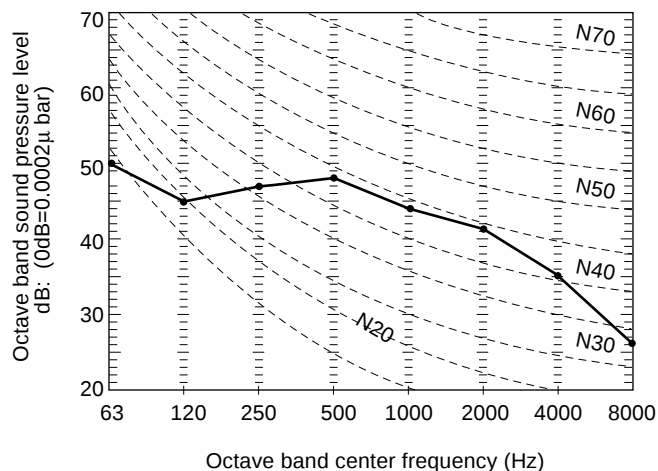
■ INDOOR UNIT SIDE

AB *24A, AB *24R

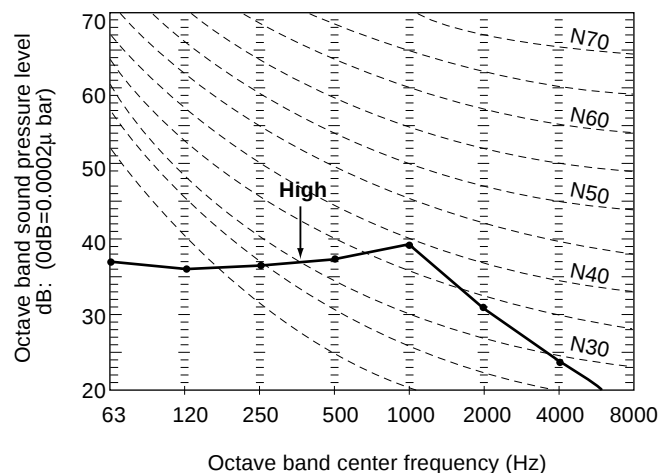


■ OUTDOOR UNIT SIDE

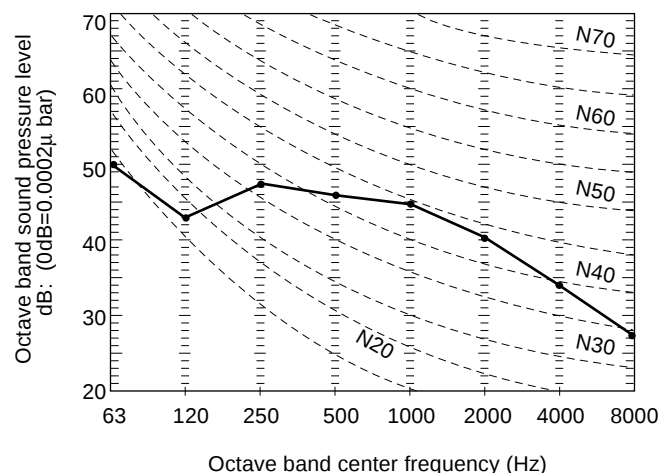
AO *24A, AO *24R



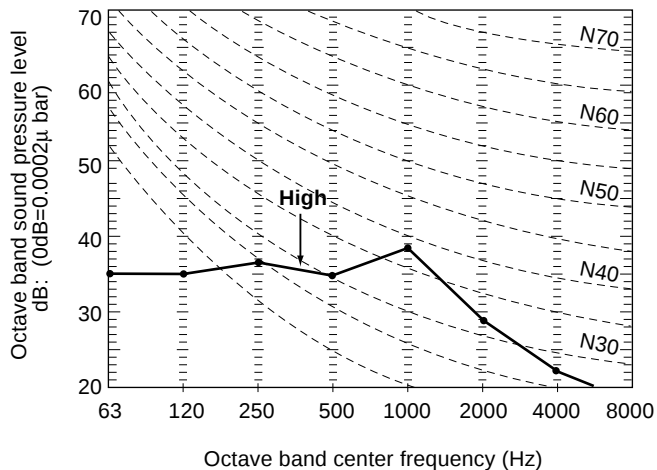
AB *18A, AB *18R



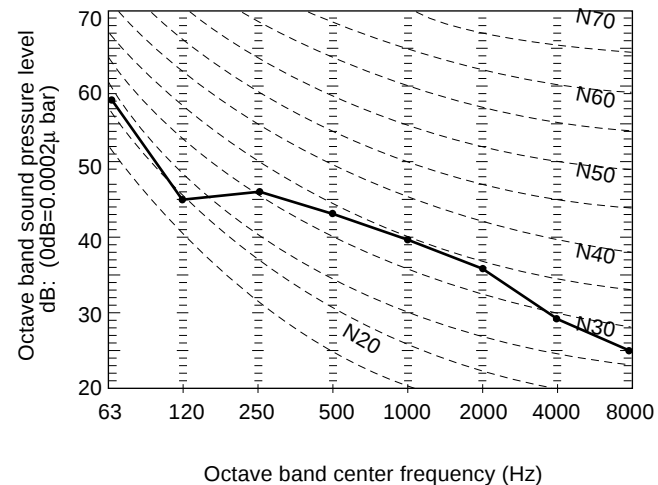
AO *18A, AO *18R



AB *14A, AB *14R



AO *14A, AO *14R

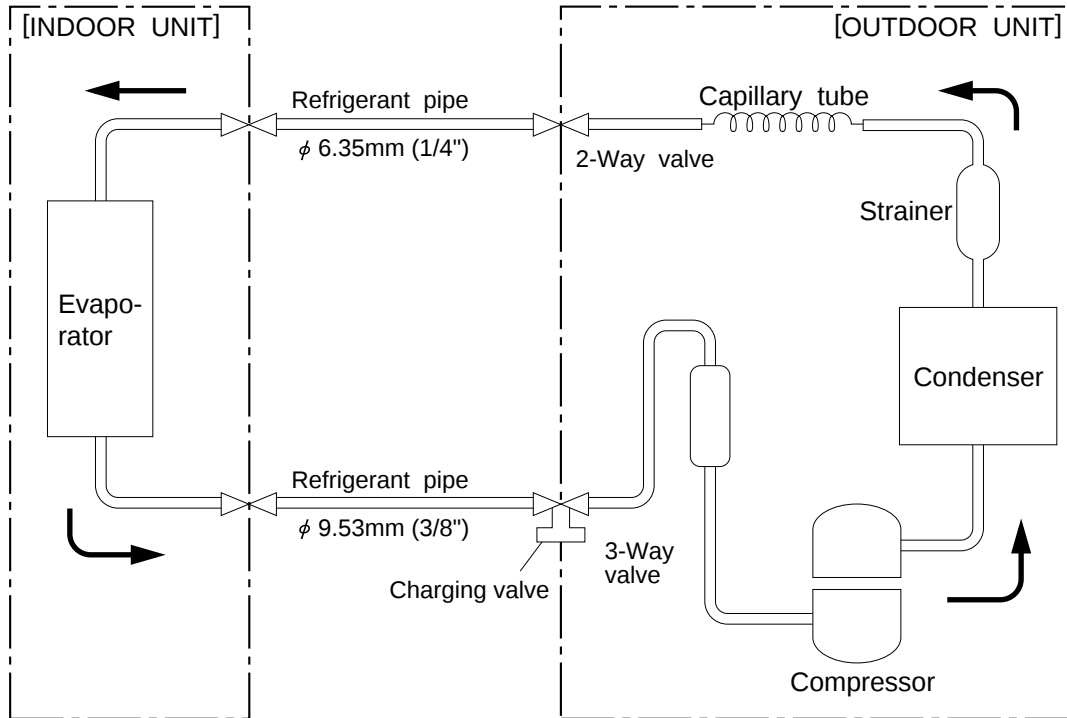


5. DIAGRAMS

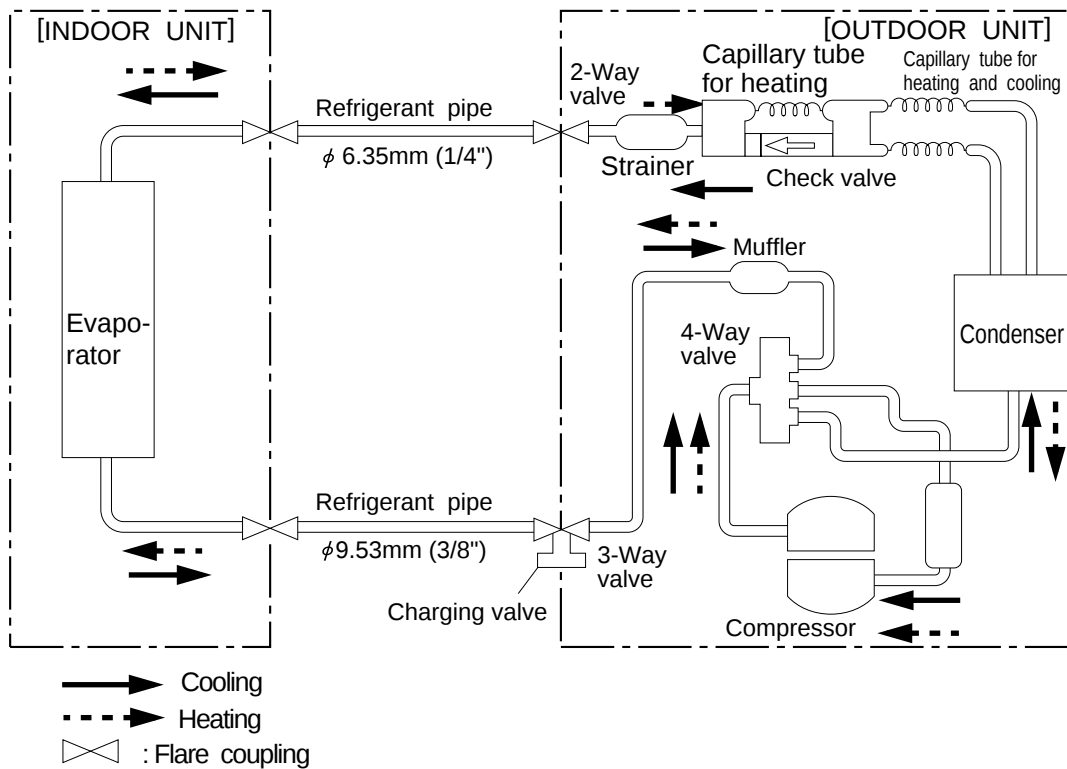
5.1 REFRIGERANT SYSTEM DIAGRAM

5.1.1 COMPACT S II SERIES

Models : AS*7A / AO*7A

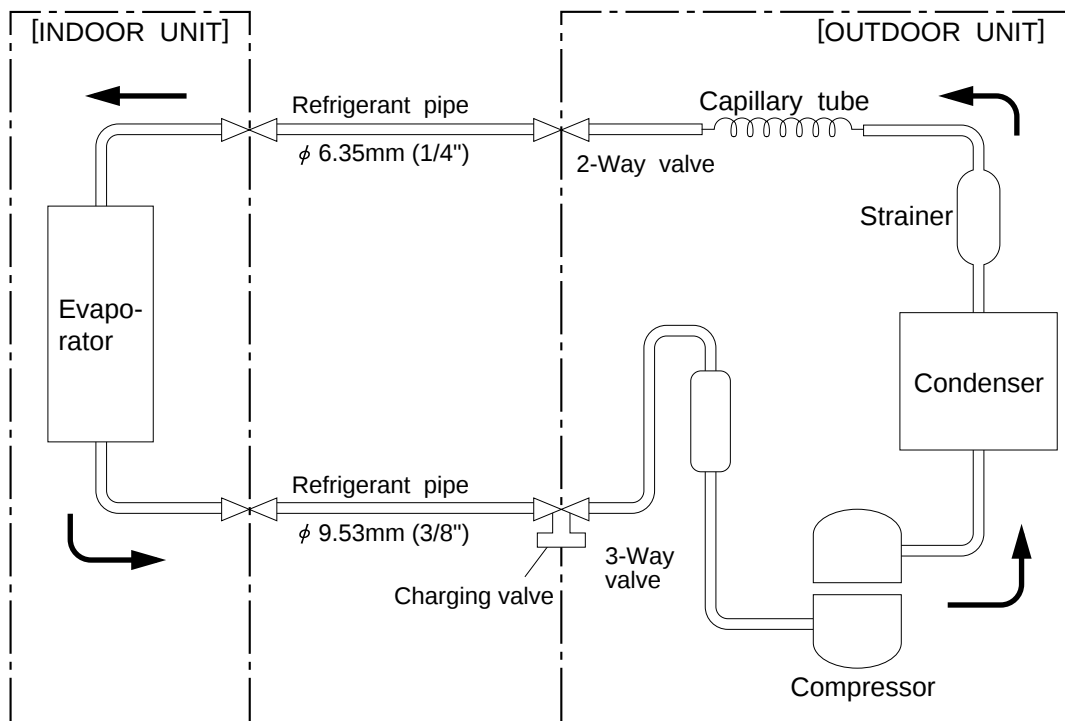


Models : AS*7R / AO*7R

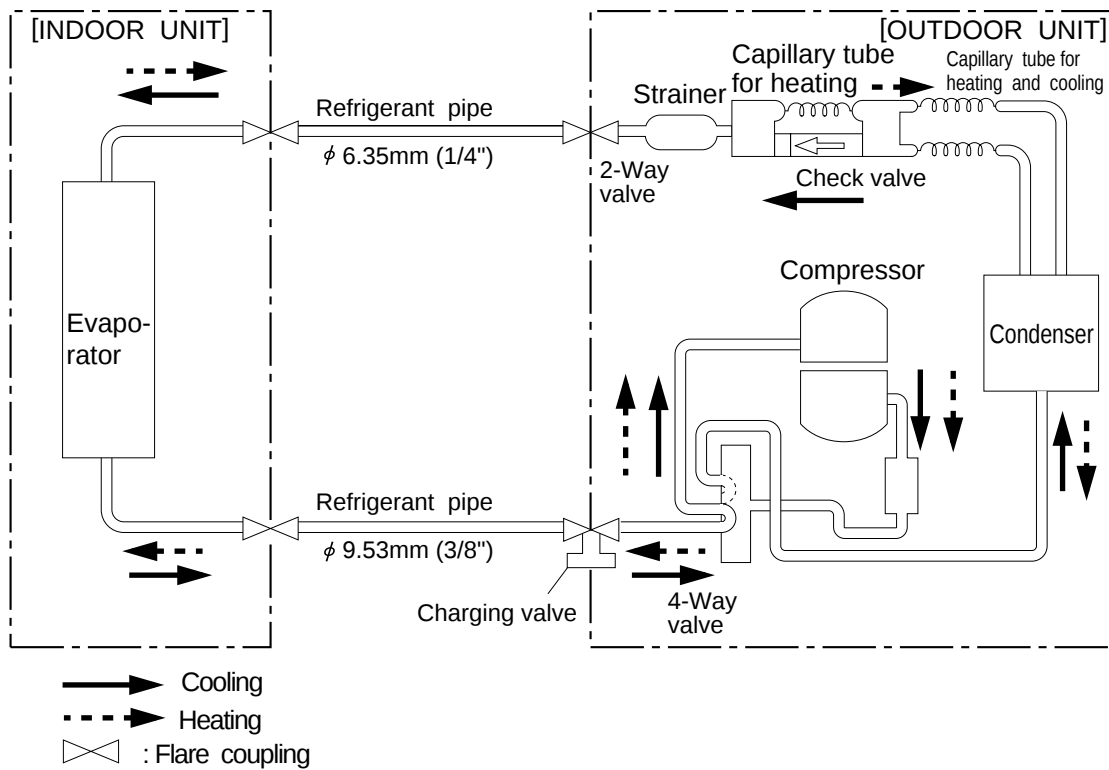


5.1.2 COMPACT M II SERIES

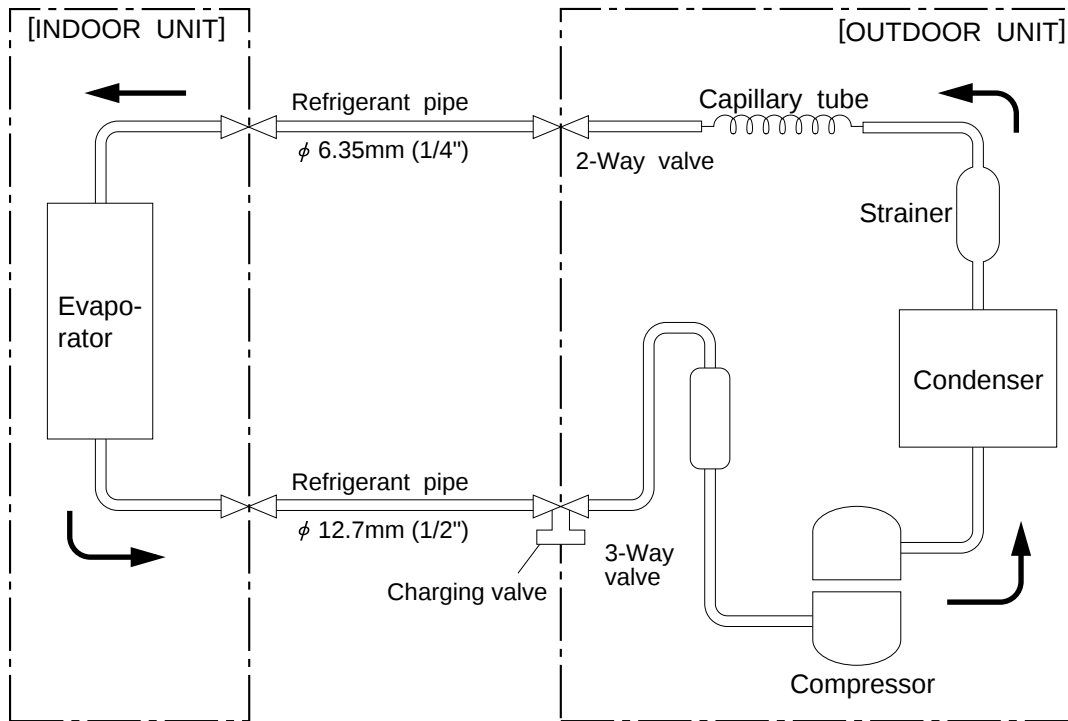
Models : AS*9A / AO*9A



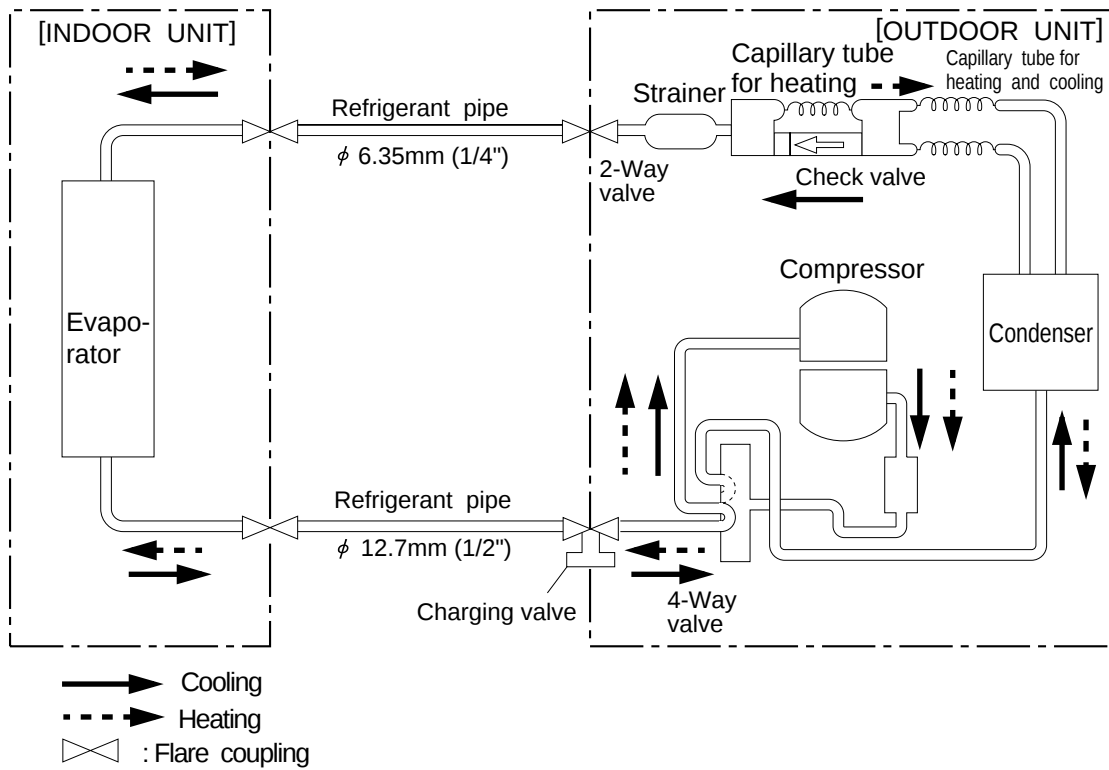
Models : AS*9R / AO*9R



Models : AS*12A / AO*12A

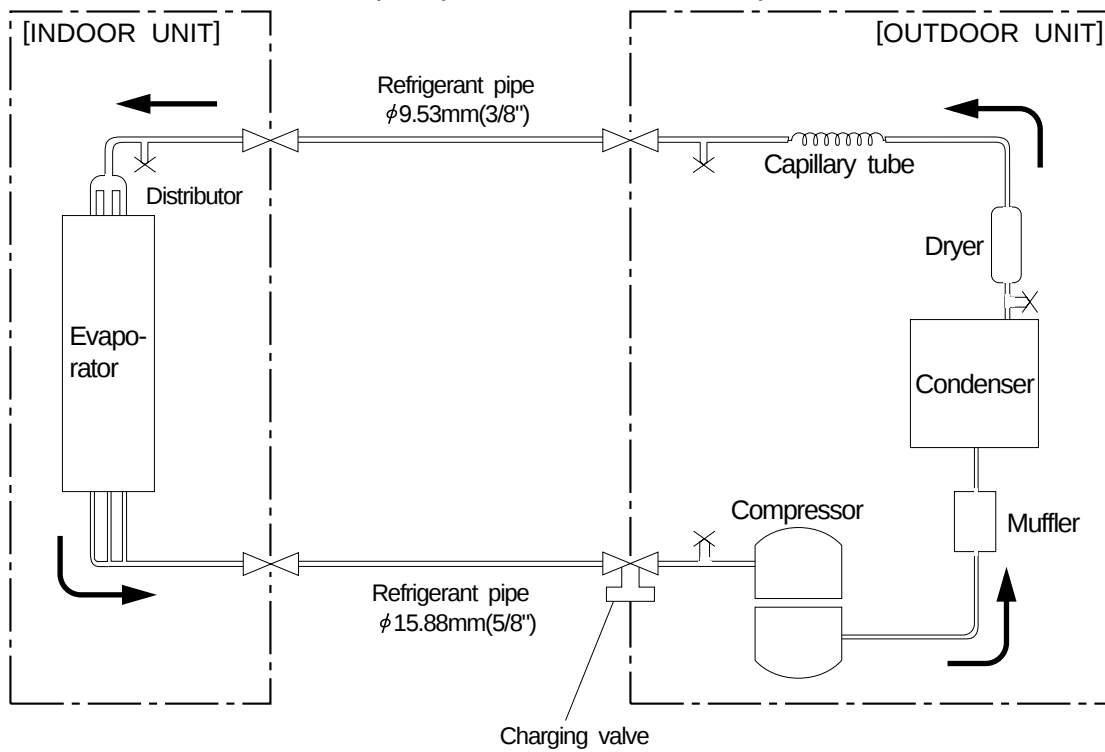


Models : AS*12R / AO*12R

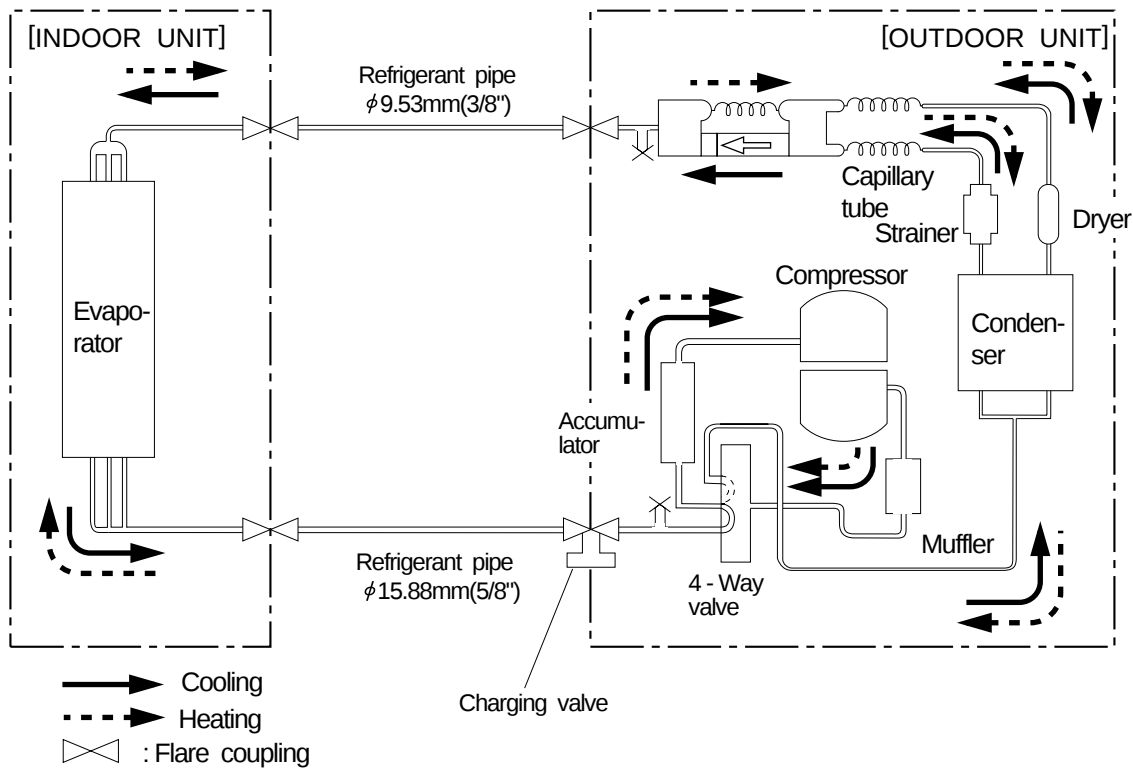


5.1.3 WALL MOUNTED LARGE AS-TYPE

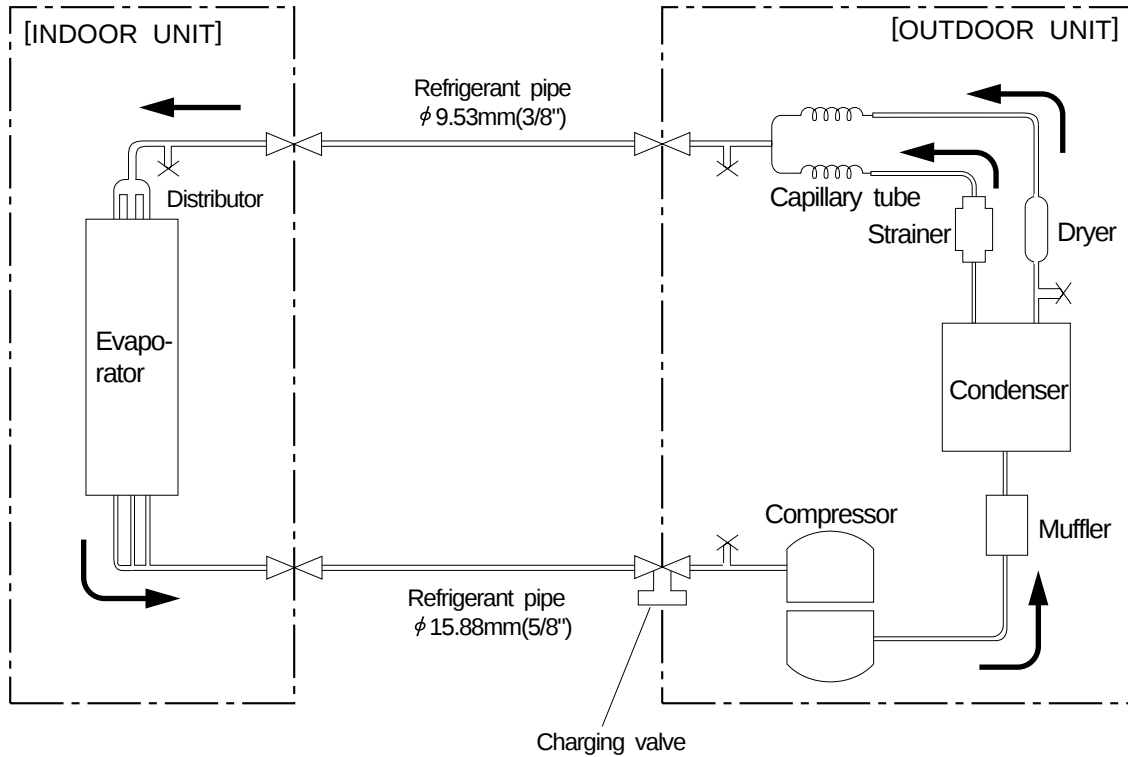
Models : AS*20A/AO*20A (except ACS-7502/ACO-7502)



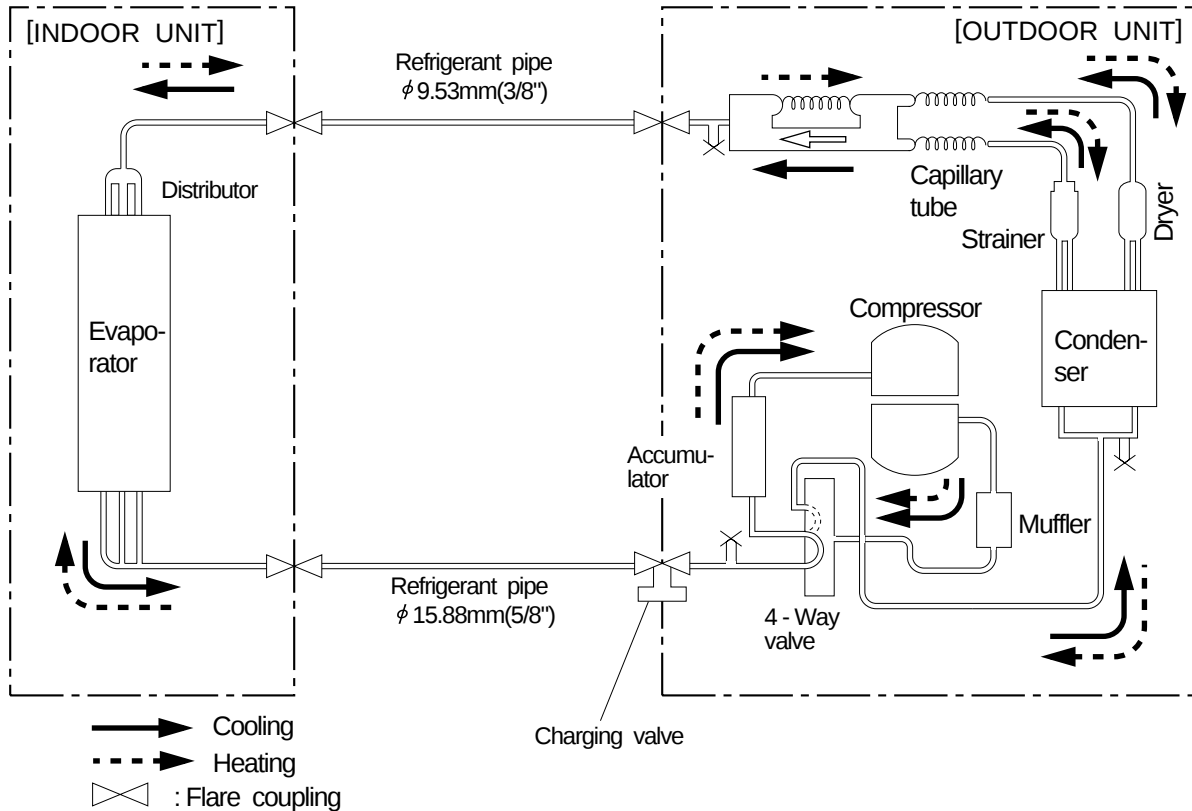
Models : AS*20R/AO*20R



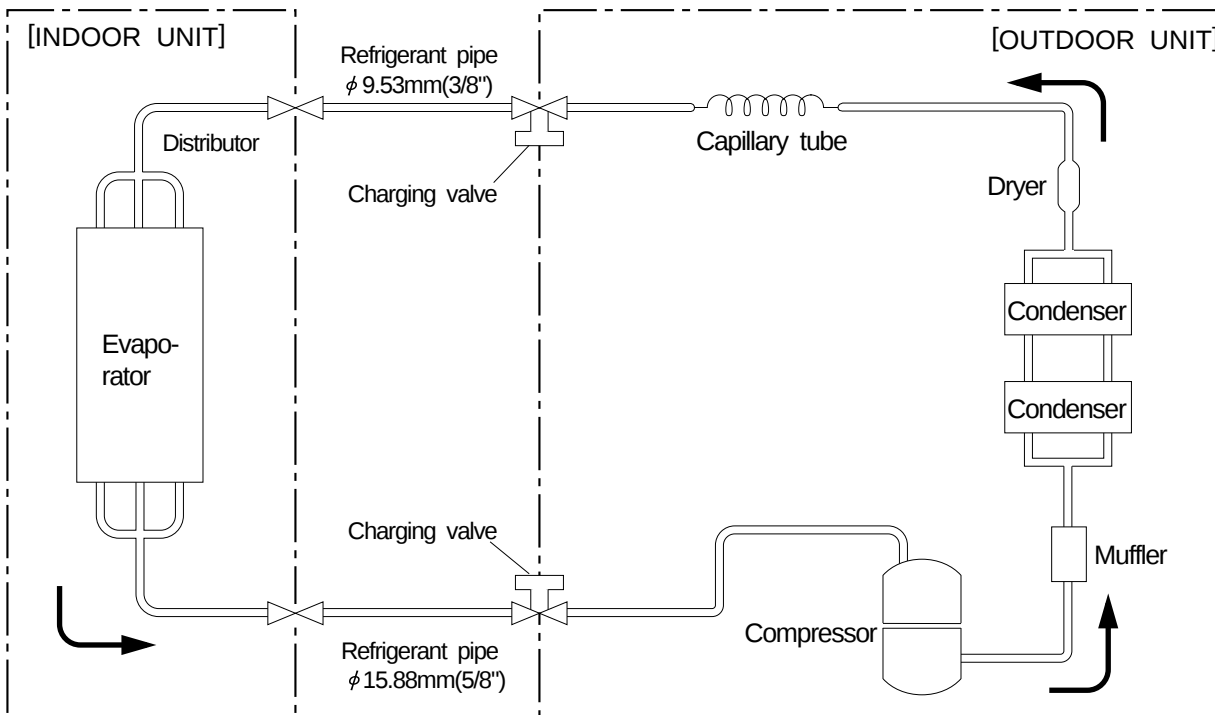
Models : AS*24A/AO*24A (except ACS-7602/ACO-7602)



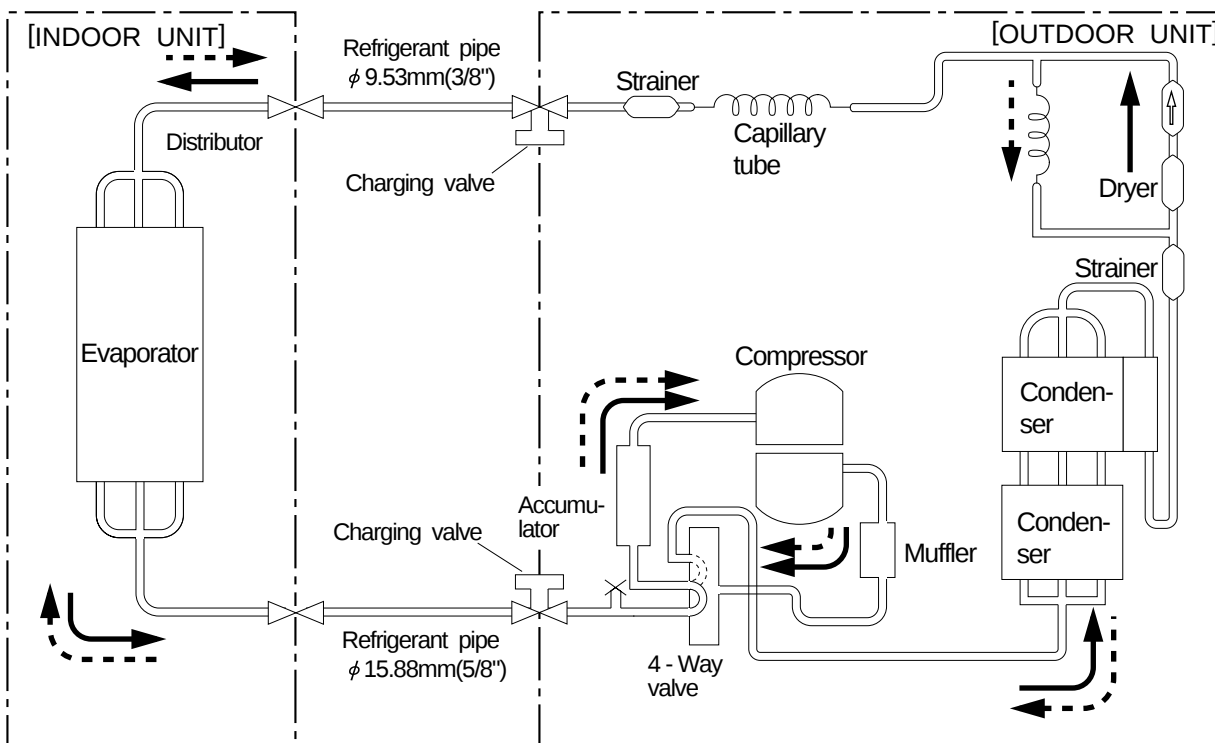
Models : AS*24R/AO*24R



Models : AS*30A/AO*30A

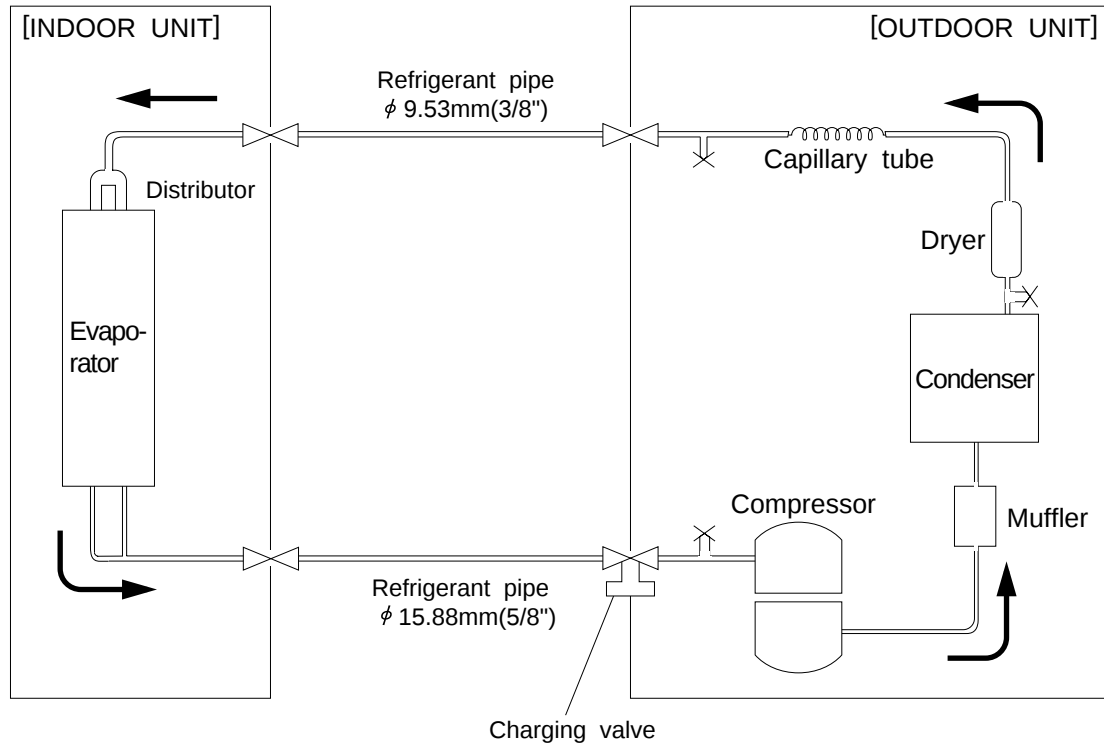


Models : AS*30R/AO*30R

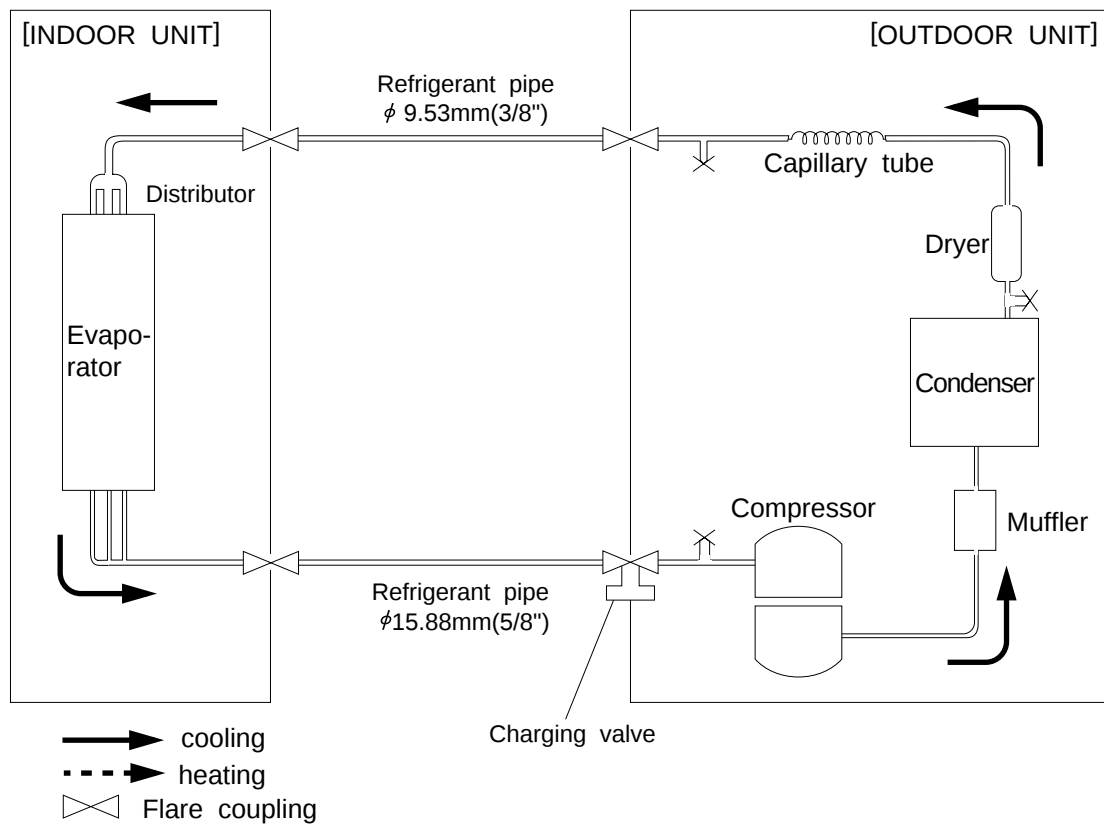


—————> Cooling
 - - - - -> Heating
 X : Flare coupling

Models : ACS-7502 / ACO-7502

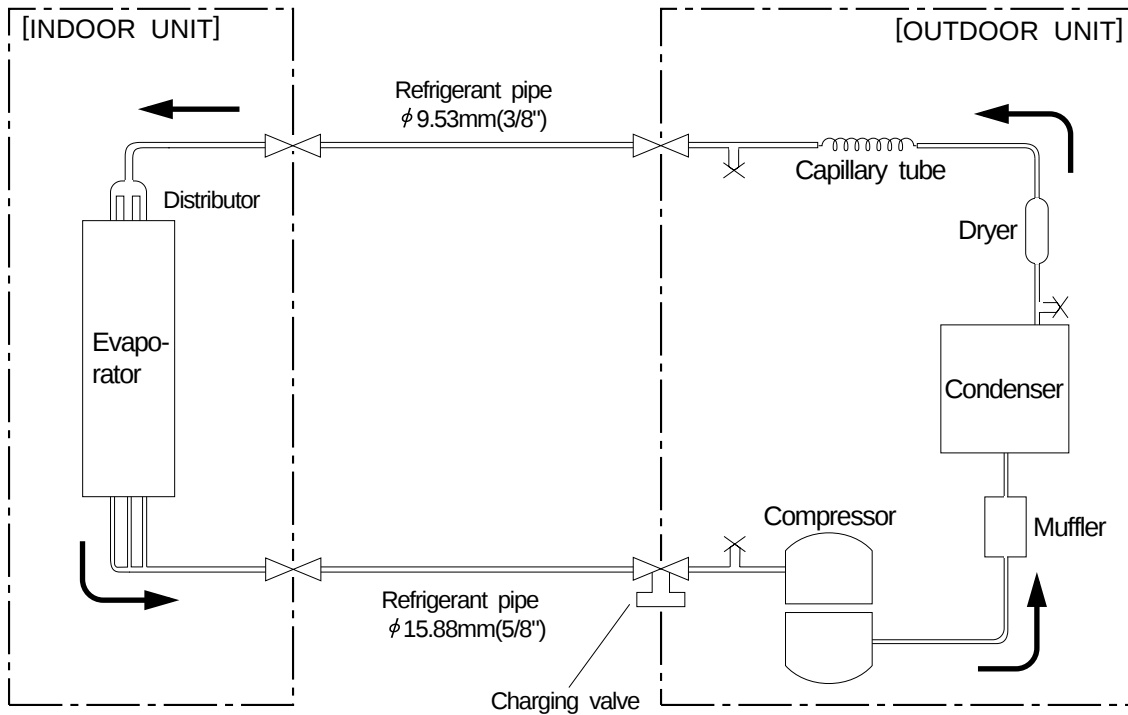


Models : ACS-7602 / ACO-7602

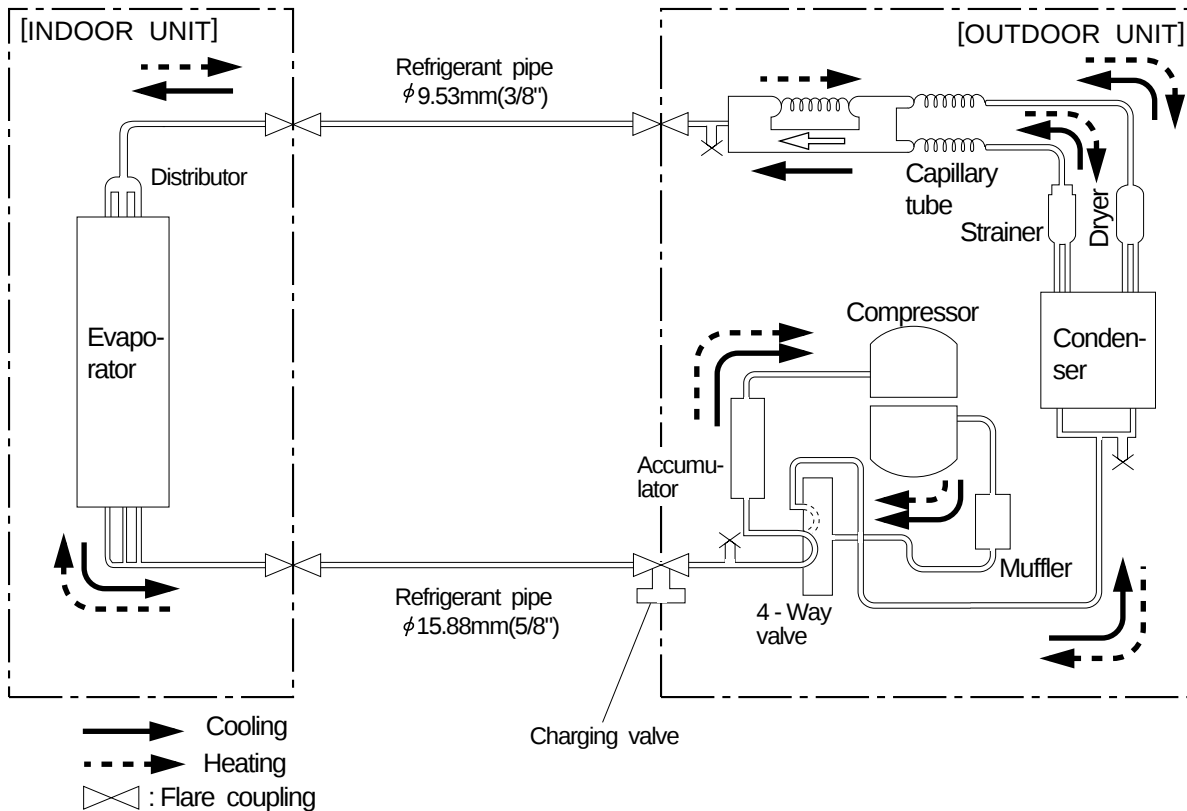


5.1.4 FLOOR / CEILING UNIVERSAL TYPE

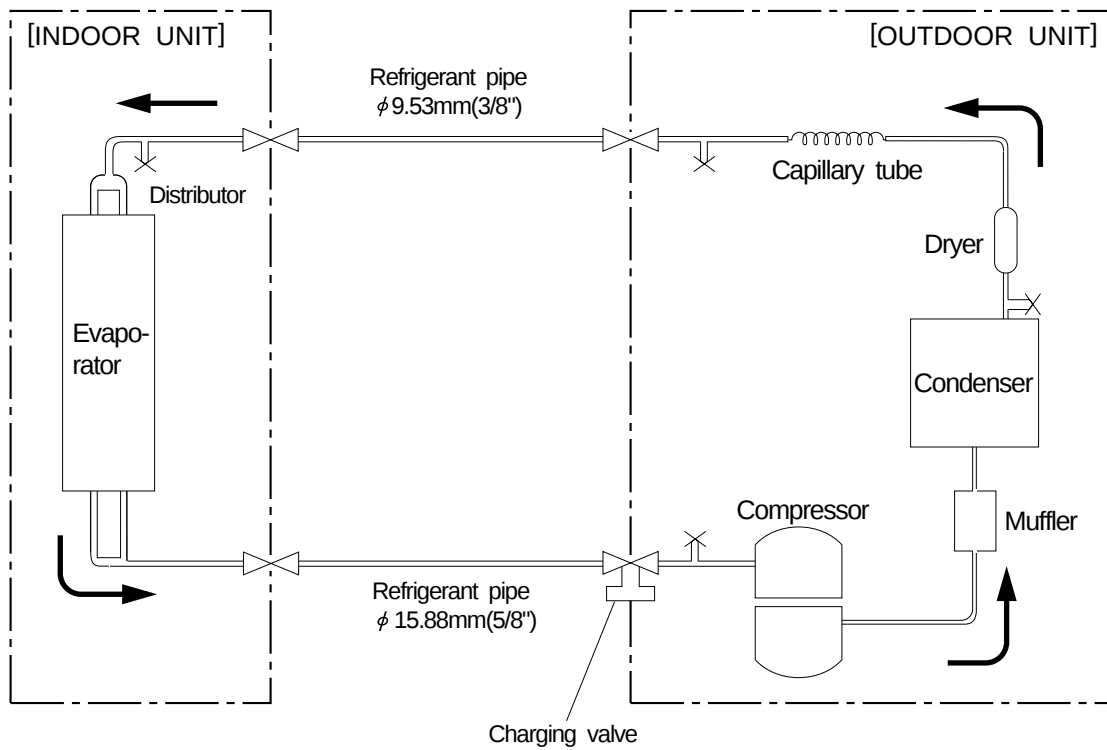
Models : AB*24A/AO*24A



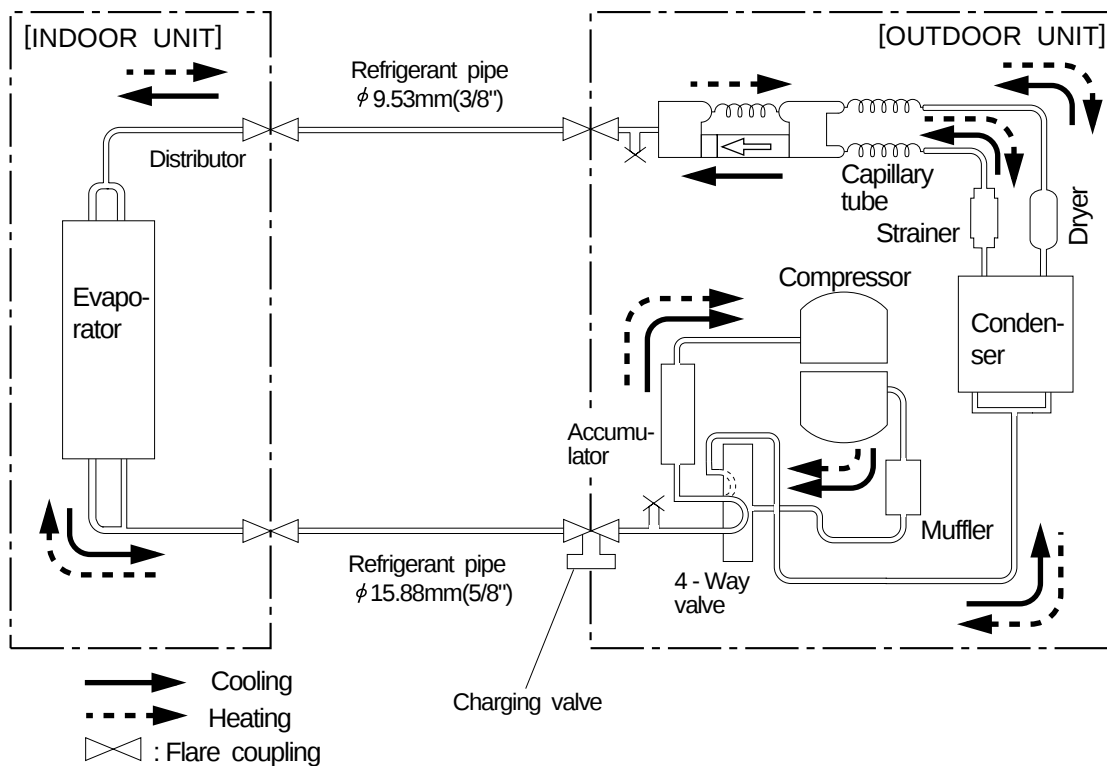
Models : AB*24R/AO*25R



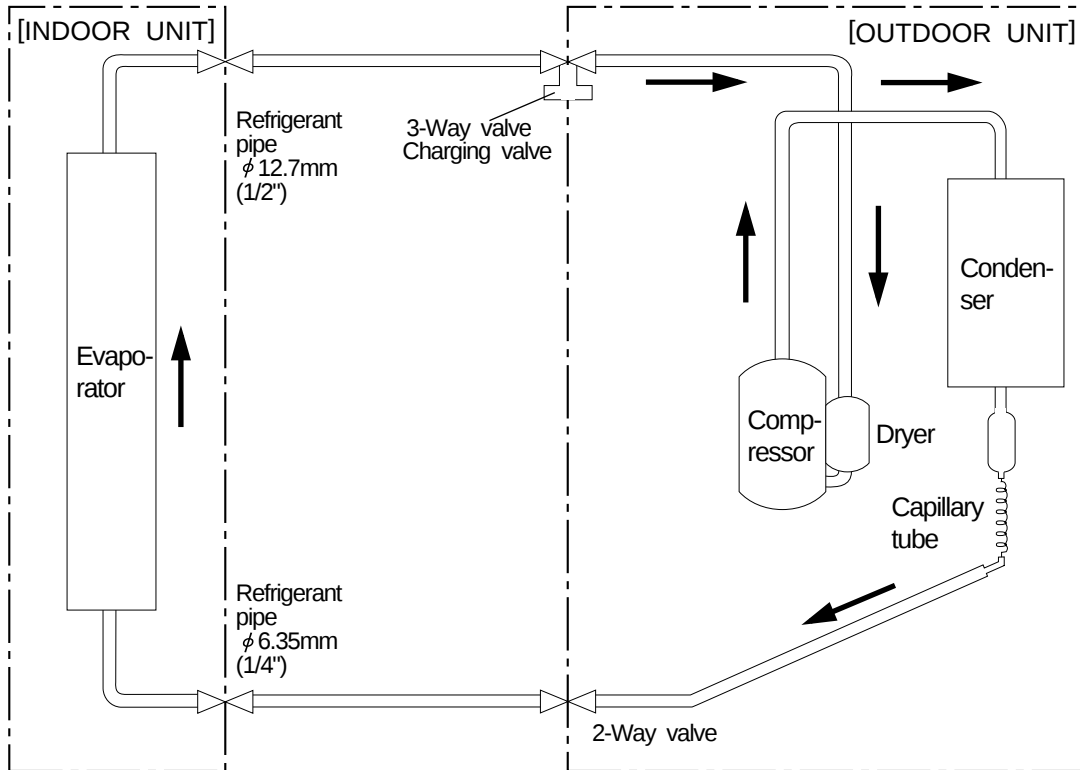
Models : AB*18A/AO*18A



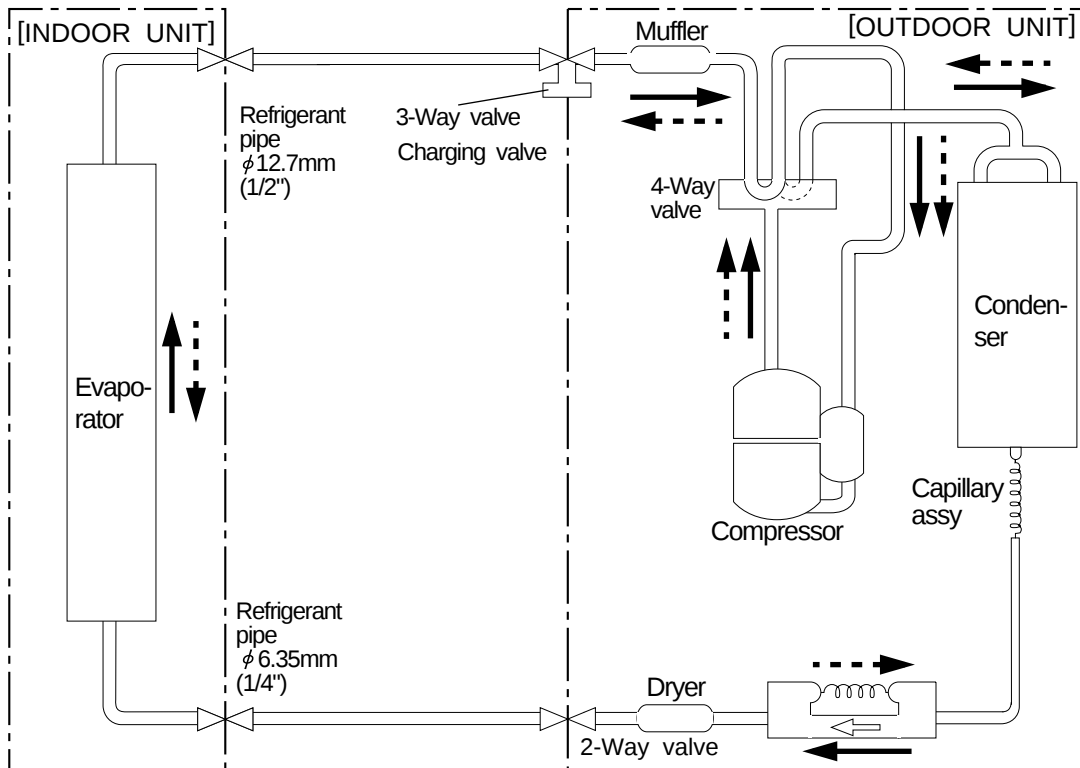
Models : AB*18R/AO*18R



Models : AB*14A/AO*14A



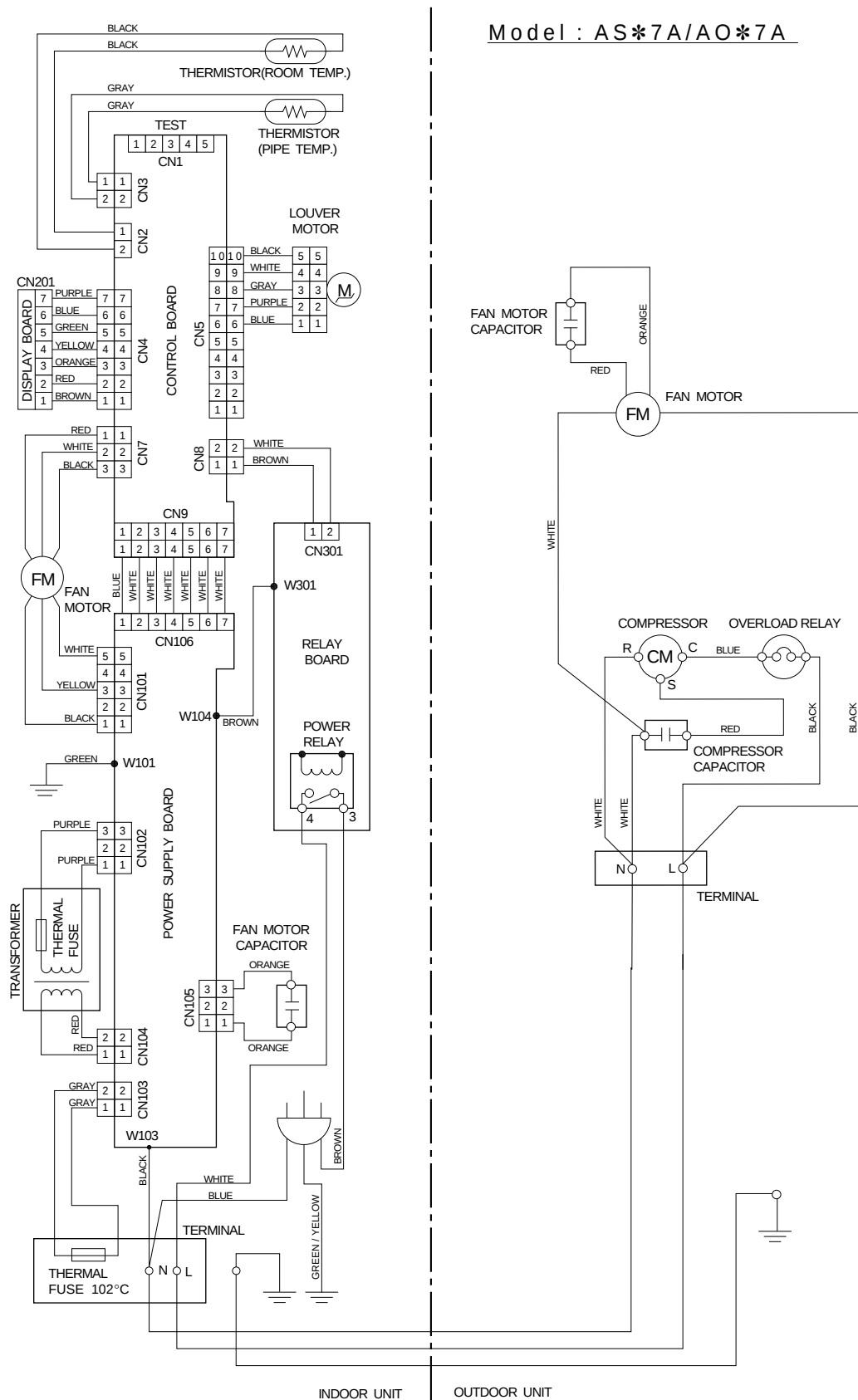
Models : AB*14R/AO*14R



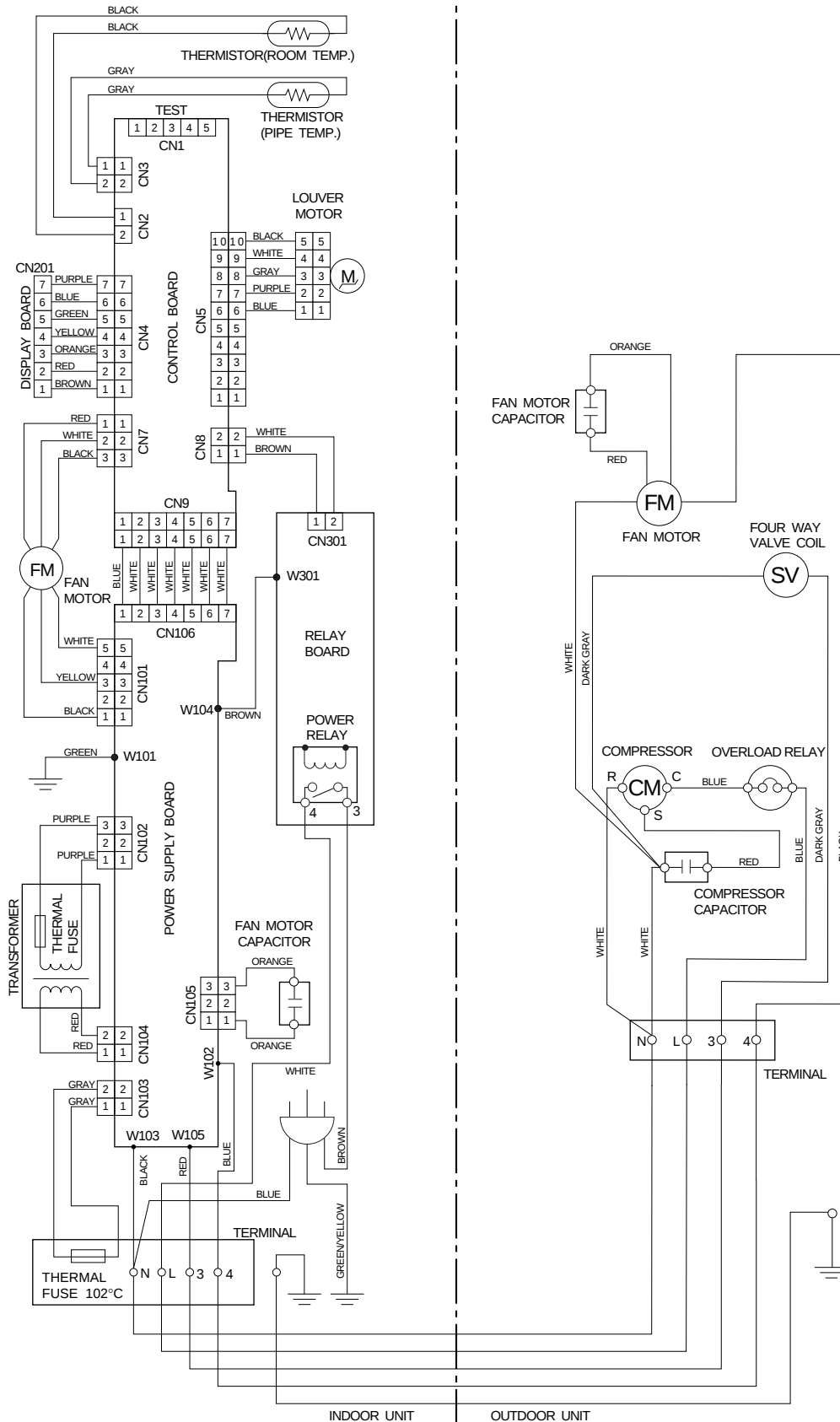
Cooling
 Heating
 : Flare coupling

5.2 CIRCUIT DIAGRAM

5.2.1 COMPACT S II SERIES

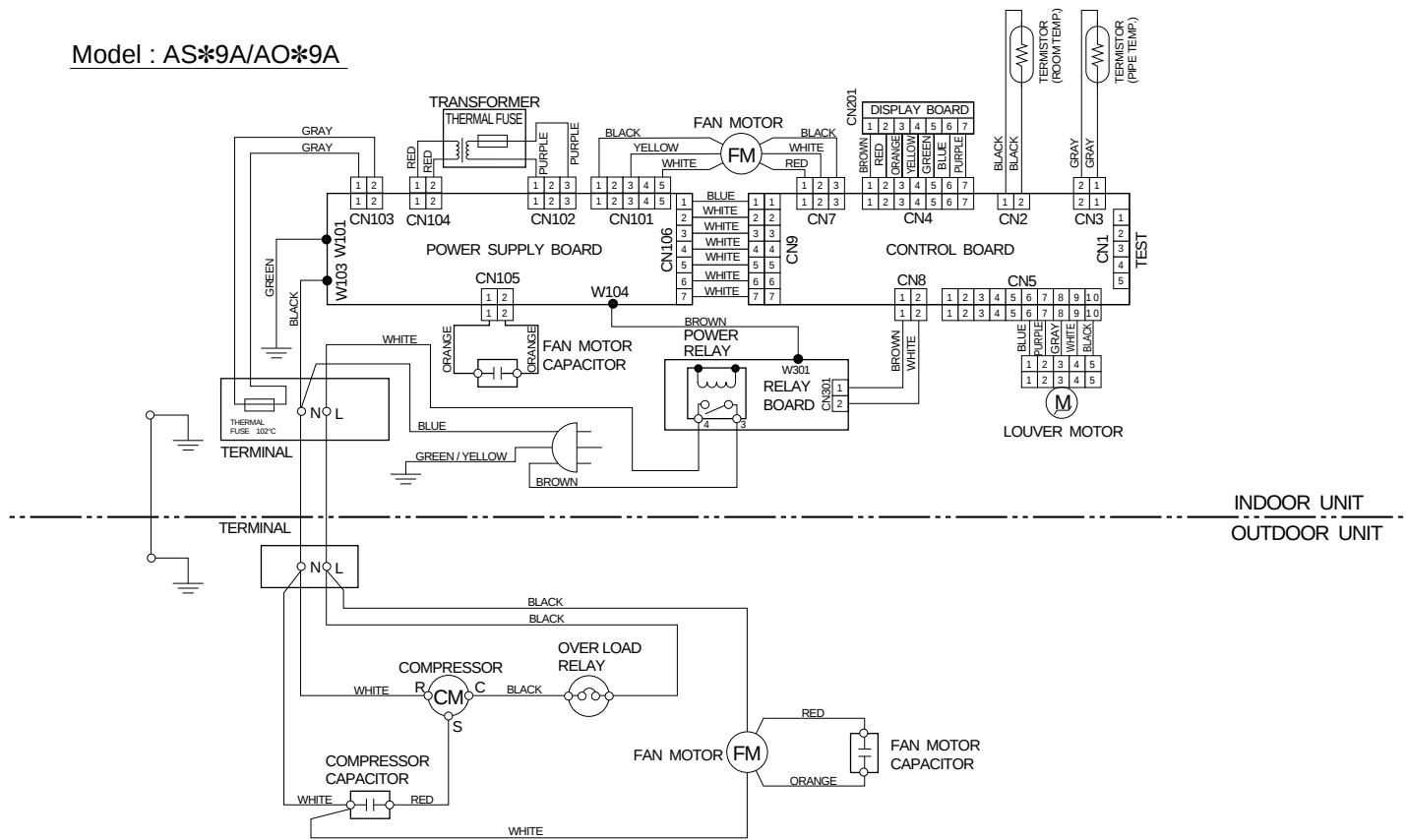


Model : AS*7R/AO*7R

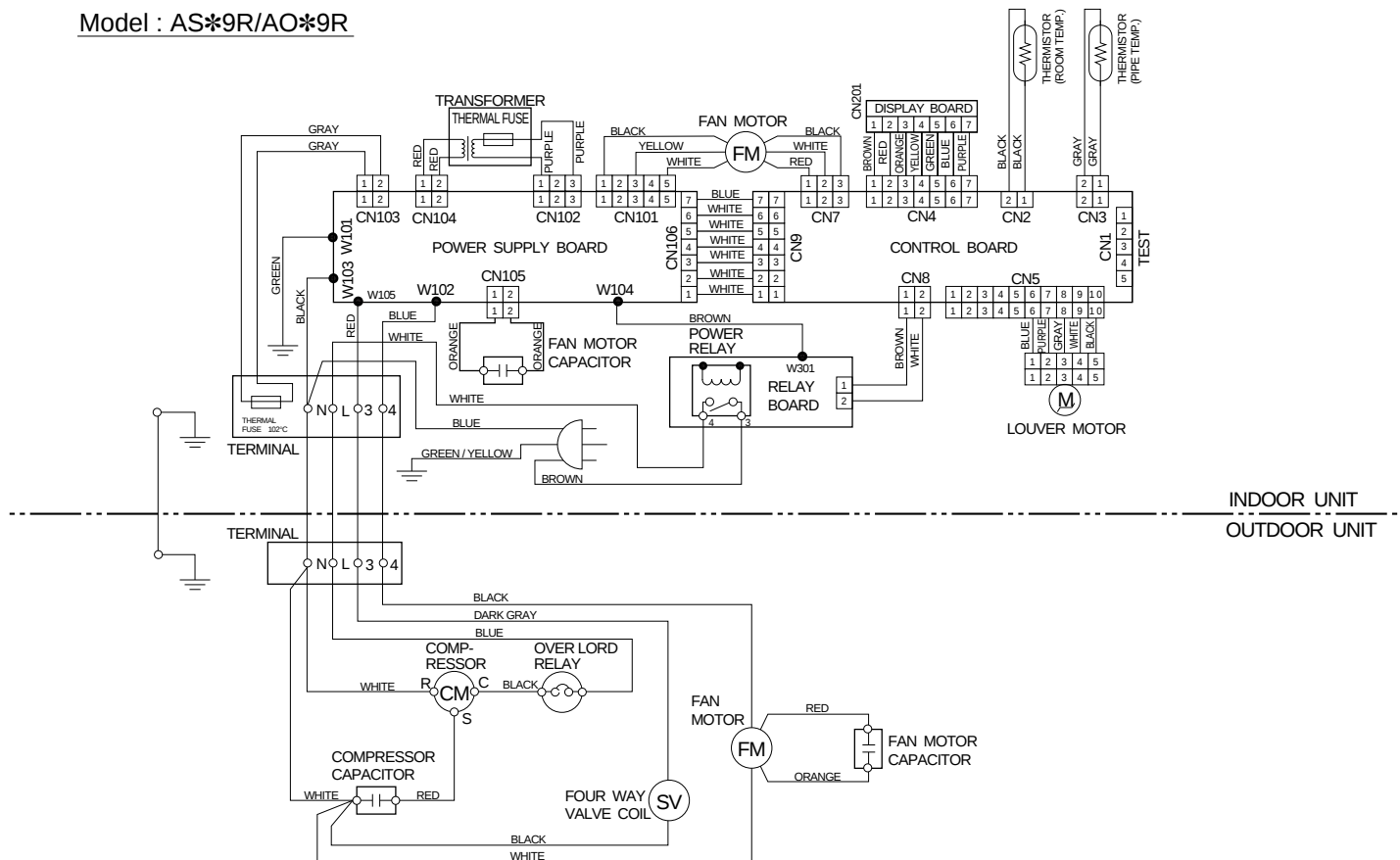


5.2.2 COMPACT M II SERIES

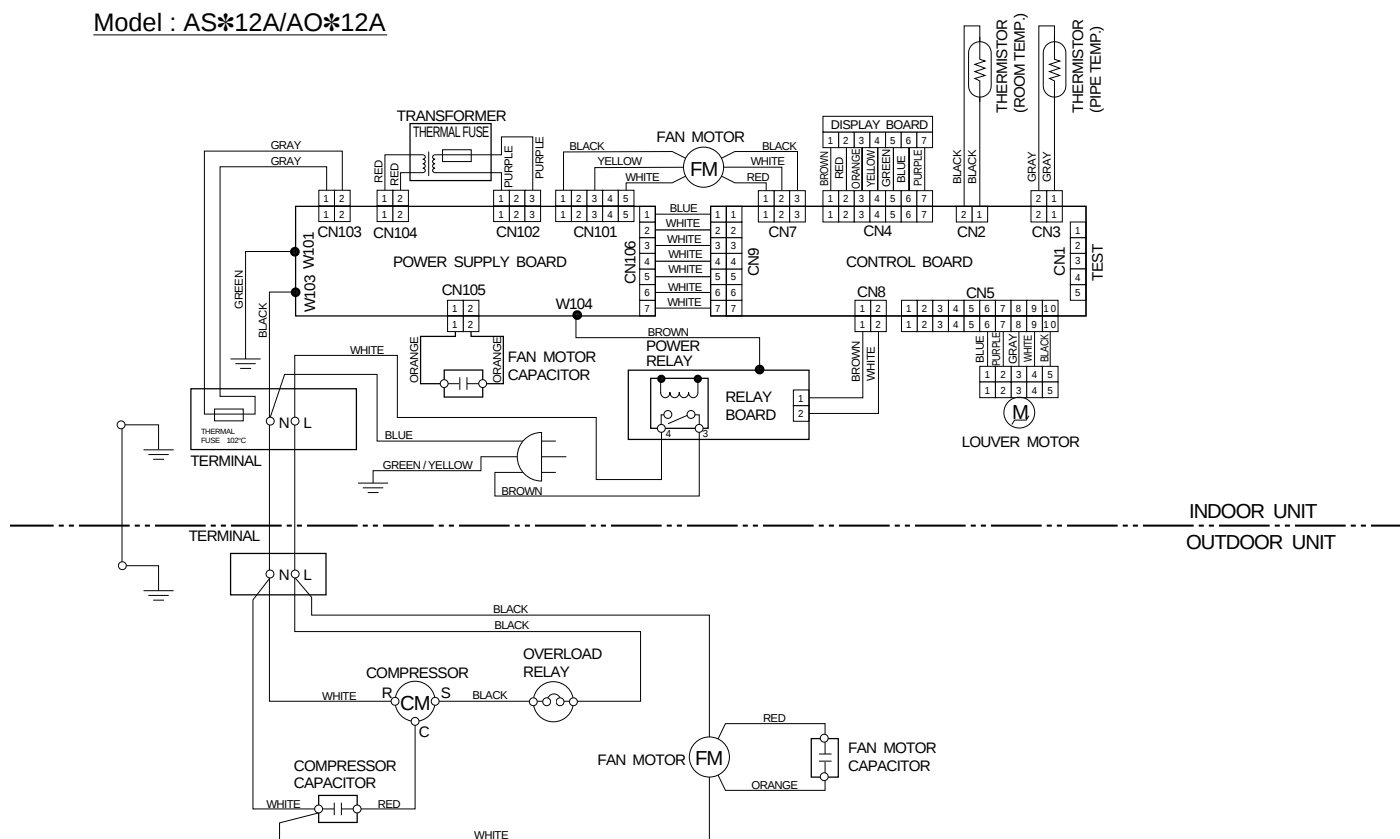
Model : AS*9A/AO*9A



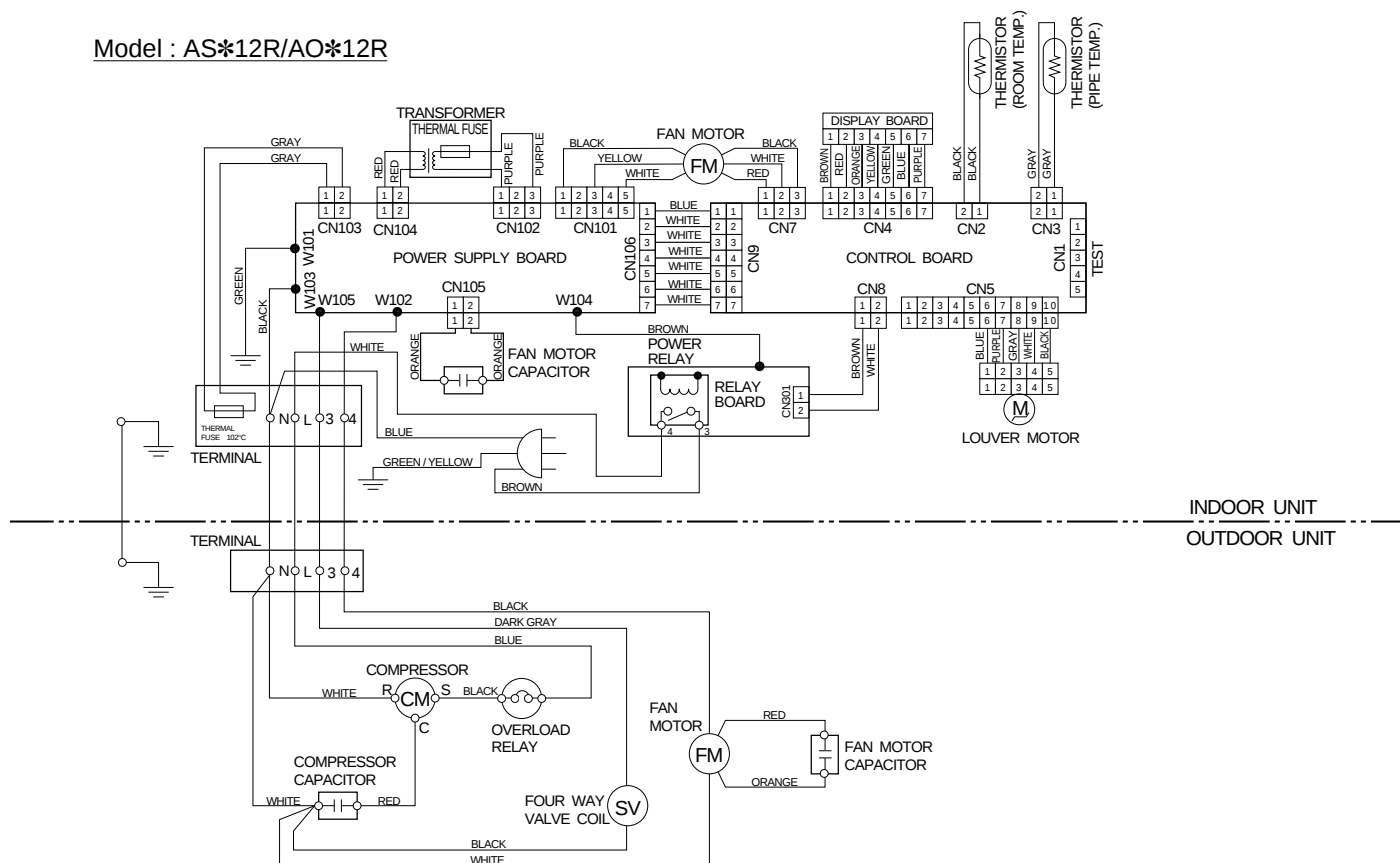
Model : AS*9R/AO*9R



Model : AS*12A/AO*12A

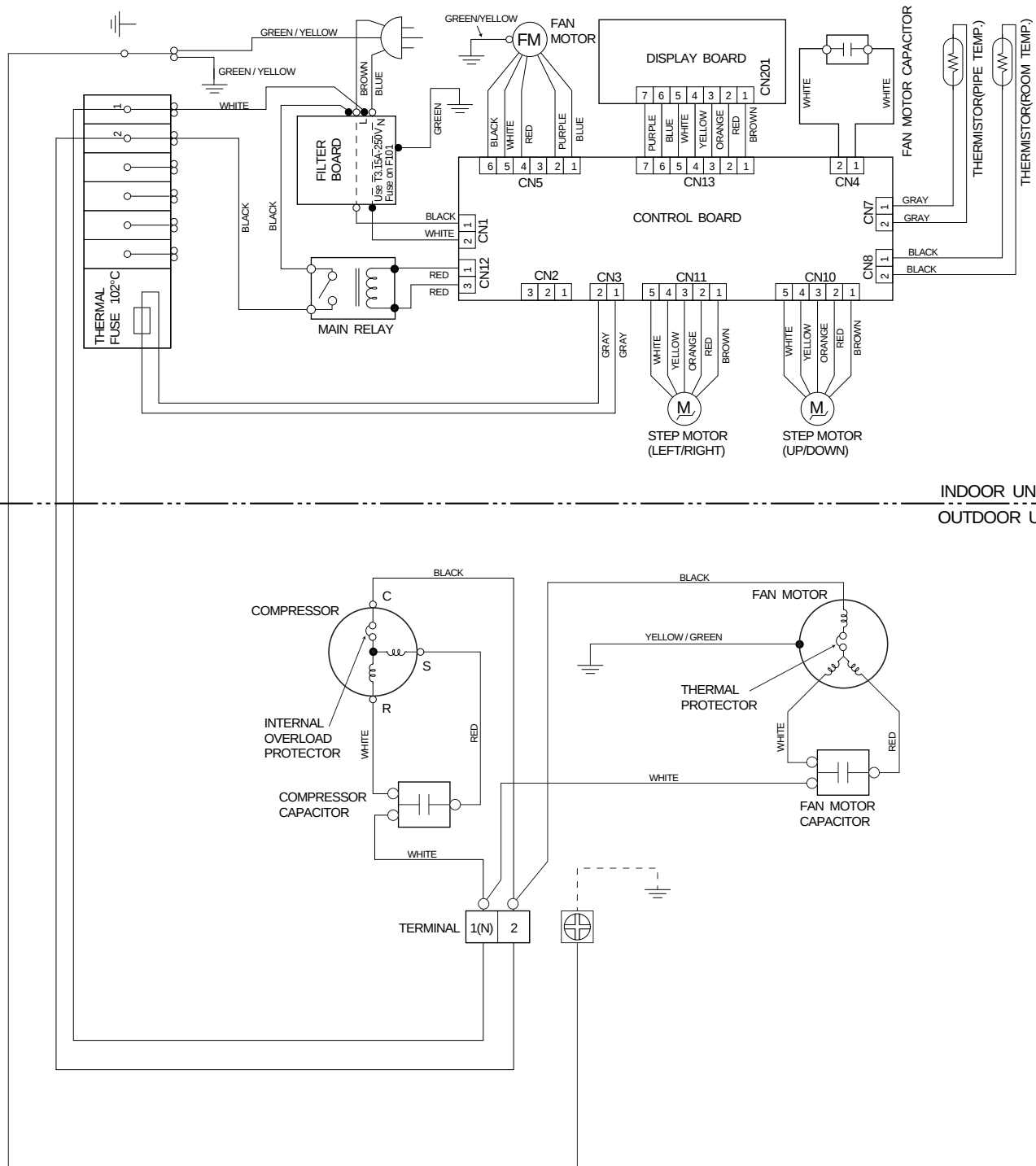


Model : AS*12R/AO*12R

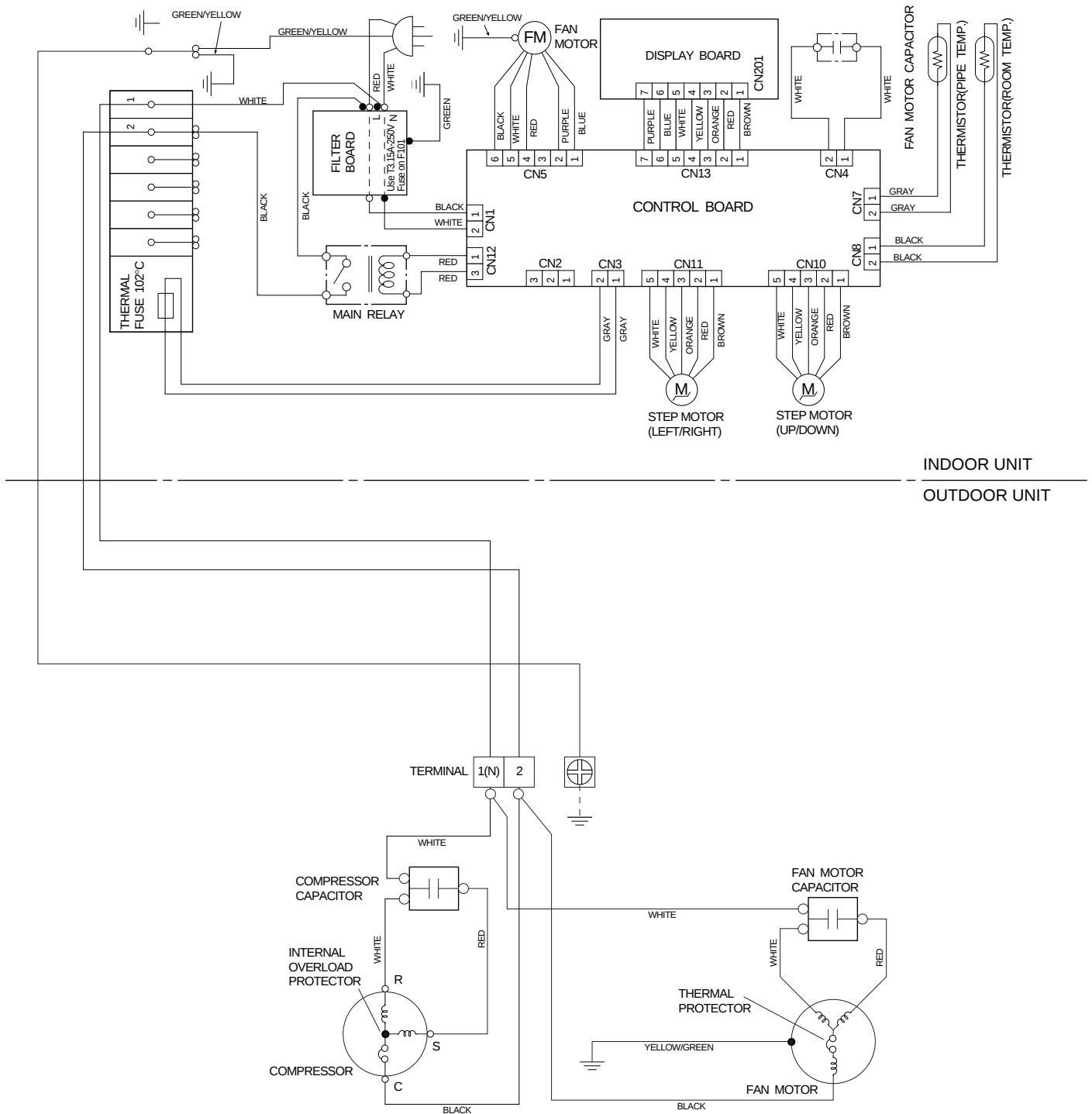


5.2.3 WALL MOUNTED LARGE TYPE

Models : AS*20A/AO*20A (except ACS-7502/ACO-7502 and ACS-7602/ACO-7602)
AS*24A/AO*24A

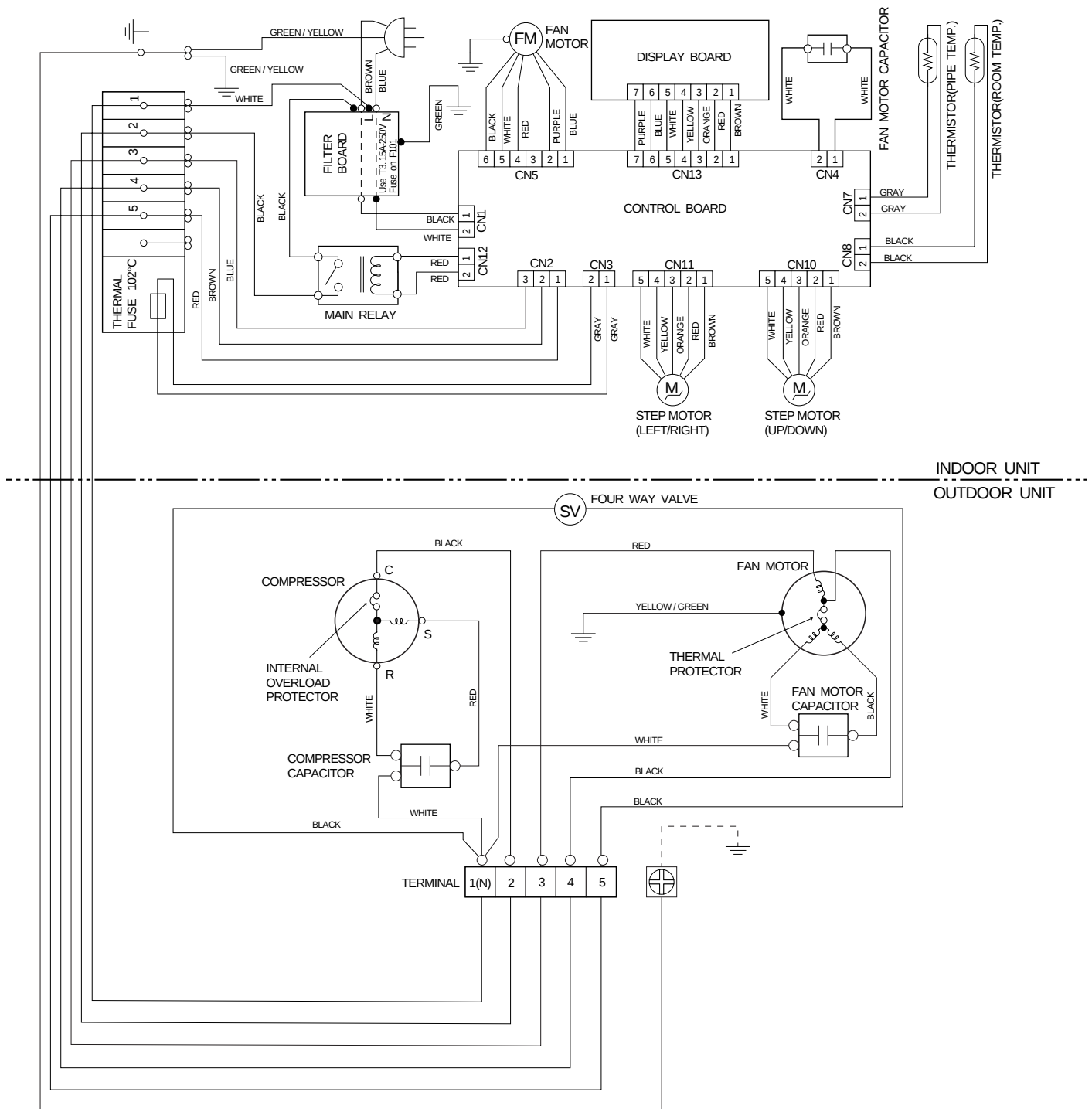


Models : ACS-7502/ACO-7502
ACS-7602/ACO-7602

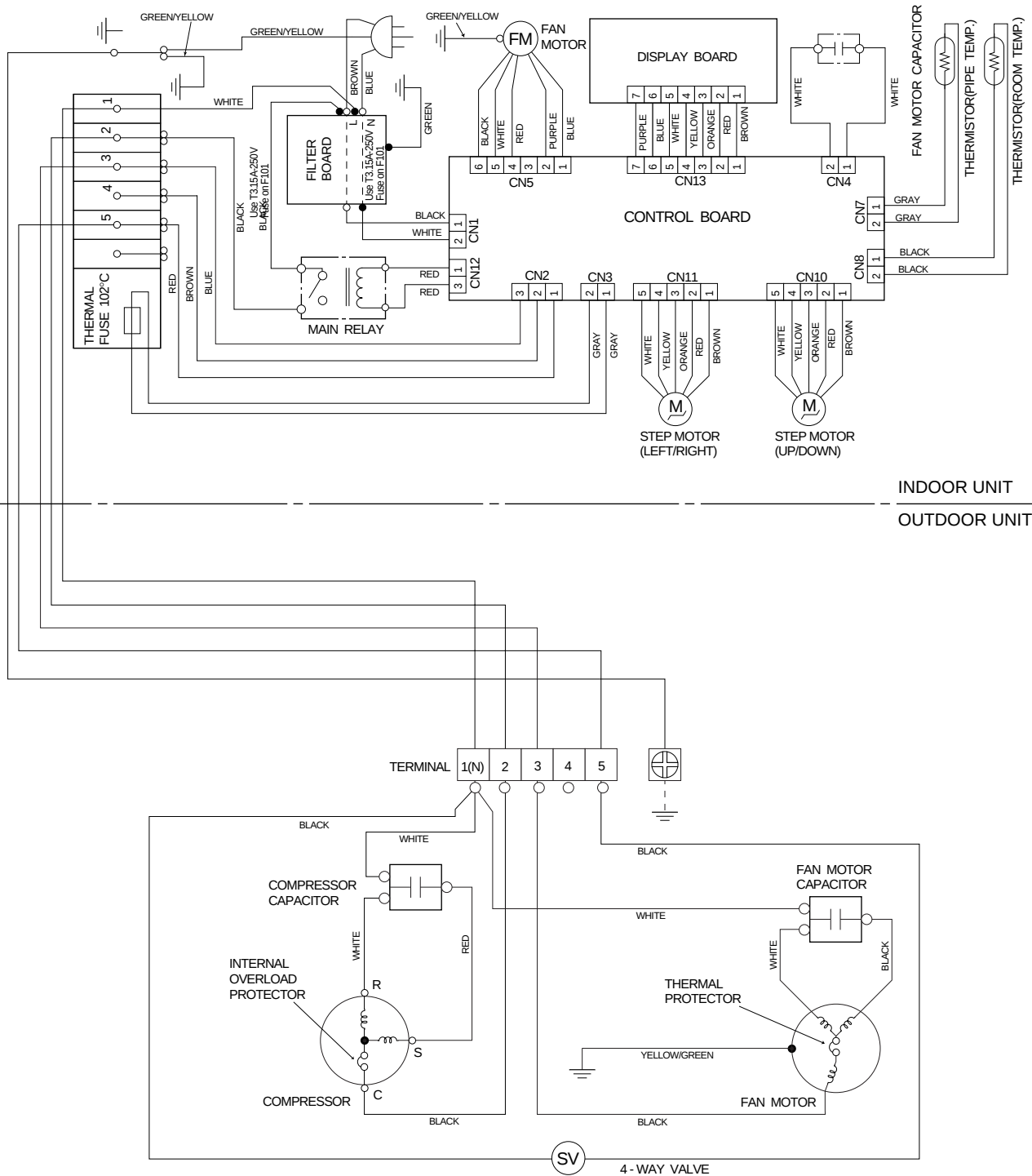


Models : AS*20R/AO*20R

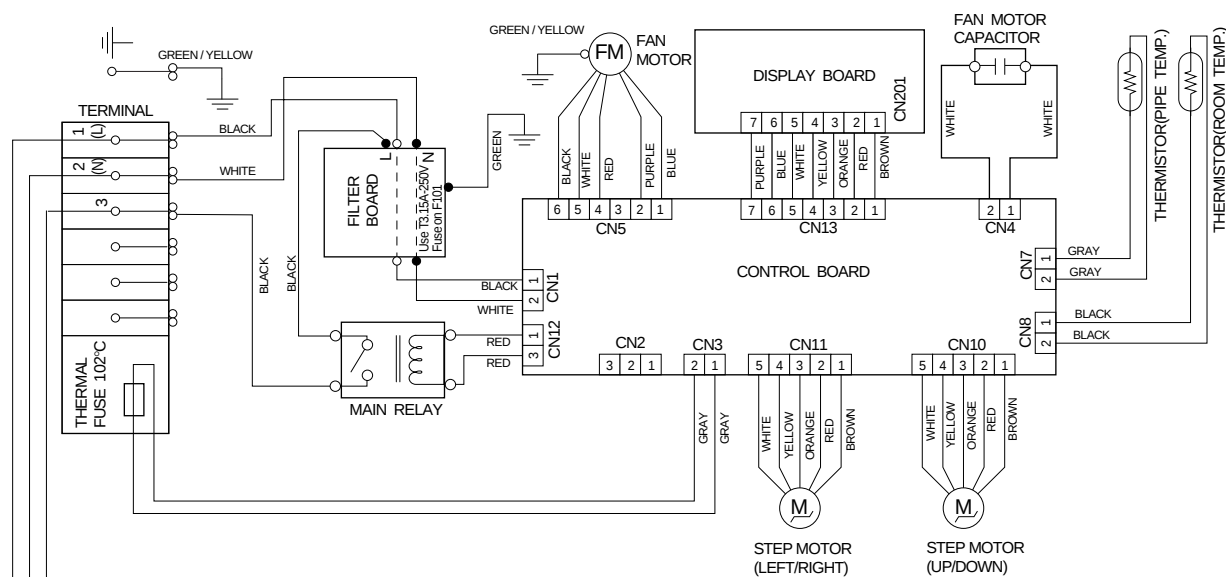
AS*24R/AO*24R (except "ASS" model)



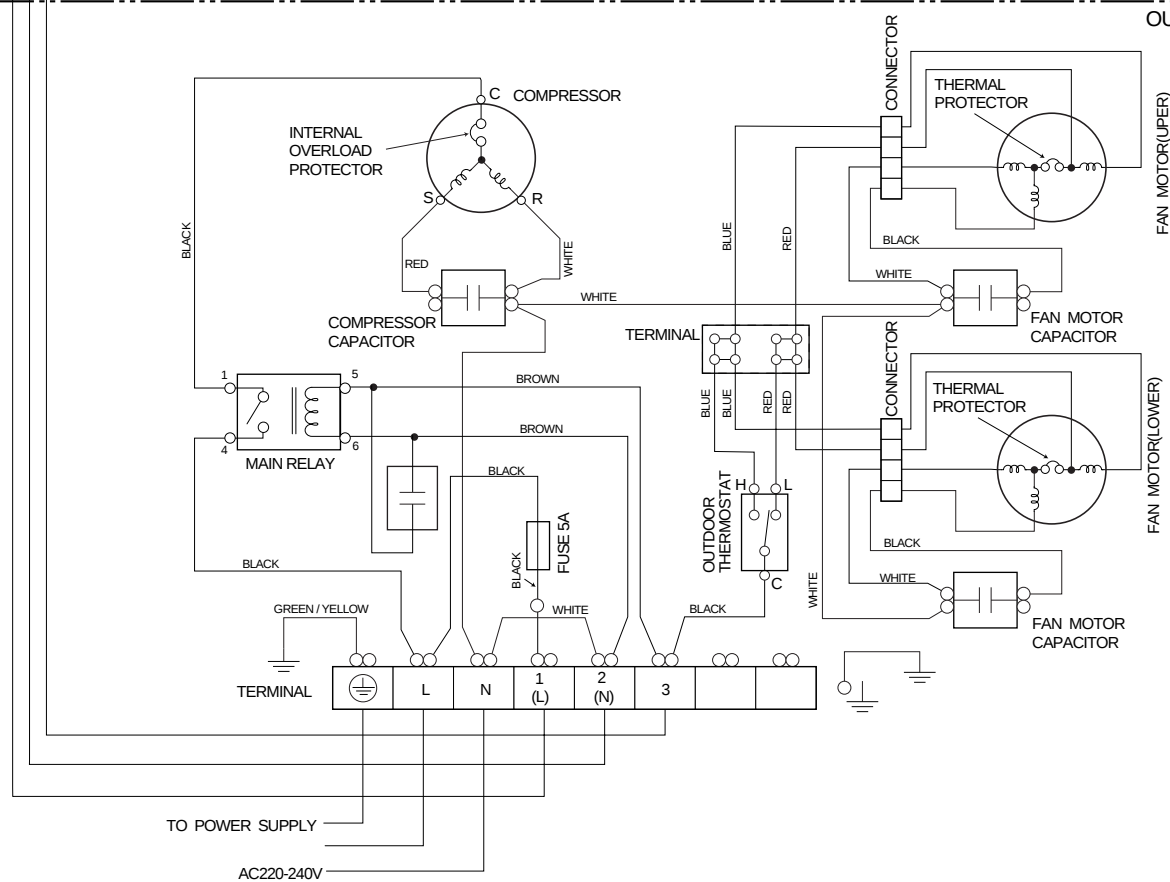
Models : ASS20R/AOS20R
ASS24R/AOS24R



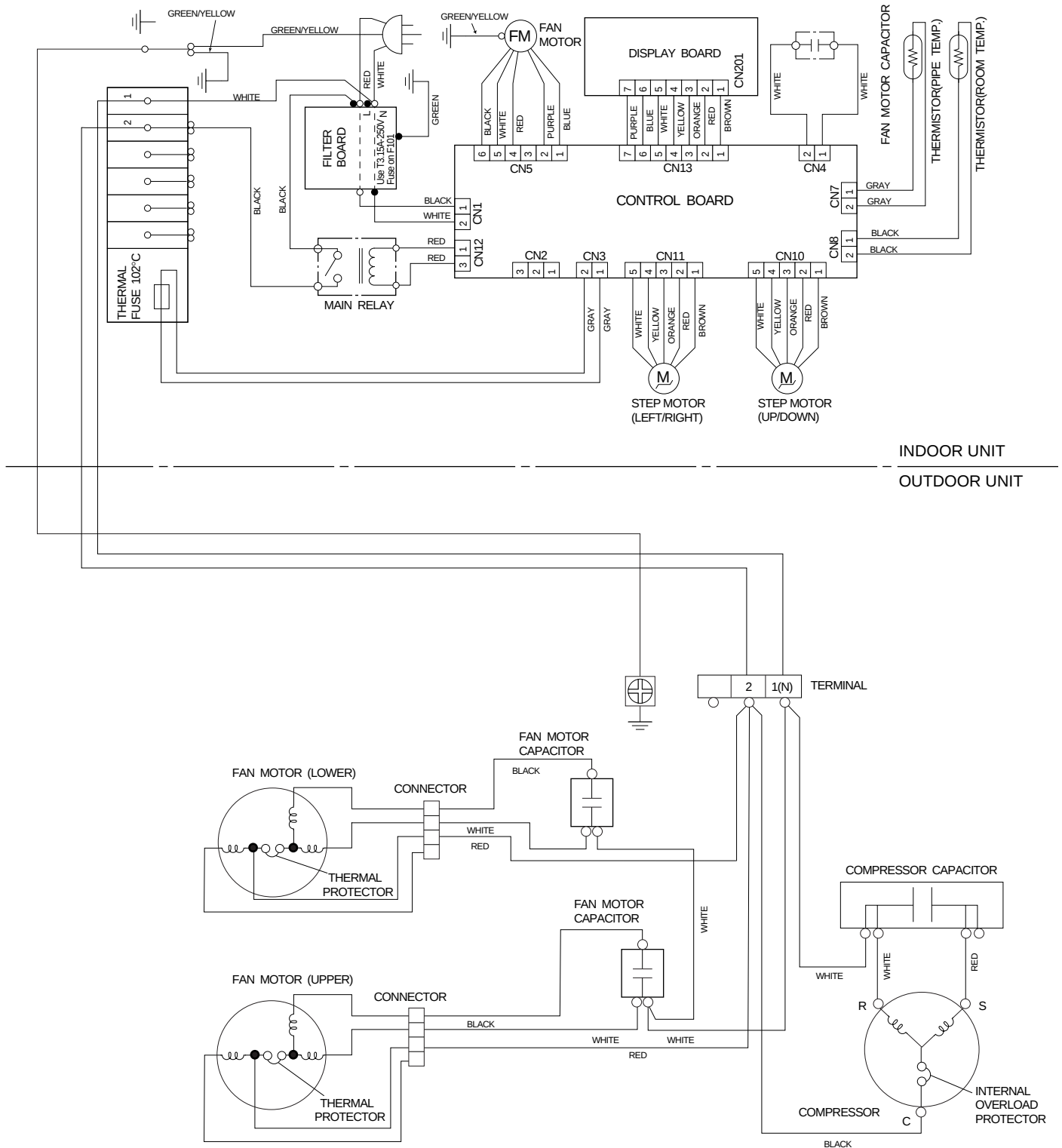
Models : AS*30A/AO*30A (except "ASS" model)



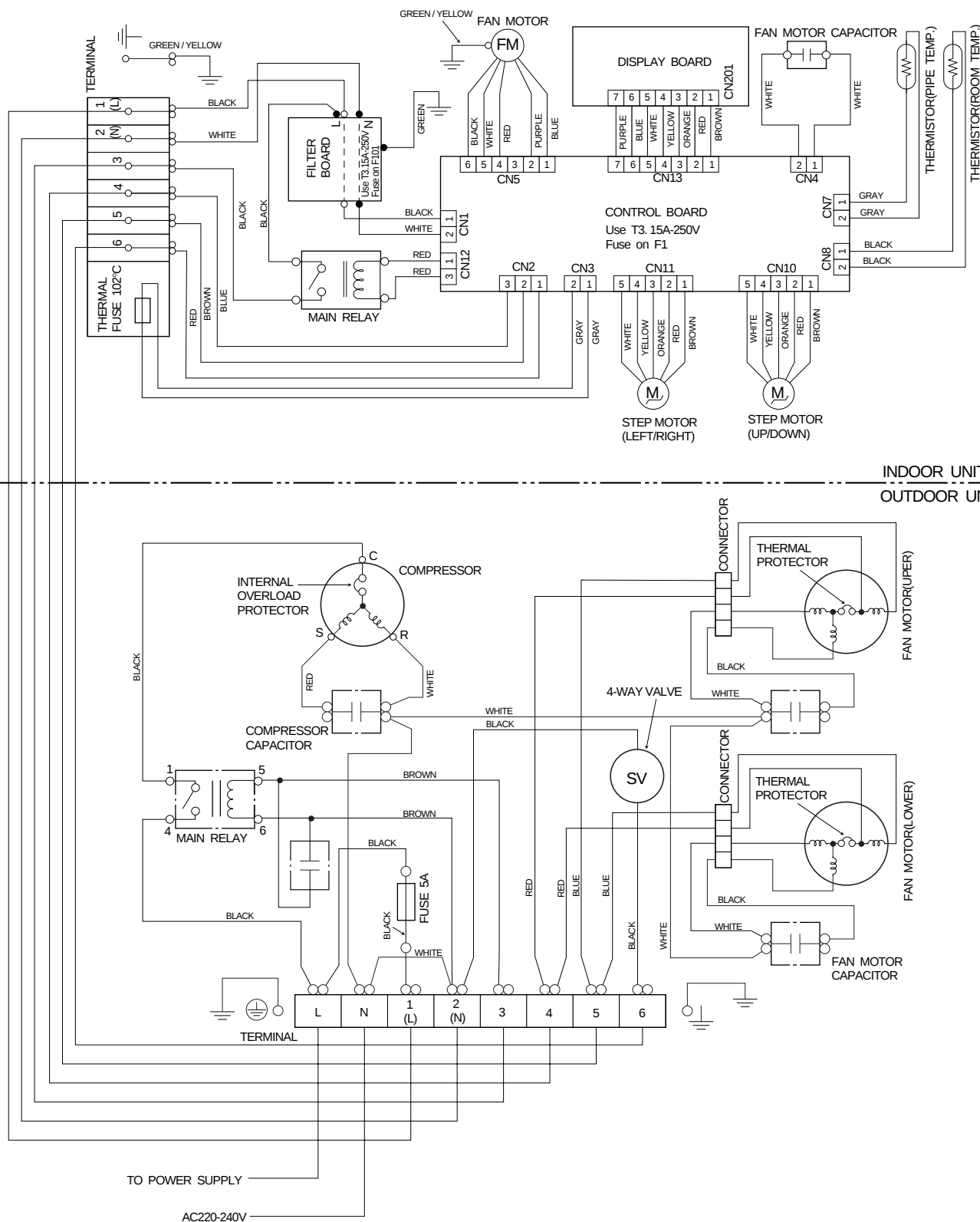
INDOOR UNIT
OUTDOOR UNIT



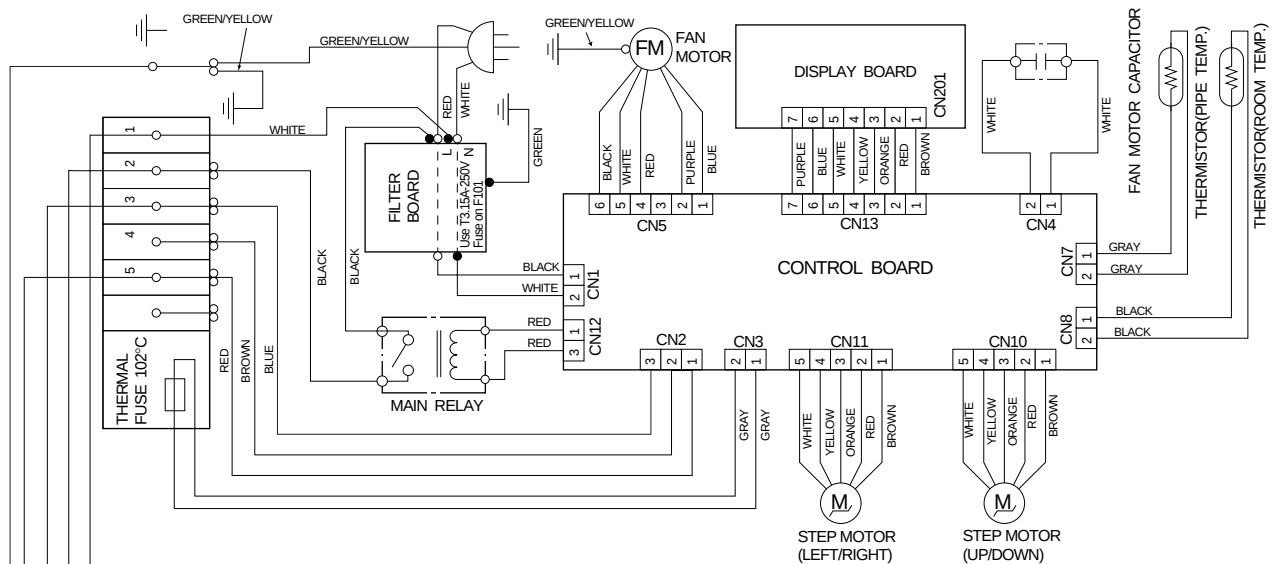
Models : ASS30A/AOS30A



Models : AS*30R/AO*30R (except "ASS" model)

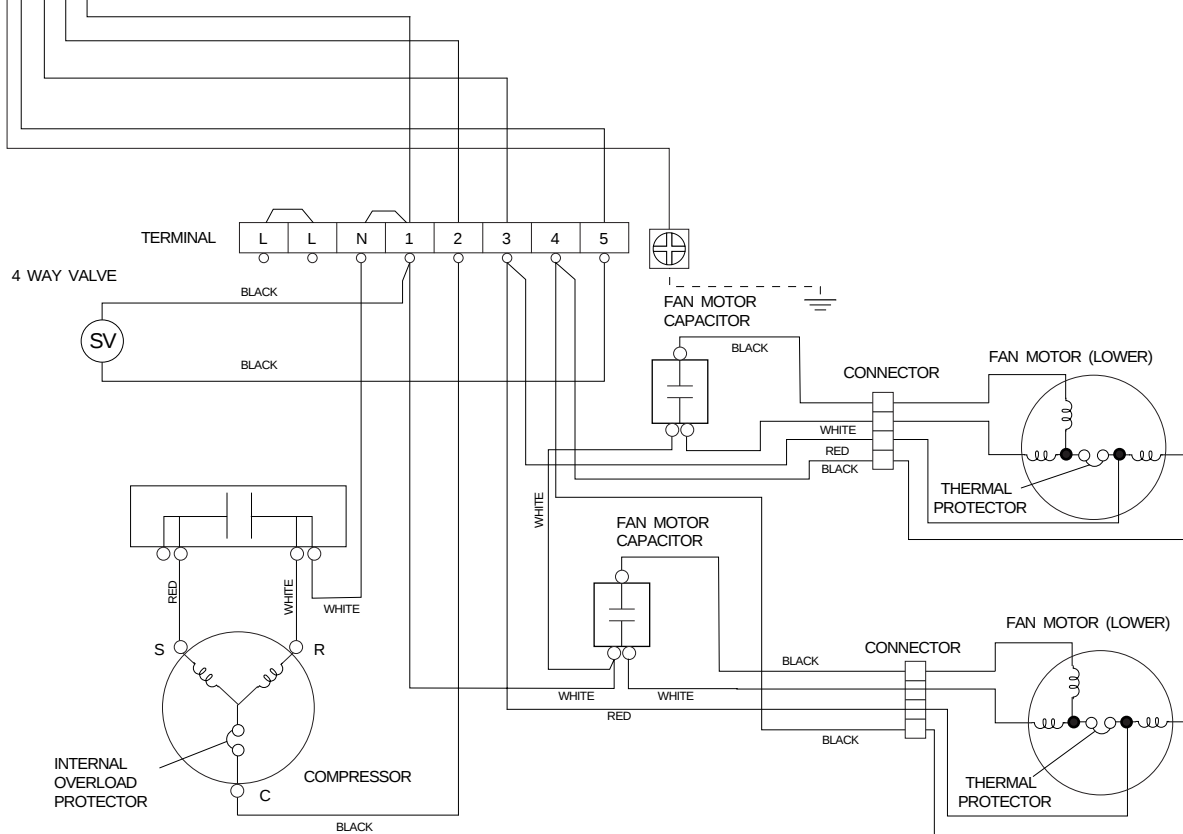


Models : ASS30R/AOS30R



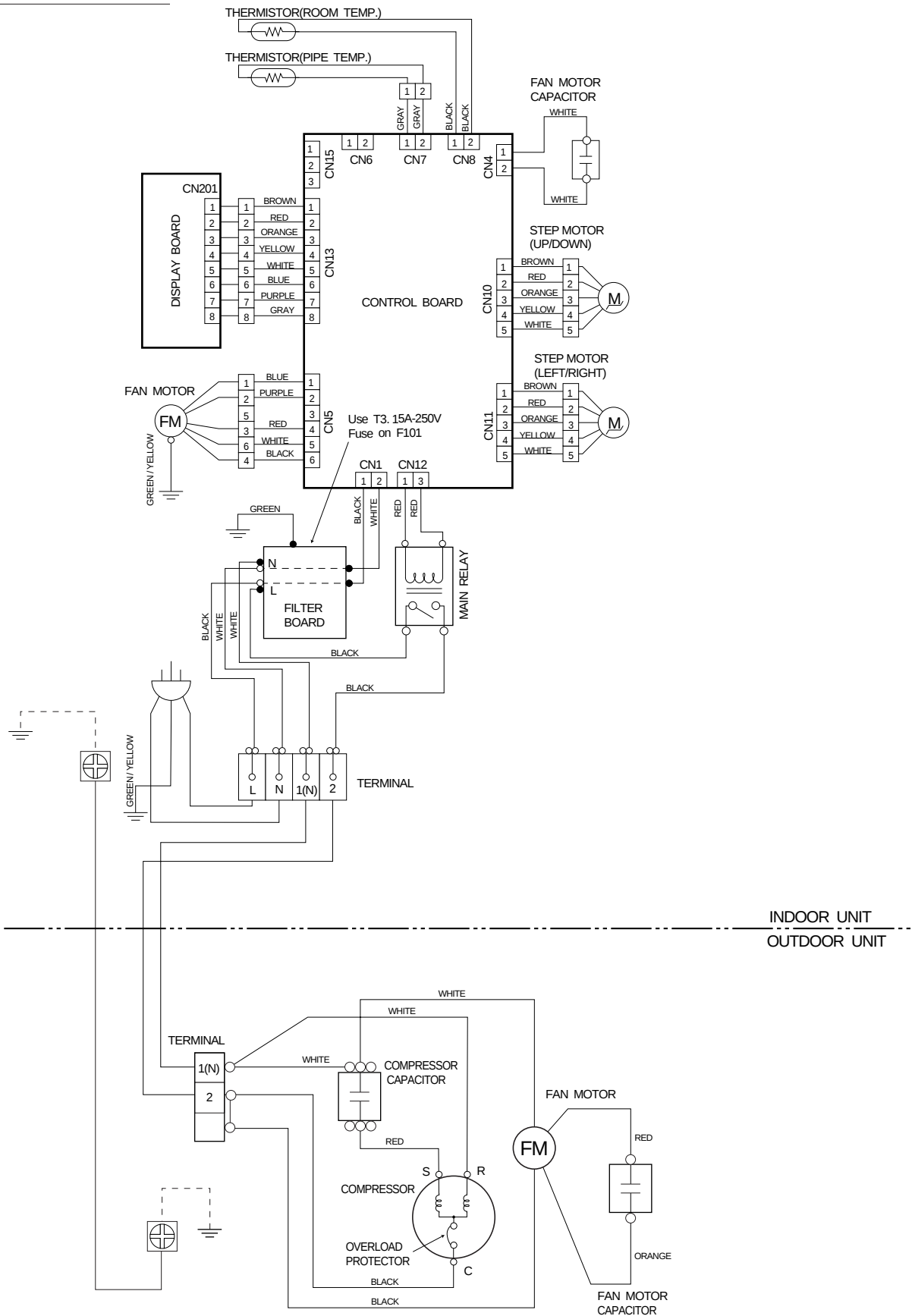
INDOOR UNIT

OUTDOOR UNIT

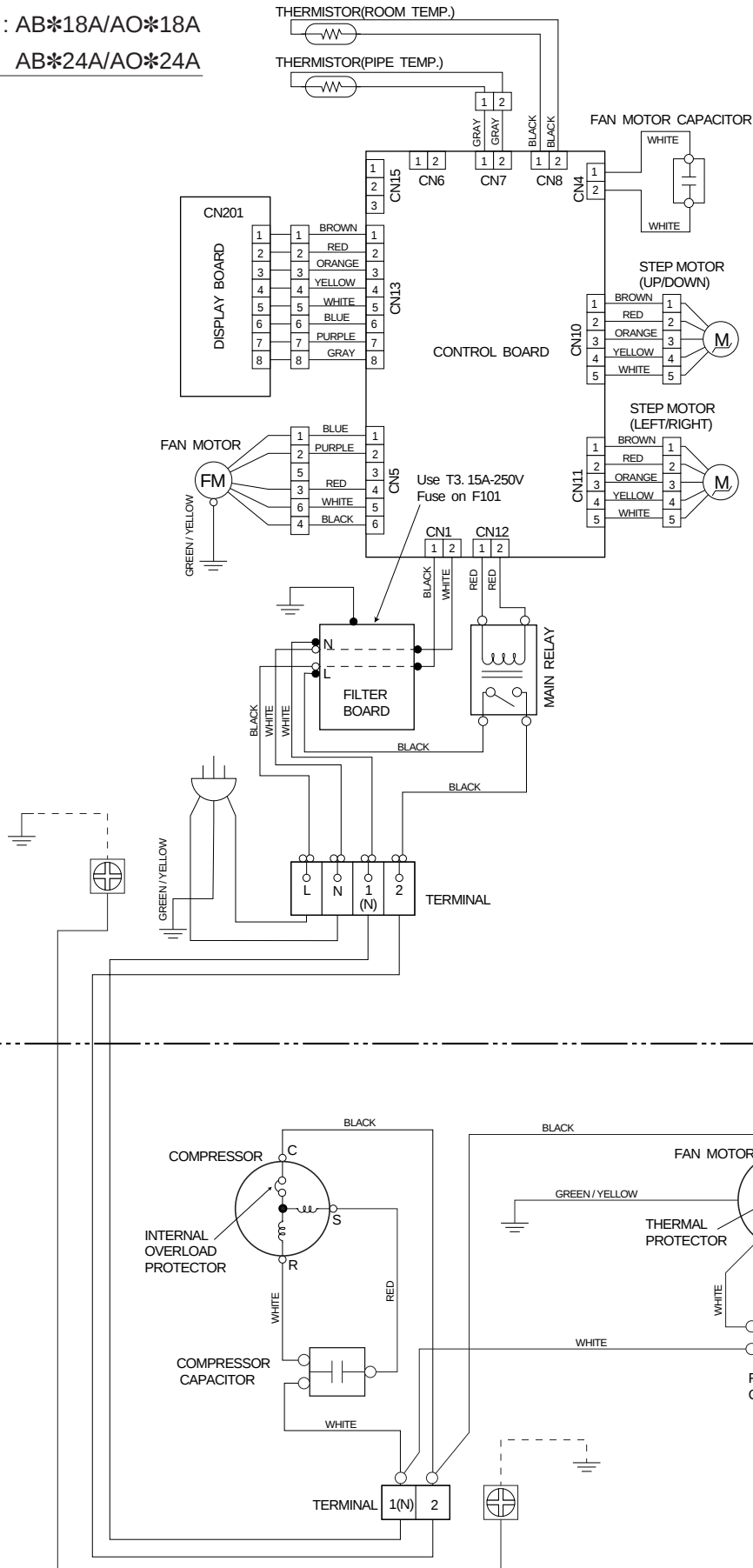


5.2.4 FLOOR / CEILING UNIVERSAL TYPE

Models : AB*14A/AO*14A



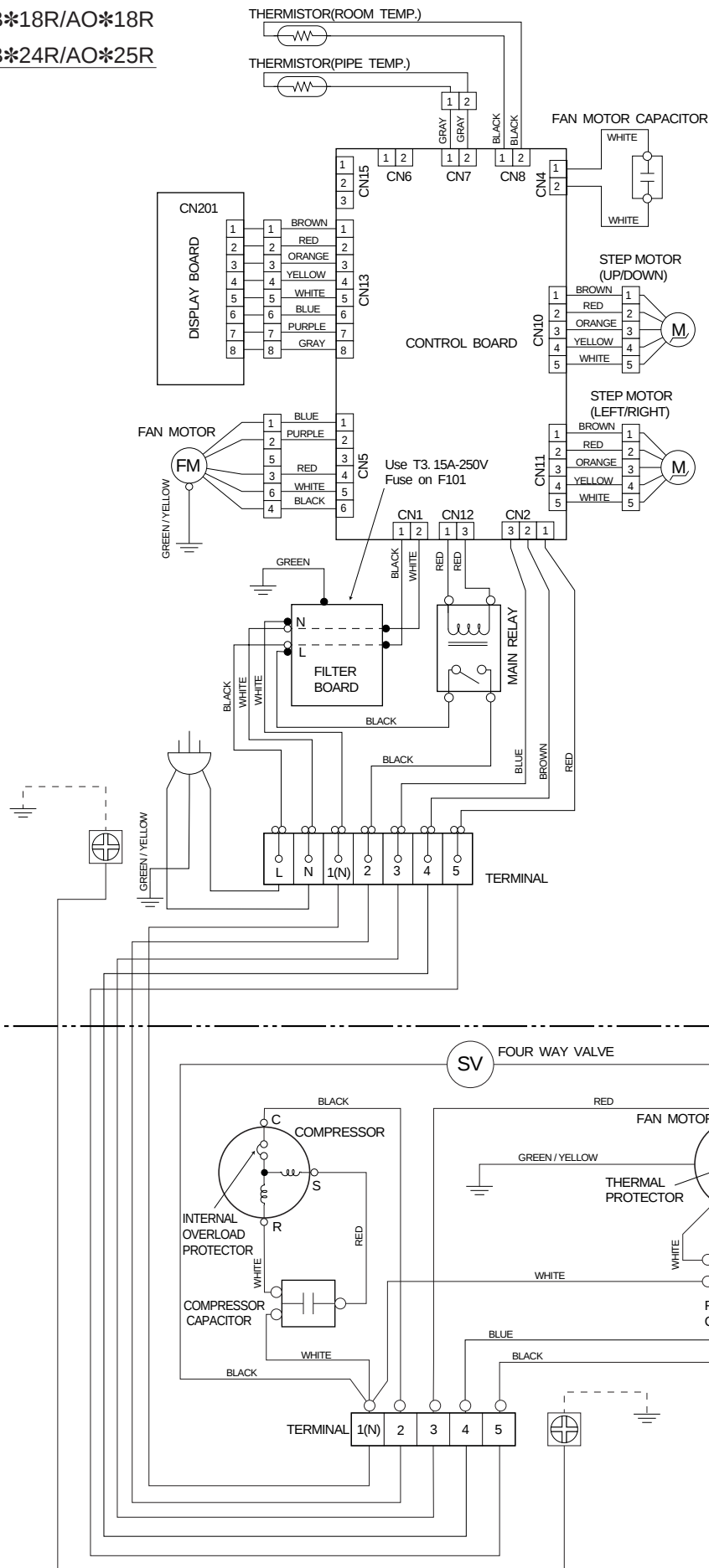
Models : AB*18A/AO*18A
AB*24A/AO*24A



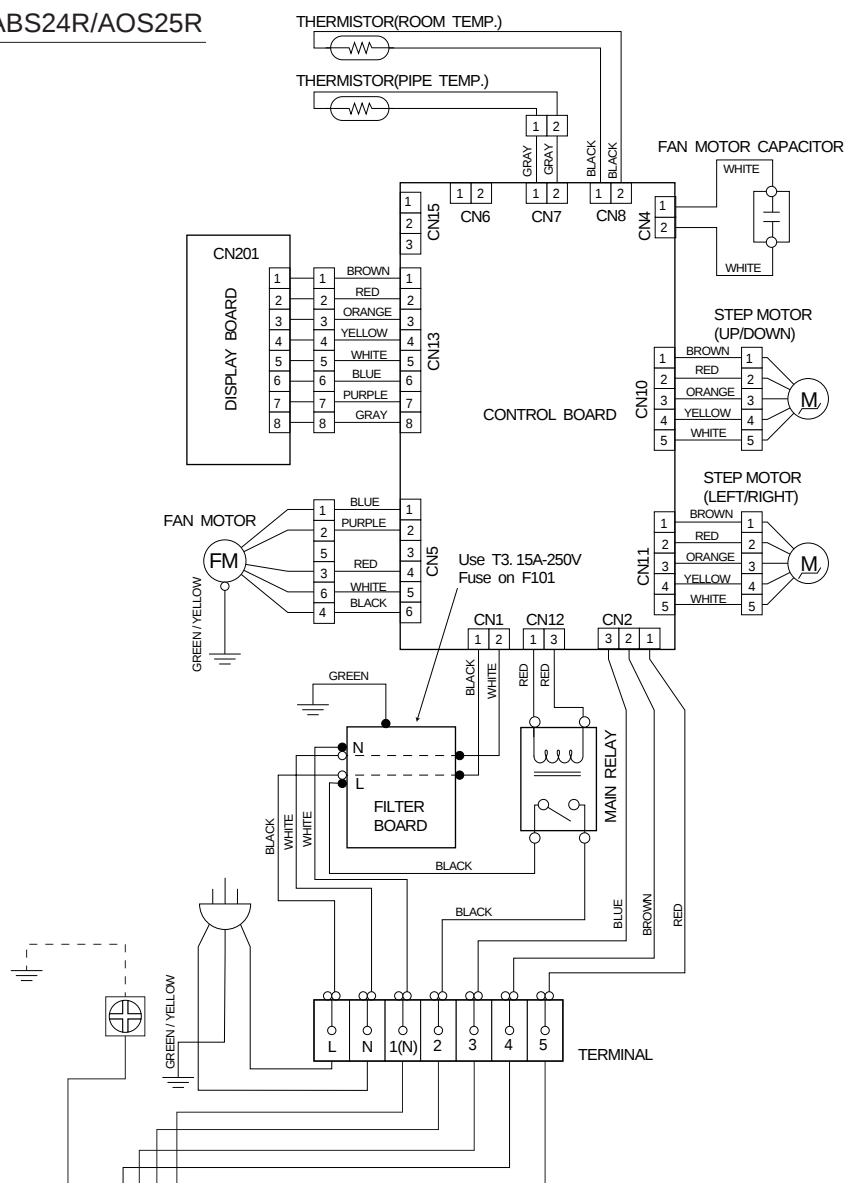
INDOOR UNIT
OUTDOOR UNIT

Models : AB*18R/AO*18R

AB*24R/AO*25R

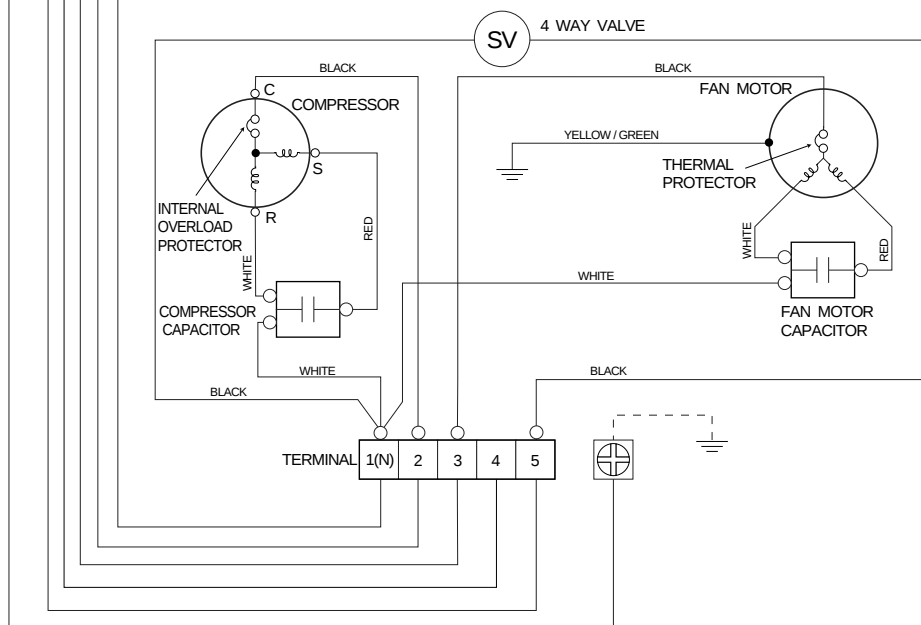


Models : ABS24R/AOS25R

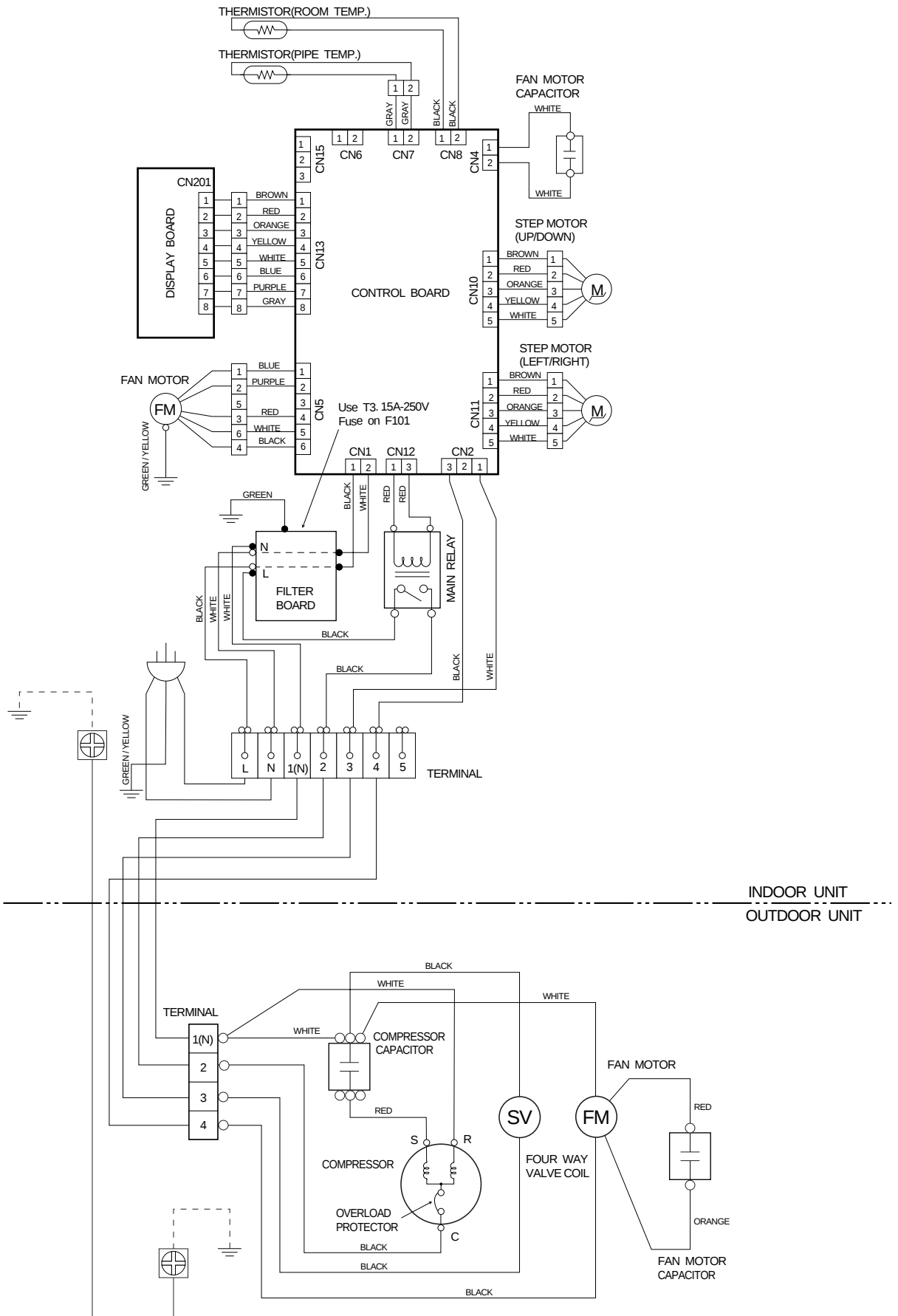


INDOOR UNIT

OUTDOOR UNIT



Models : AB*14R/AO*14R



5.3 CONTROLLER CIRCUIT DIAGRAM EZ NUMBER LIST

MODEL	CONTROL BOX ASSY EZ-No.	P. C. BOARD ASSY EZ-No.
COMPACT SII TYPE AS □- SERIES		
ASY 7A ASG/H 7A	096KWSE 096RWSE	096KWSE-C
ASY 7R ASG/H 7R	096JHSE 096KRSE	096JHSE-C

MODEL	CONTROL BOX ASSY EZ-No.	P. C. BOARD ASSY EZ-No.
COMPACT MII TYPE AS □- SERIES		
ASY 9A ASG 9A AST 9A ASP 9A	09502WSE 095FWSE 09509WSE 09502WSE or 096NWSE or 0977WSE	095FWSE-C
ASY 12A ASG 12A AST 12A	09505WSE 09504WSE 09505WSE or 096PWSE or 0978WSE	09504WSE-C
ASY 9R ASG 9R AST 9R ASP/H 9A	0950HHSE 0950GHSE 0950JHSE 0950HHSE or 096MHSE 096MHSE or 0978HSE	095HHSE-C
ASY 12R ASG 12R AST 12R ASP 12A	0950LHSE 0950KHSE 0950MHSE 0950LHSE 096NHSE or 0979HSE	0950LHSE-C

MODEL	CONTROL BOX ASSY EZ-No.	P. C. BOARD ASSY EZ-No.	SOFTWARE EZ-No.
AS□ -SERIES			
ASY 20/24A ASG 20/24A AST 20/24A ASY/G/T 30A ASS 20/24A ASS 30A ACS-7502/ACS-7602	096JWSE 096GWSE 0968WSE 096HWSE 096LWSE 096SWSE 0974WSE	0968WSE-F	0986WSE-C
ASY 20R ASG 20R AST 20R	096UHSE 096RHSE 096THSE	096RHSE-F	096RHSE-C
ASY 24R ASG 24R AST 24R ASY/G/T 30R	096FHSE 096HHSE 0961HSE 096EHSE	0961HSE-F	0961HSE-C
ASS 20R	096SHSE	096SHSE-F	096SHSE-C
ASS 24R ASS 30R	096LHSE 096PHSE	096PHSE-F	096PHSE-C

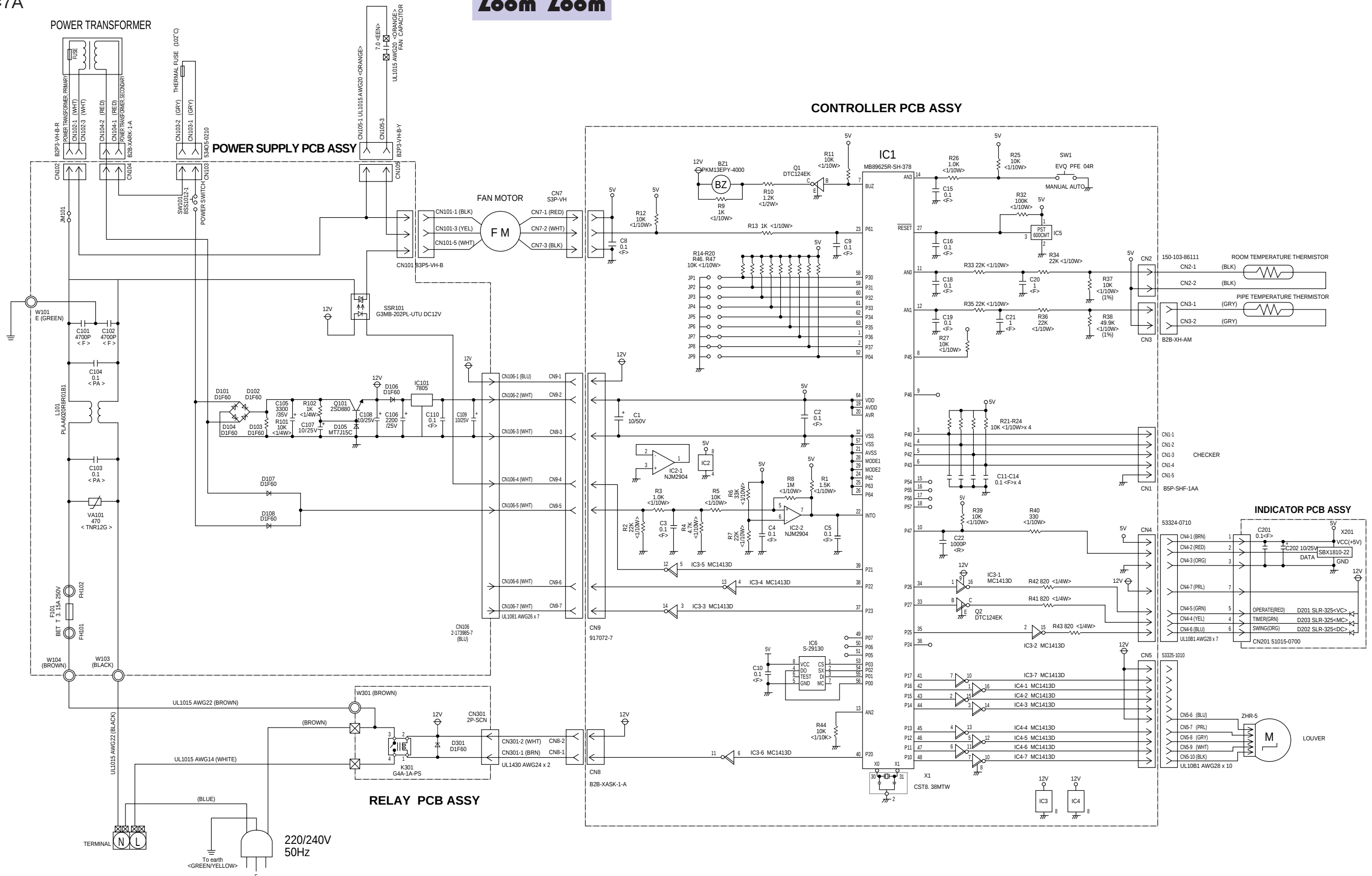
MODEL	CONTROL BOX ASSY EZ-No.	P. C. BOARD ASSY EZ-No.	SOFTWARE EZ-No.
AB□ -SERIES			
ABY 14A ABG 14A	0975WSE 0976WSE	096VWSE-F	096VWSE-C
ABY 18A ABG 18A	0972WSE 096YWSE		
ABY 24A ABG 24A ABT 24A	0970WSE 096VWSE 0971WSE		
ABS 24A	0973WSE		
ABY 14R ABG 14R ABT 14R	0975HSE 0976HSE 0977HSE	0975HSE-F	0975HSE-C
ABY 18R ABG 18R ABT 18R	0972HSE 096WHSE 0973HSE	0964HSE-F	0964HSE-C
ABY 24R ABG 24R ABT 24R	0970HSE 0964HSE 0971HSE		
ABS 24R	0974HSE	0974HSE-F	0974HSE-C

5.4. CONTROLLER PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

5.4.1 COMPACT SII SERIES

Model : AS*7A

Zoom Zoom
Zoom Zoom



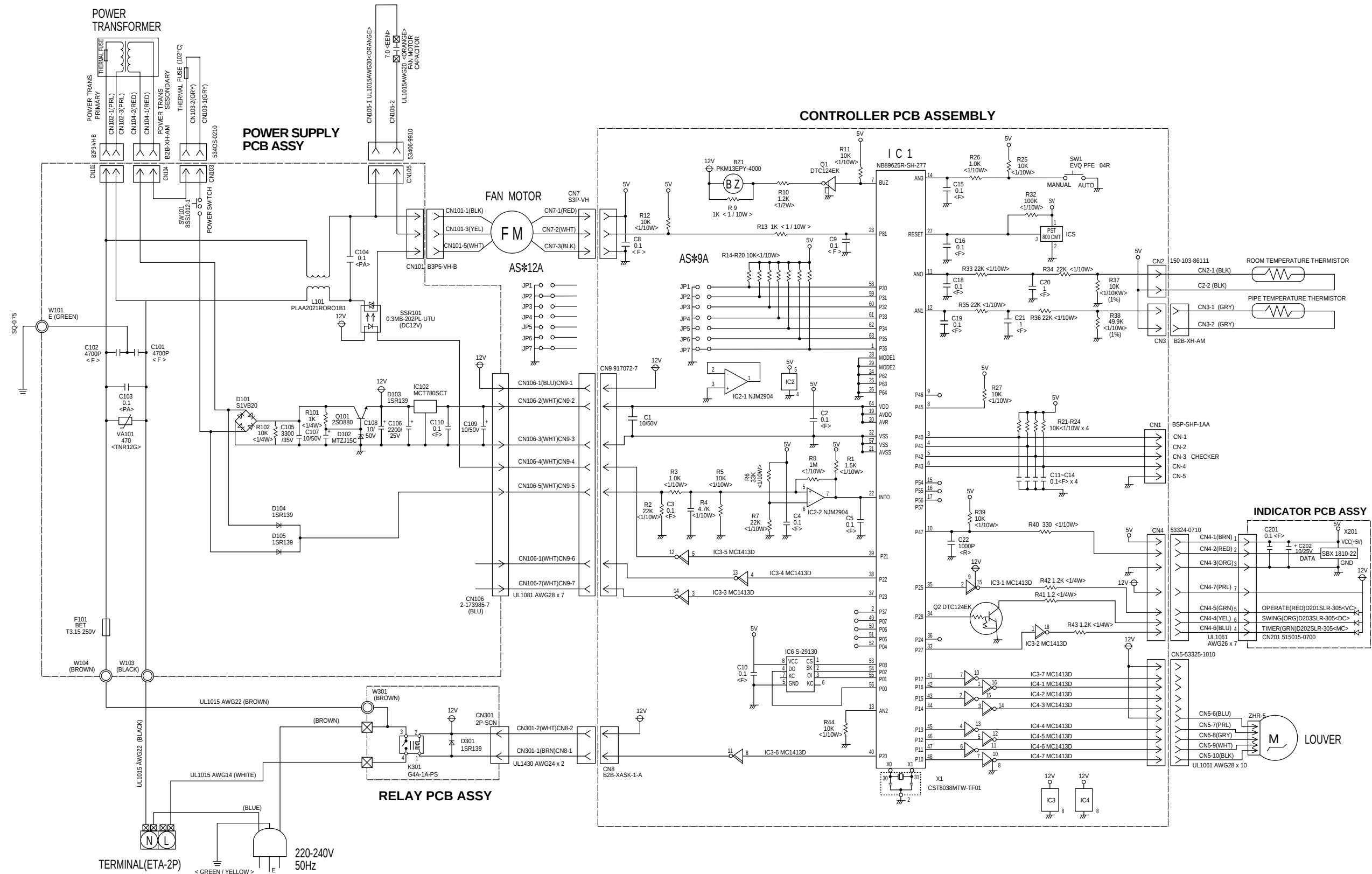
Zoom Zoom
Zoom Zoom



5.4.2 COMPACT MII SERIES

Models : AS*9A, 12A

Zoom Zoom
Zoom Zoom

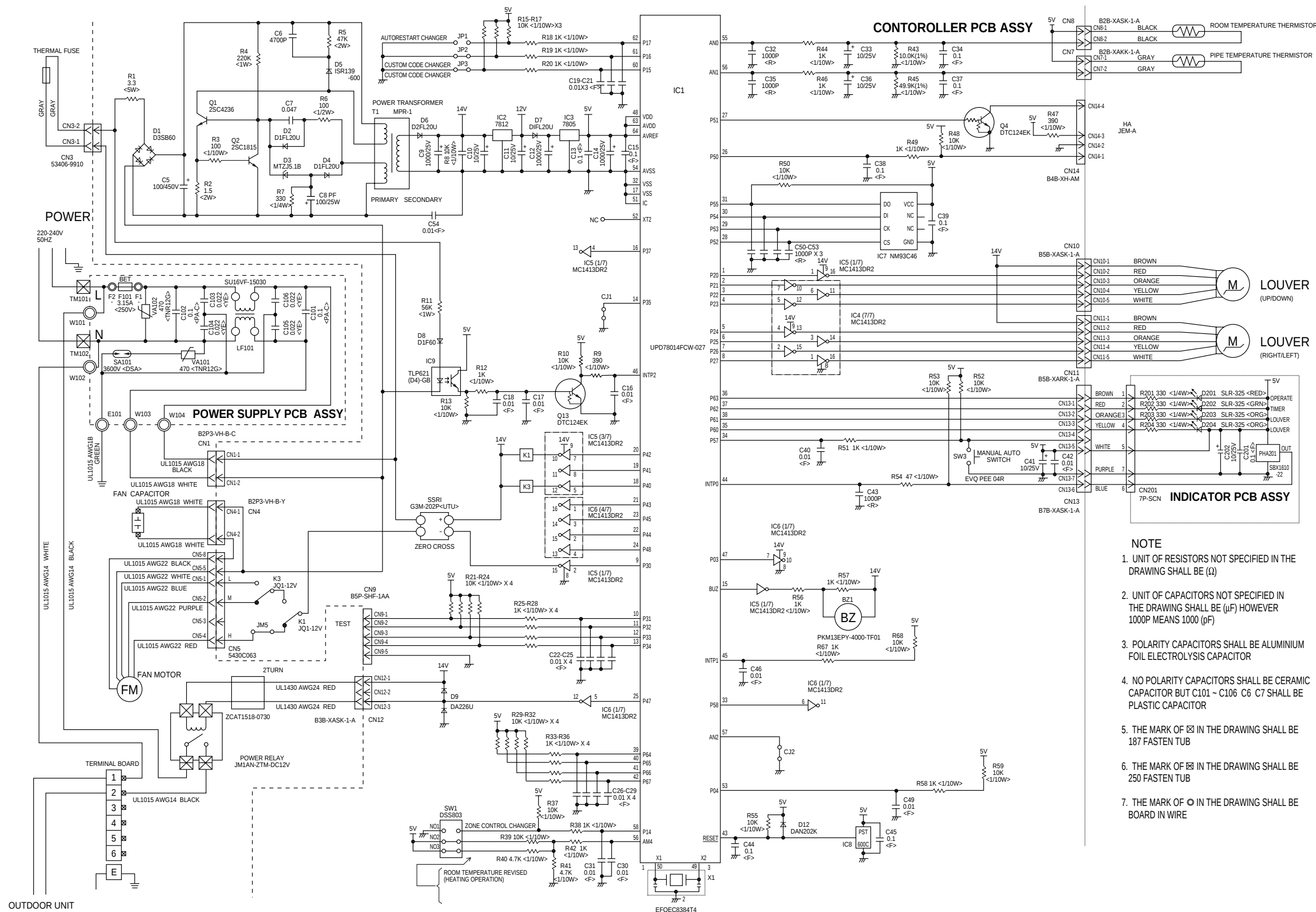


Zoom Zoom
Zoom Zoom



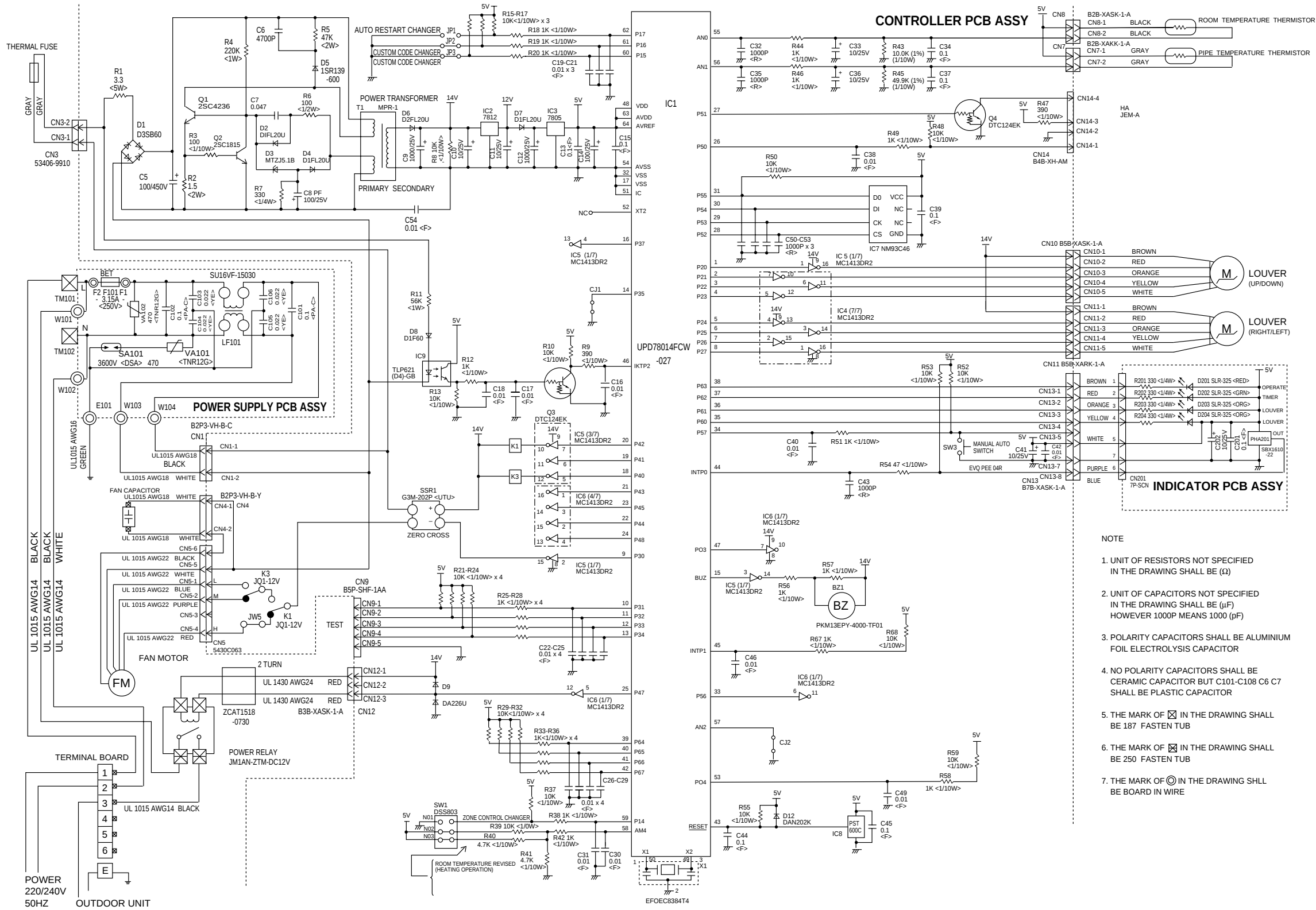
Zoom Zoom
Zoom Zoom

Models : AS*20A, AS*24A, ASS30A, ACS-7502, ACS-7602



Zoom Zoom
Zoom Zoom

Model : AS*30A



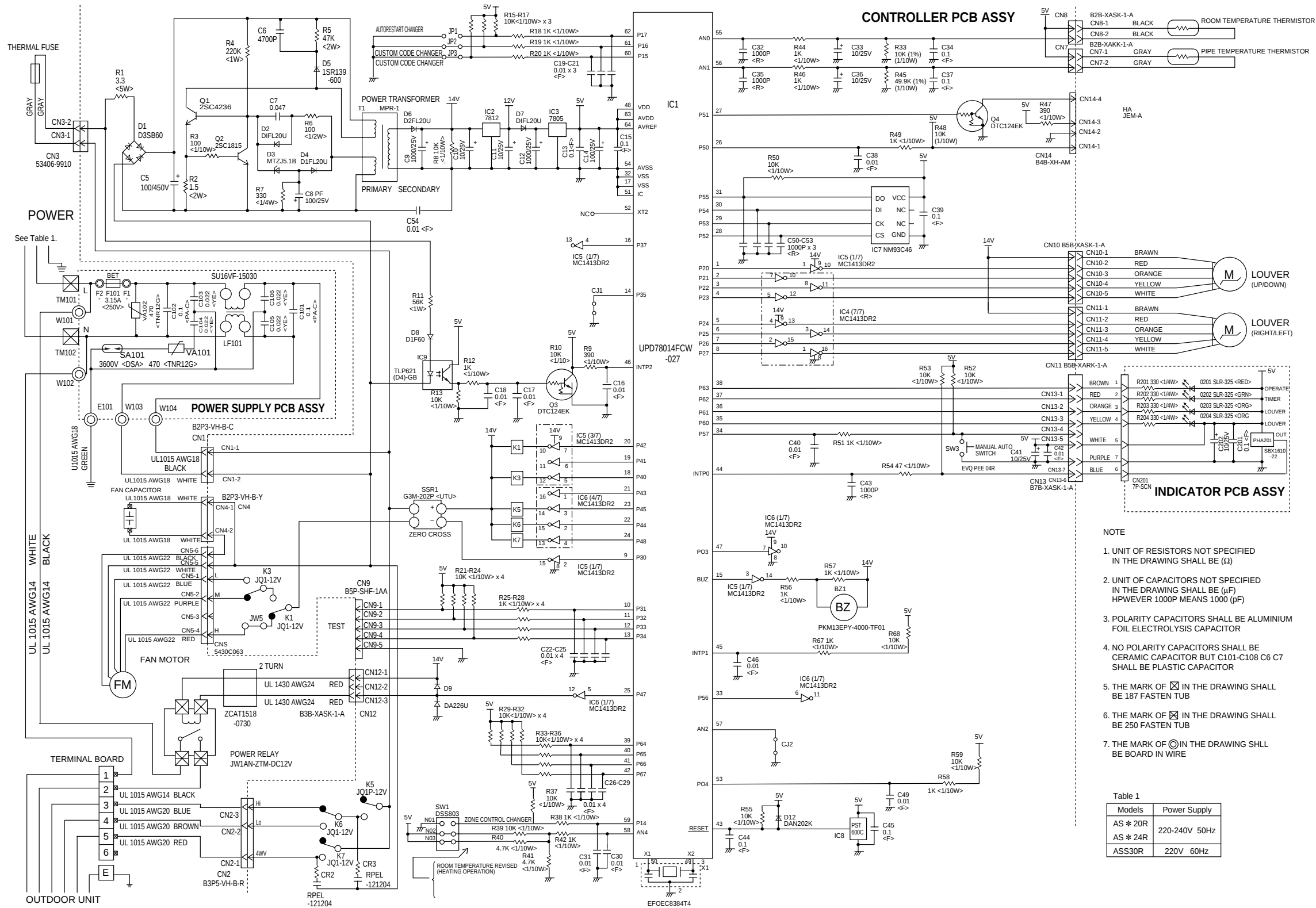
NOTE

1. UNIT OF RESISTORS NOT SPECIFIED IN THE DRAWING SHALL BE (Ω)
2. UNIT OF CAPACITORS NOT SPECIFIED IN THE DRAWING SHALL BE (μF) HOWEVER 1000P MEANS 1000 (pF)
3. POLARITY CAPACITORS SHALL BE ALUMINIUM FOIL ELECTROLYSIS CAPACITOR
4. NO POLARITY CAPACITORS SHALL BE CERAMIC CAPACITOR BUT C101-C108 C6 C7 SHALL BE PLASTIC CAPACITOR
5. THE MARK OF ☒ IN THE DRAWING SHALL BE 187 FASTEN TUB
6. THE MARK OF ☒ IN THE DRAWING SHALL BE 250 FASTEN TUB
7. THE MARK OF © IN THE DRAWING SHLL BE BOARD IN WIRE

Zoom Zoom

Zoom Zoom

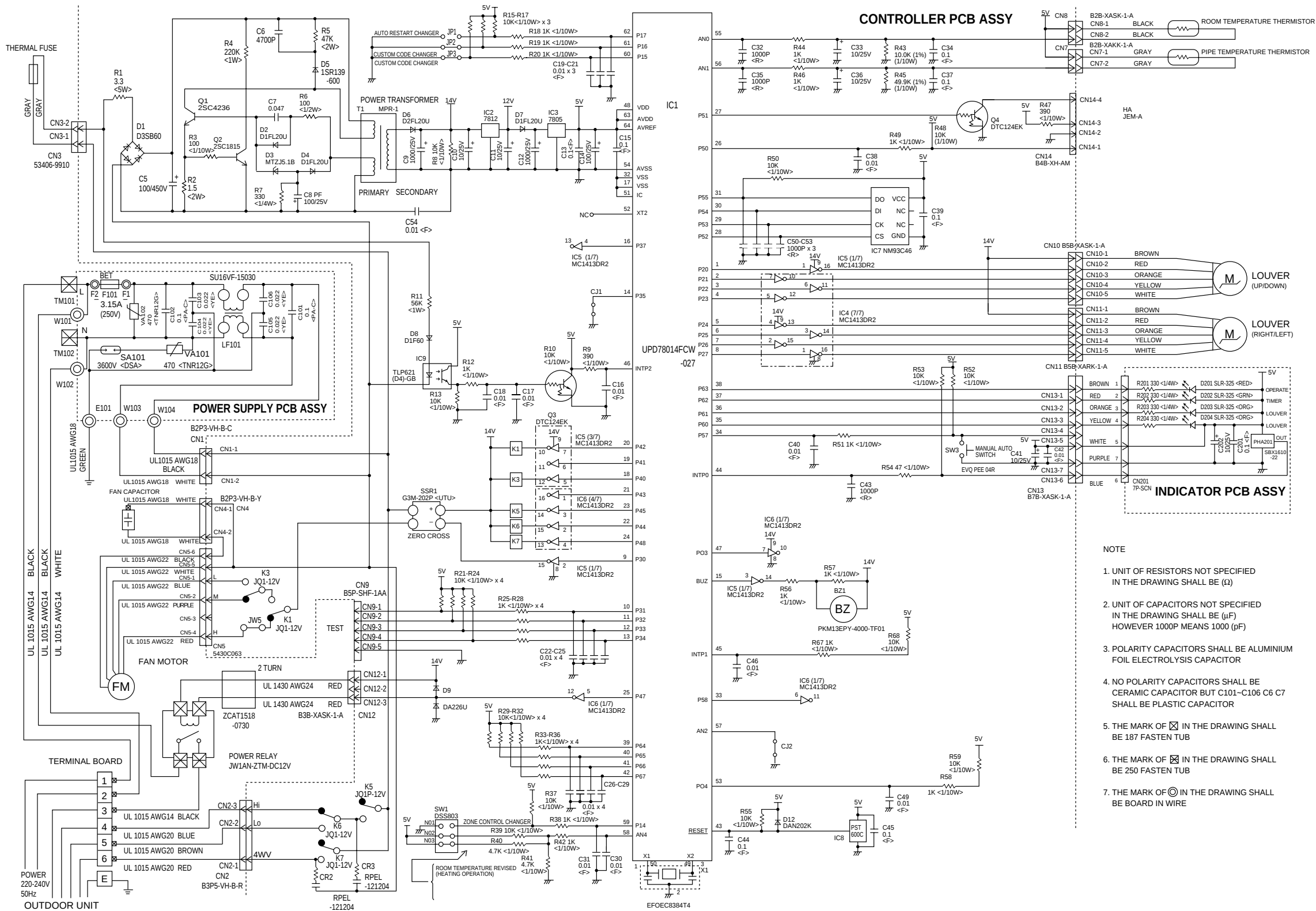
Models : AS*20R, AS*24R, ASS30R



- NOTE
- UNIT OF RESISTORS NOT SPECIFIED IN THE DRAWING SHALL BE (Ω)
 - UNIT OF CAPACITORS NOT SPECIFIED IN THE DRAWING SHALL BE (μF)
HPWEVER 1000P MEANS 1000 (pF)
 - POLARITY CAPACITORS SHALL BE ALUMINIUM FOIL ELECTROLYSIS CAPACITOR
 - NO POLARITY CAPACITORS SHALL BE CERAMIC CAPACITOR BUT C101-C108 C6 C7 SHALL BE PLASTIC CAPACITOR
 - THE MARK OF ☒ IN THE DRAWING SHALL BE 187 FASTEN TUB
 - THE MARK OF ☒ IN THE DRAWING SHALL BE 250 FASTEN TUB
 - THE MARK OF ⊙ IN THE DRAWING SHLL BE BOARD IN WIRE

Zoom Zoom
Zoom Zoom

Model : AS*30R

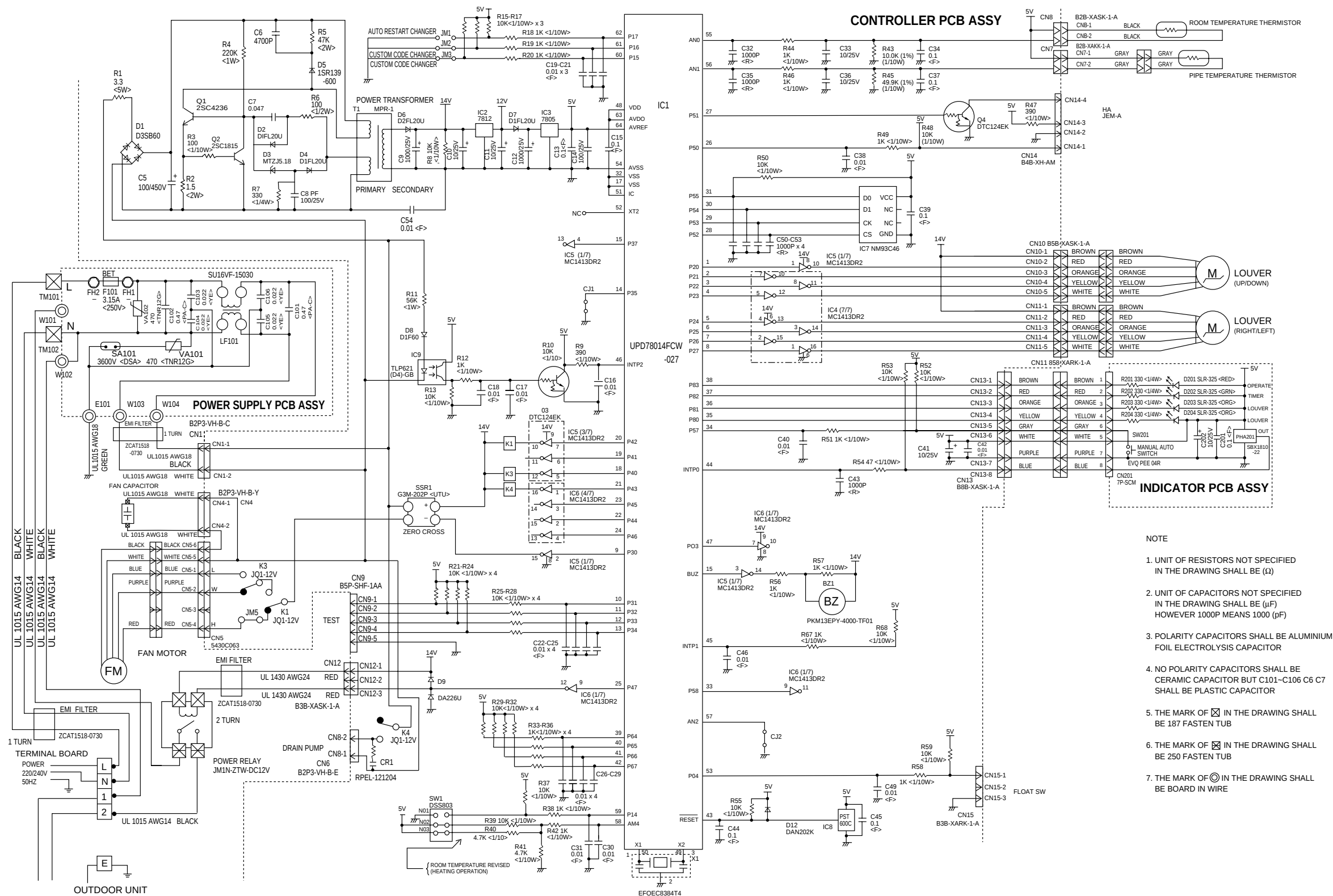


- NOTE
1. UNIT OF RESISTORS NOT SPECIFIED IN THE DRAWING SHALL BE (Ω)
 2. UNIT OF CAPACITORS NOT SPECIFIED IN THE DRAWING SHALL BE (μF) HOWEVER 1000P MEANS 1000 (pF)
 3. POLARITY CAPACITORS SHALL BE ALUMINIUM FOIL ELECTROLYSIS CAPACITOR
 4. NO POLARITY CAPACITORS SHALL BE CERAMIC CAPACITOR BUT C101-C106 C6 C7 SHALL BE PLASTIC CAPACITOR
 5. THE MARK OF ☒ IN THE DRAWING SHALL BE 187 FASTEN TUB
 6. THE MARK OF ☒ IN THE DRAWING SHALL BE 250 FASTEN TUB
 7. THE MARK OF ⊙ IN THE DRAWING SHALL BE BOARD IN WIRE

5.4.4 FLOOR / CEILING UNIVERSAL TYPE

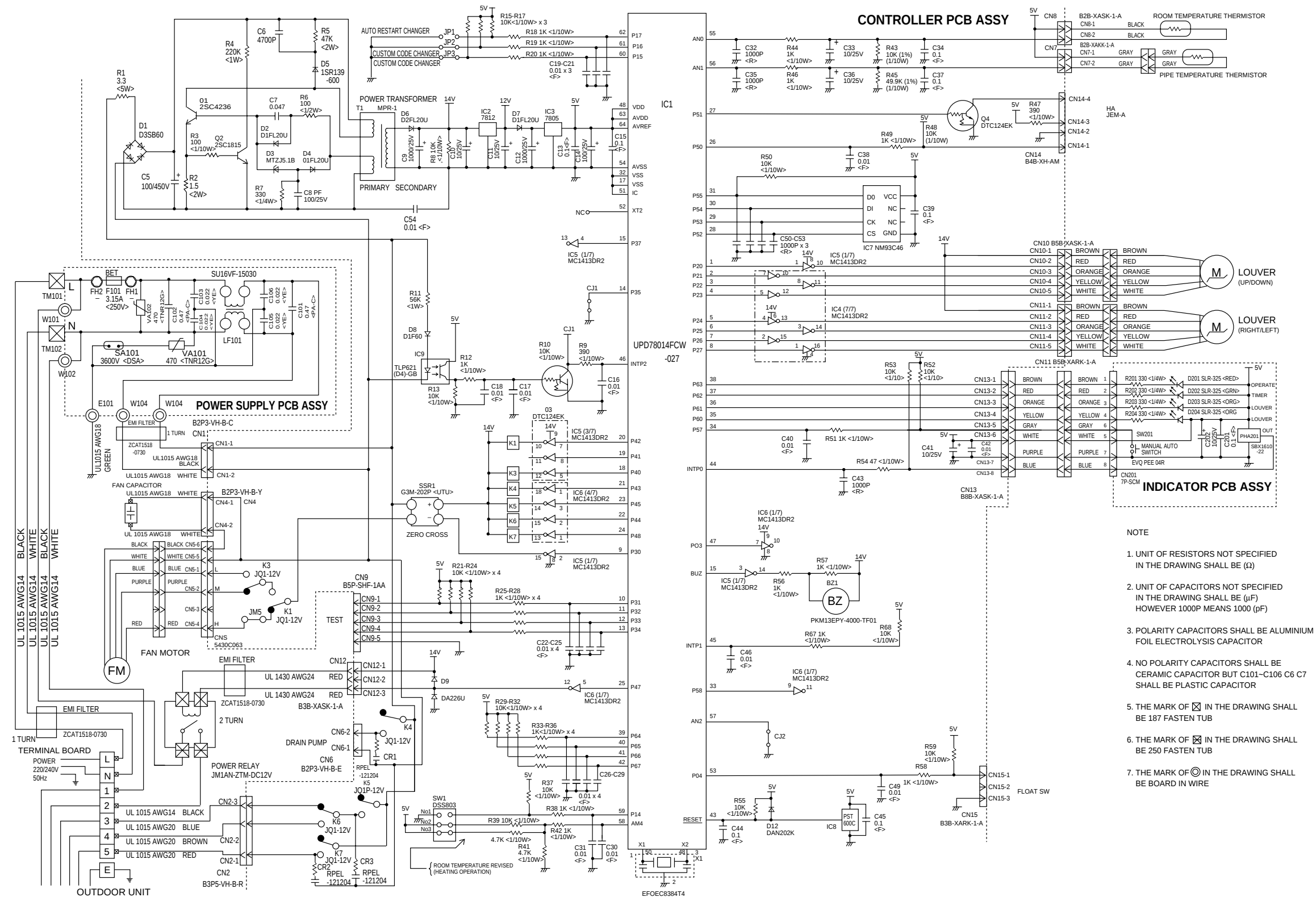
Models : AB*14A, AB*18A, AB*24A

Zoom Zoom
Zoom Zoom



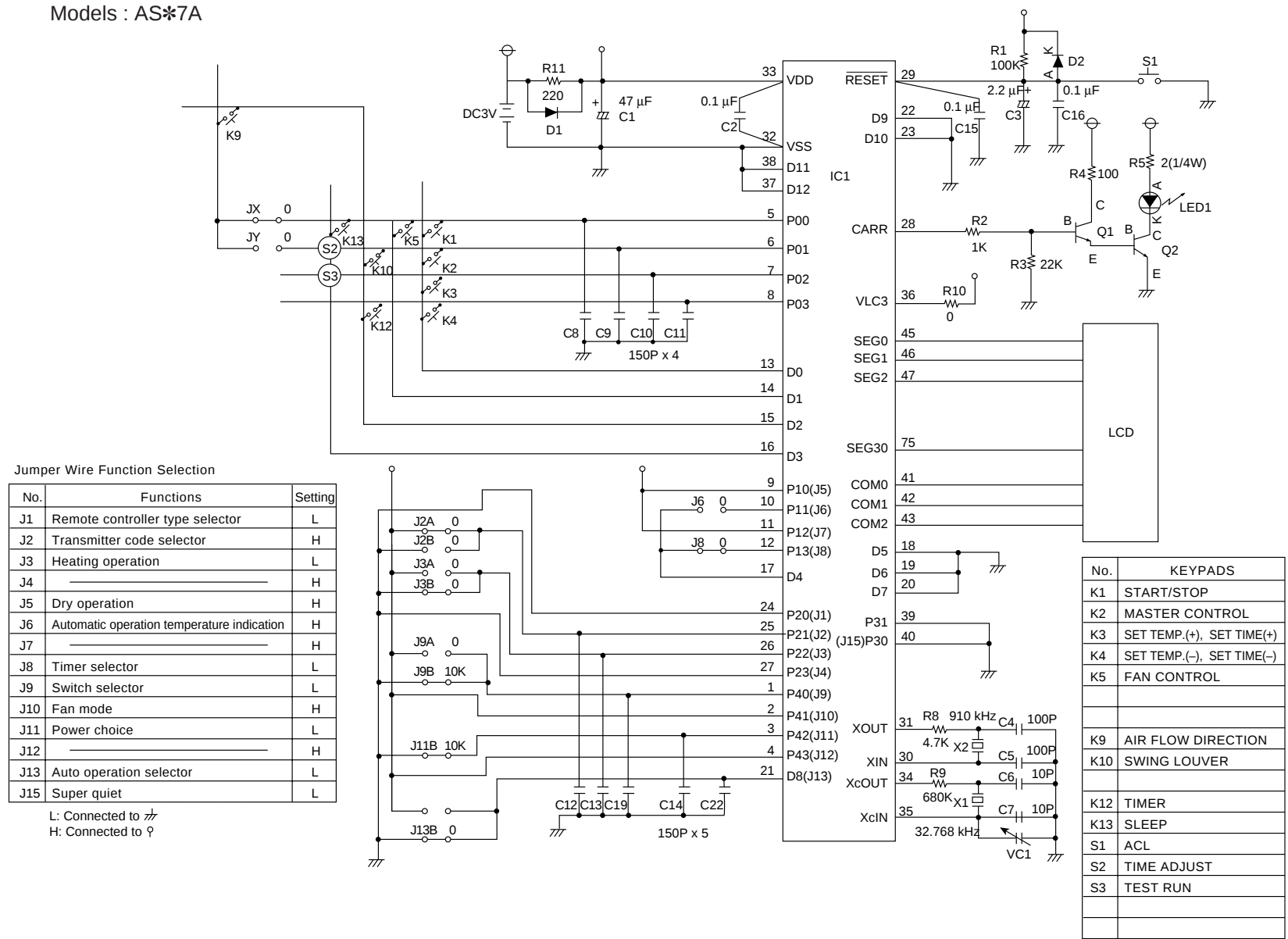
Zoom Zoom
Zoom Zoom

Models : AB*14R, AB*18R, AB*24R

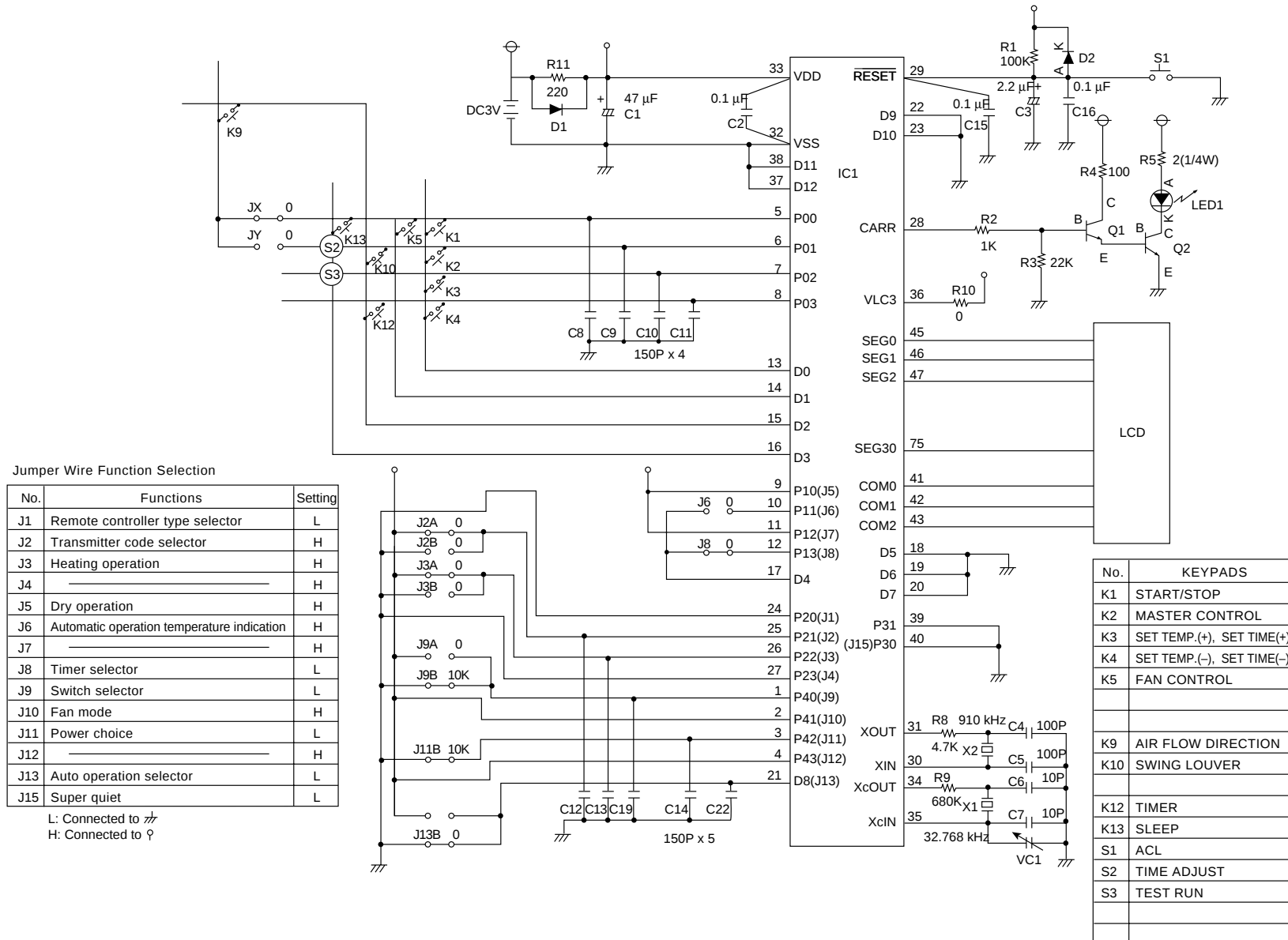


5.5.1 COMPACT S II SERIES

Models : AS*7A

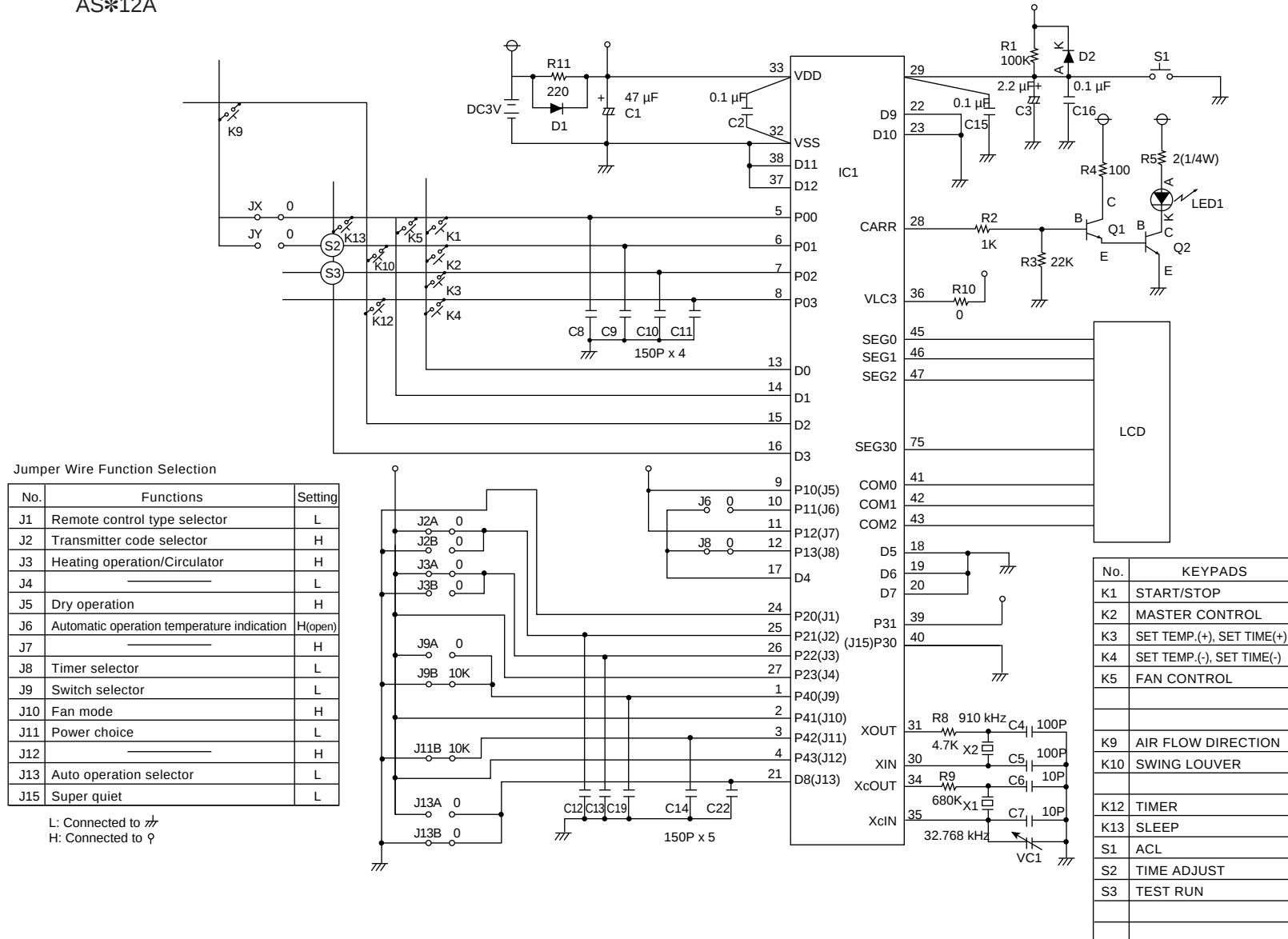


Model : AS*7R

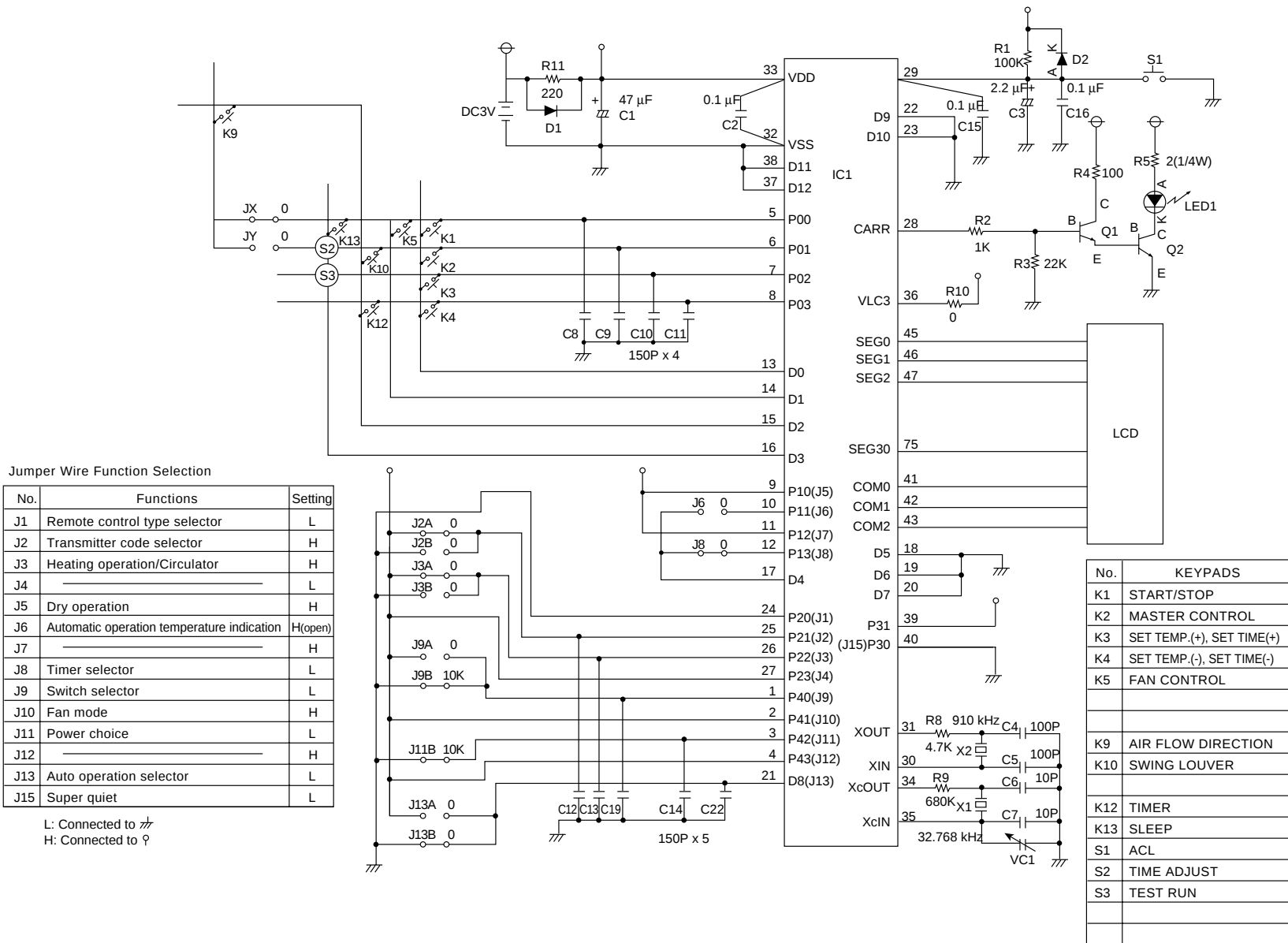


5.5.2 COMPACT M II SERIES

Models : AS*9A
AS*12A



Models : AS*9R
AS*12R

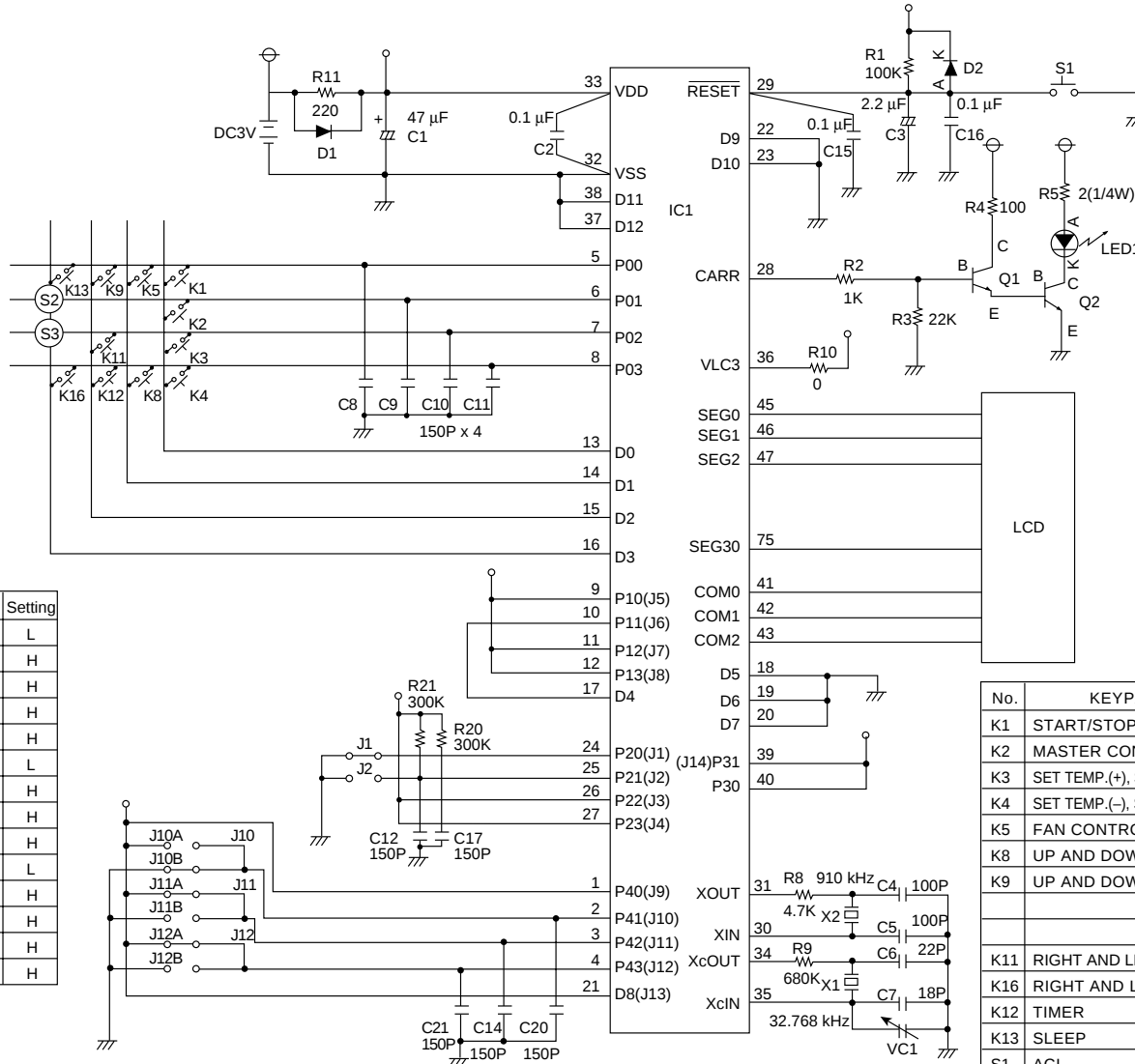


5.5.3 WALL MOUNTED LARGE TYPE AND FLOOR/CEILING UNIVERSAL TYPE

REMOTE CONTROL UNIT CIRCUIT DIAGRAM (HANDY TYPE)

Models : AS*20A, 24A, 30A

AB*14A, 18A, 24A



Jumper Wire Function Selection

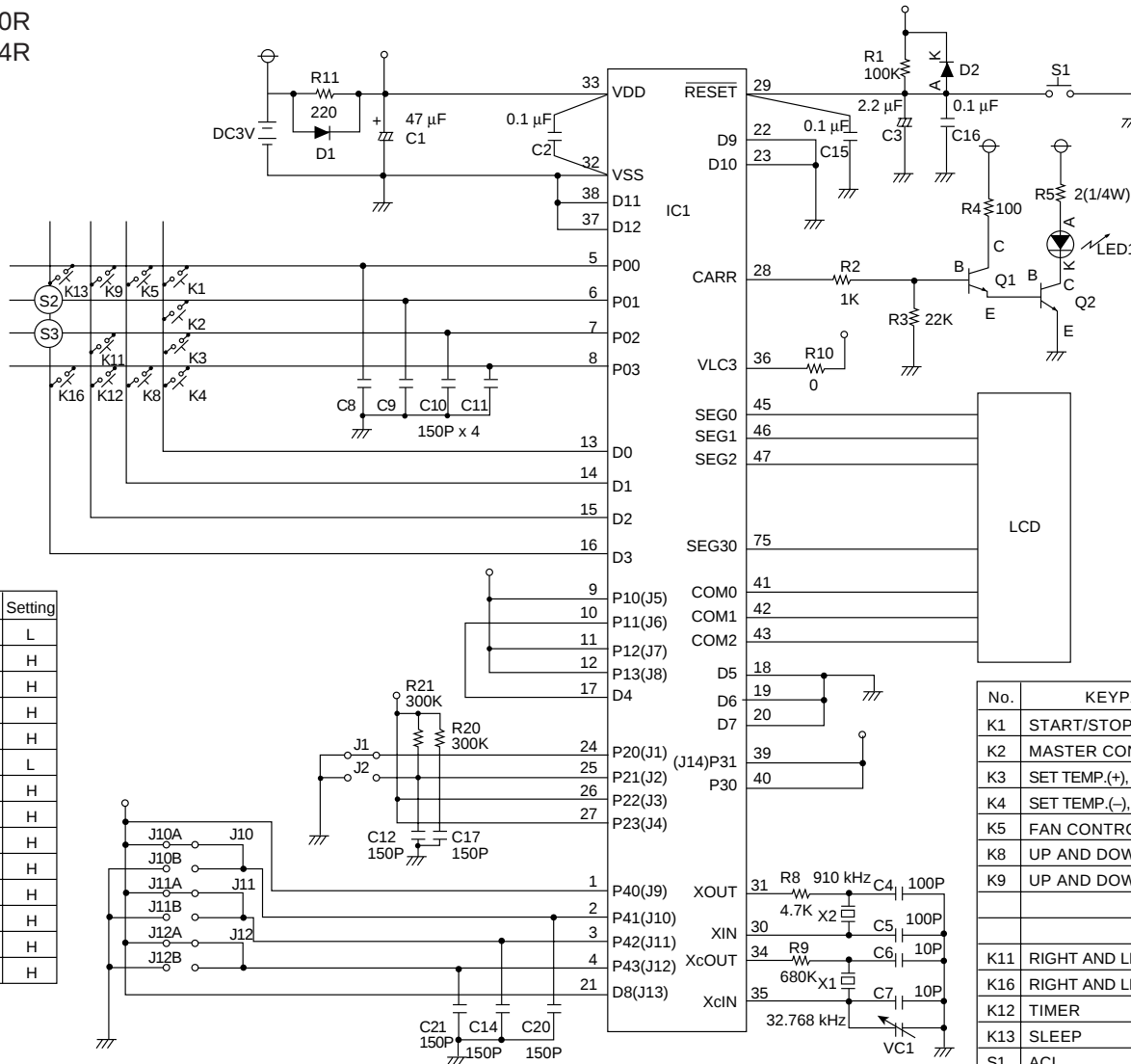
No.	Functions	Setting
J1	Transmitting code change	L
J2	Transmitting code change	H
J3	Transmitting code change	H
J4	Transmitting code change	H
J5	Dry operation	H
J6	Temperature display of automatic operation	L
J7	Change of V-remote control type	H
J8	Temperature unit selector	H
J9	Automatic operation	H
J10	Heating operation	L
J11	24Hour/12Hour	H
J12	Super quiet	H
J13	Auto operation selector	H
J14	Wind operation	H

L: Connected to ---
H: Connected to ---

No.	KEYPADS
K1	START/STOP
K2	MASTER CONTROL
K3	SET TEMP.(+), SET TIME(+)
K4	SET TEMP.(−), SET TIME(−)
K5	FAN CONTROL
K8	UP AND DOWN SWING
K9	UP AND DOWN WIND
K11	RIGHT AND LEFT SWING
K16	RIGHT AND LEFT WIND
K12	TIMER
K13	SLEEP
S1	ACL
S2	TIME ADJUST
S3	TEST RUN

REMOTE CONTROL UNIT CIRCUIT DIAGRAM (HANDY TYPE)

Models : AS*20R, 24R, 30R
AB*14R, 18R, 24R



Jumper Wire Function Selection

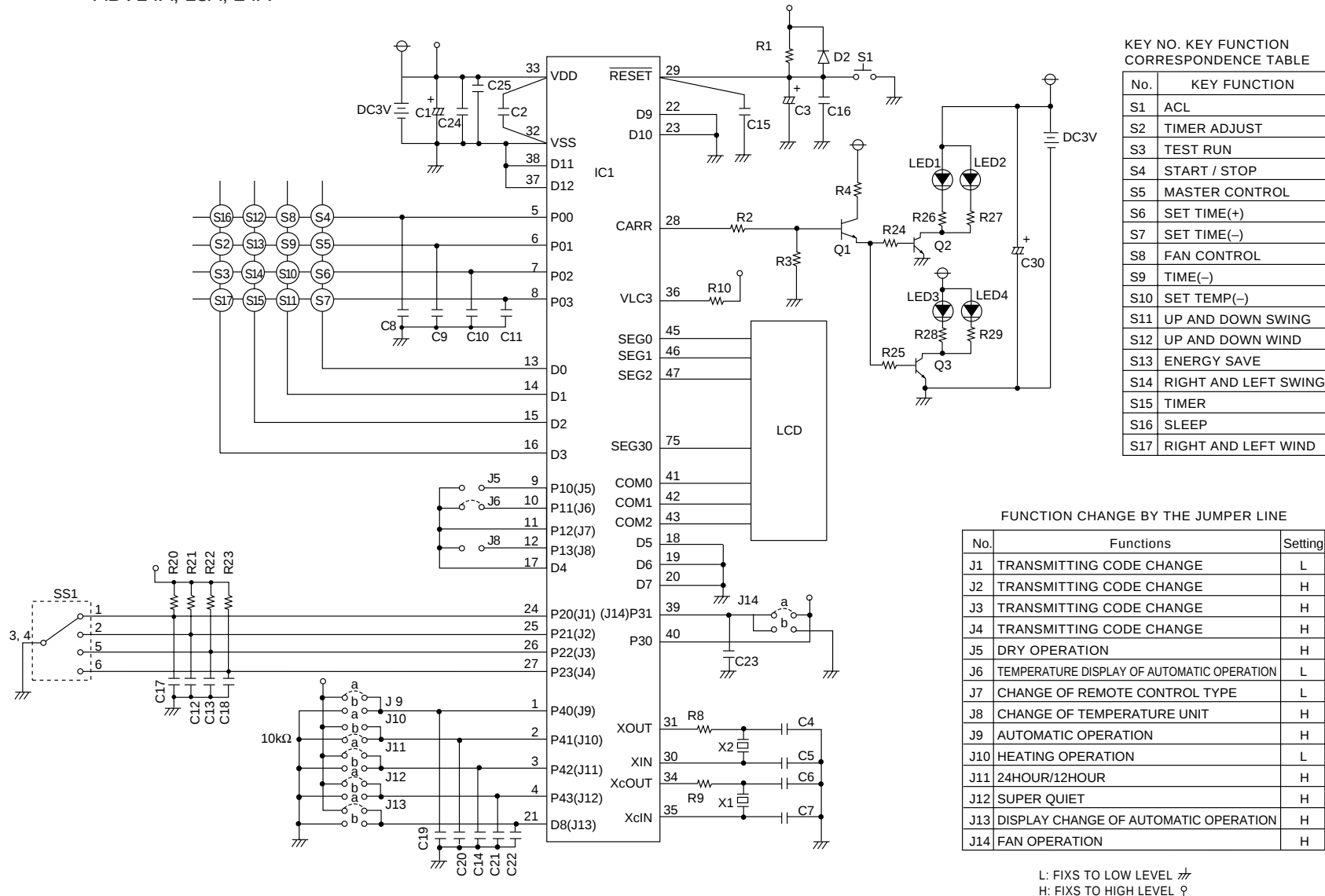
No.	Functions	Setting
J1	Transmitting code change	L
J2	Transmitting code change	H
J3	Transmitting code change	H
J4	Transmitting code change	H
J5	Dry operation	H
J6	Temperature display of automatic operation	L
J7	Change of V-remote control type	H
J8	Temperature unit selector	H
J9	Automatic operation	H
J10	Heating operation	H
J11	24Hour/12Hour	H
J12	Super quiet	H
J13	Auto operation selector	H
J14	Wind operation	H

L: Connected to ---
H: Connected to ---

No.	KEYPADS
K1	START/STOP
K2	MASTER CONTROL
K3	SET TEMP.(+), SET TIME(+)
K4	SET TEMP.(-), SET TIME(-)
K5	FAN CONTROL
K8	UP AND DOWN SWING
K9	UP AND DOWN WIND
K11	RIGHT AND LEFT SWING
K16	RIGHT AND LEFT WIND
K12	TIMER
K13	SLEEP
S1	ACL
S2	TIME ADJUST
S3	TEST RUN

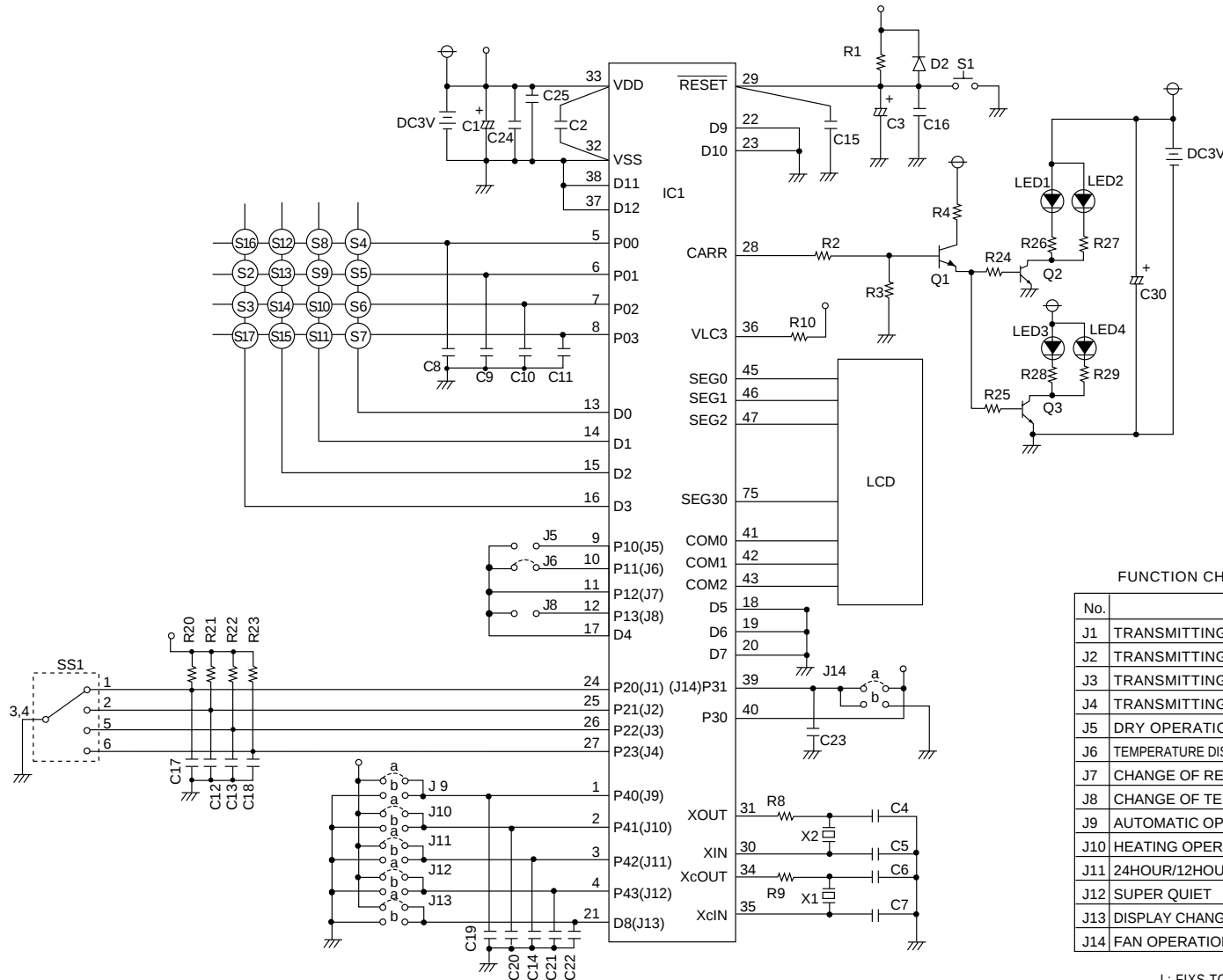
REMOTE CONTROL UNIT CIRCUIT DIAGRAM (WALL FIXING TYPE)

Models : AS*20A, 24A, 30A
AB*14A, 18A, 24A



REMOTE CONTROL UNIT CIRCUIT DIAGRAM (WALL FIXING TYPE)

Models : AS*20R, 24R, 30R
AB*14R, 18R, 24R



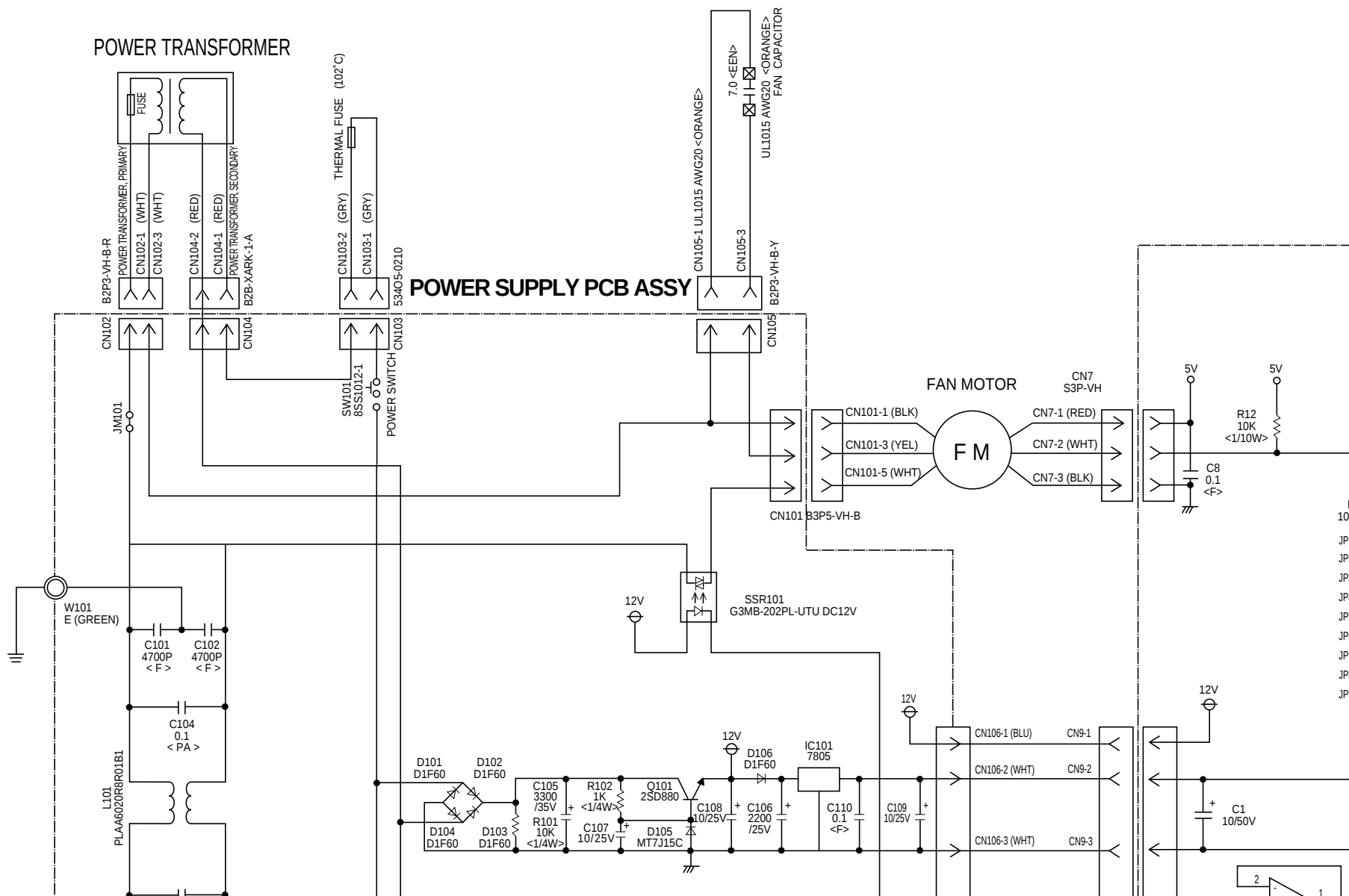
KEY NO. KEY FUNCTION
CORRESPONDENCE TABLE

No.	KEY FUNCTION
S1	ACL
S2	TIMER ADJUST
S3	TEST RUN
S4	START / STOP
S5	MASTER CONTROL
S6	SET TEMP(+)
S7	SET TEMP(-)
S8	FAN CONTROL
S9	SET TIME(+)
S10	SET TIME(-)
S11	UP AND DOWN SWING
S12	UP AND DOWN WIND
S13	ENERGY SAVE
S14	RIGHT AND LEFT SWING
S15	TIMER
S16	SLEEP
S17	RIGHT AND LEFT WIND

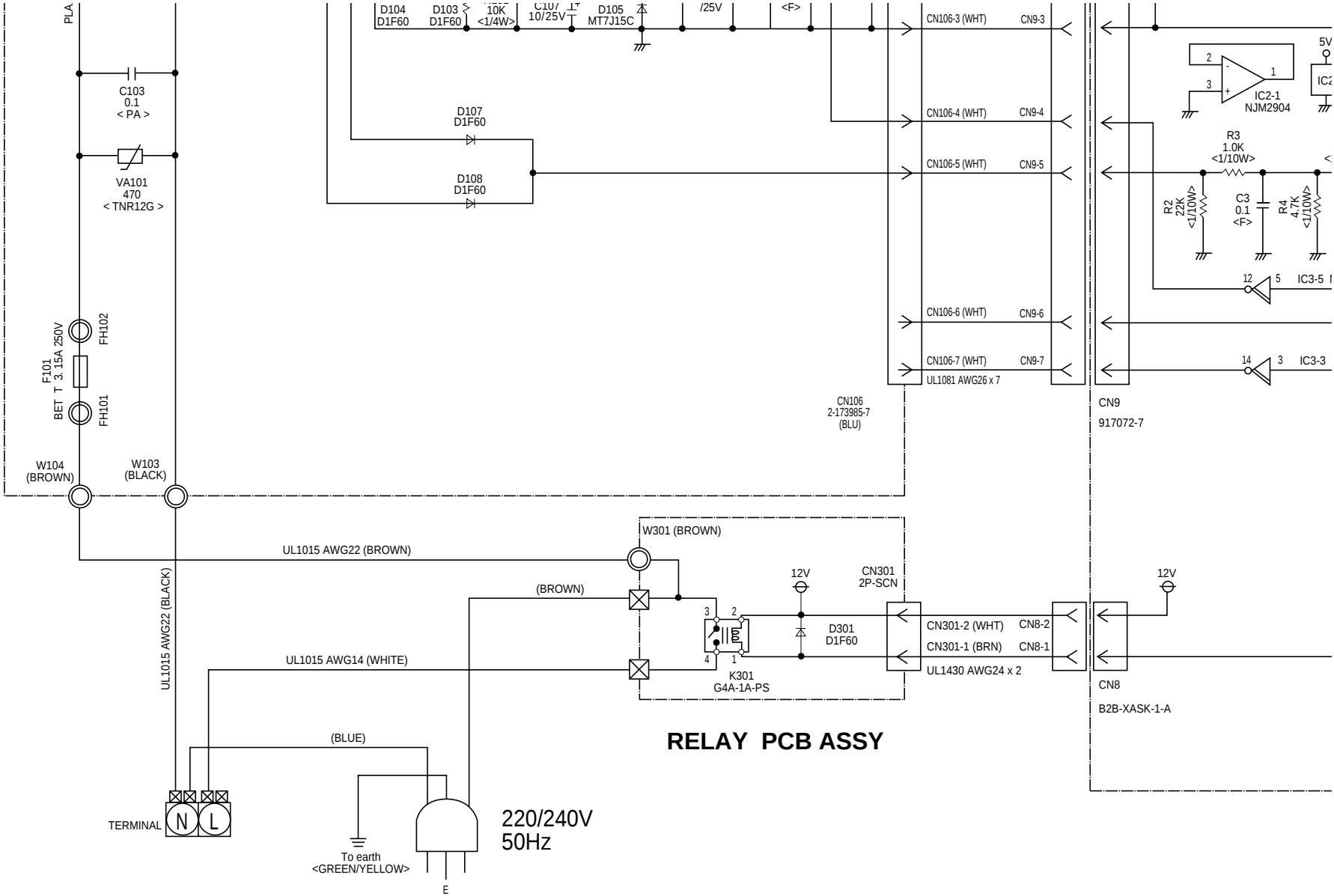
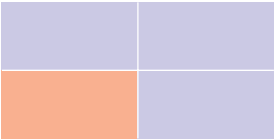
FUNCTION CHANGE BY THE JUMPER LINE

No.	Functions	Setting
J1	TRANSMITTING CODE CHANGE	L
J2	TRANSMITTING CODE CHANGE	H
J3	TRANSMITTING CODE CHANGE	H
J4	TRANSMITTING CODE CHANGE	H
J5	DRY OPERATION	H
J6	TEMPERATURE DISPLAY OF AUTOMATIC OPERATION	L
J7	CHANGE OF REMOTE CONTROL TYPE	L
J8	CHANGE OF TEMPERATURE UNIT	H
J9	AUTOMATIC OPERATION	H
J10	HEATING OPERATION	H
J11	24HOUR/12HOUR	H
J12	SUPER QUIET	H
J13	DISPLAY CHANGE OF AUTOMATIC OPERATION	H
J14	FAN OPERATION	H

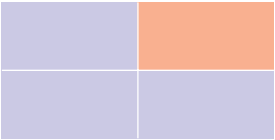
L: FIXES TO LOW LEVEL ㇏
H: FIXES TO HIGH LEVEL ㇏



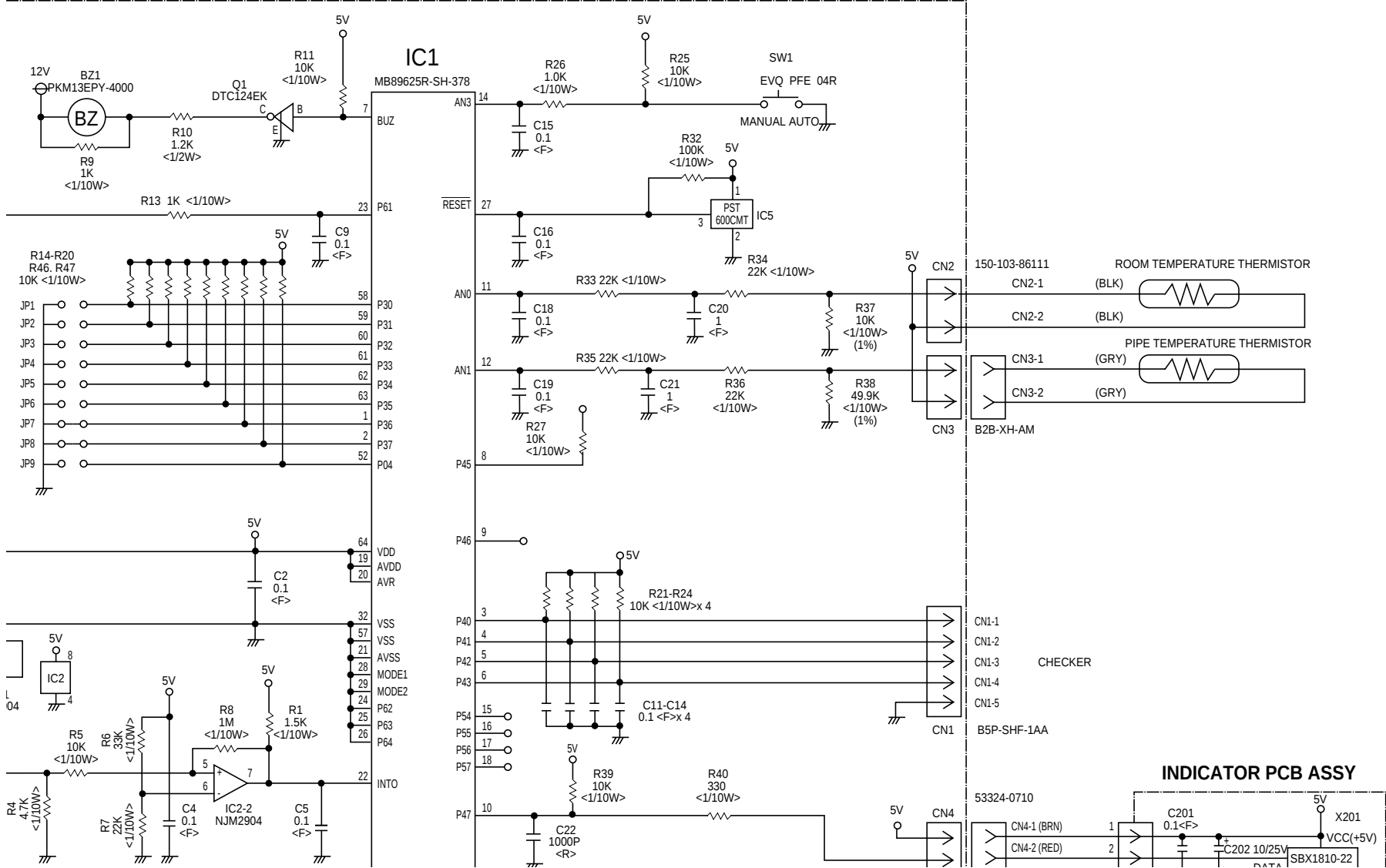
Model : AS*7A



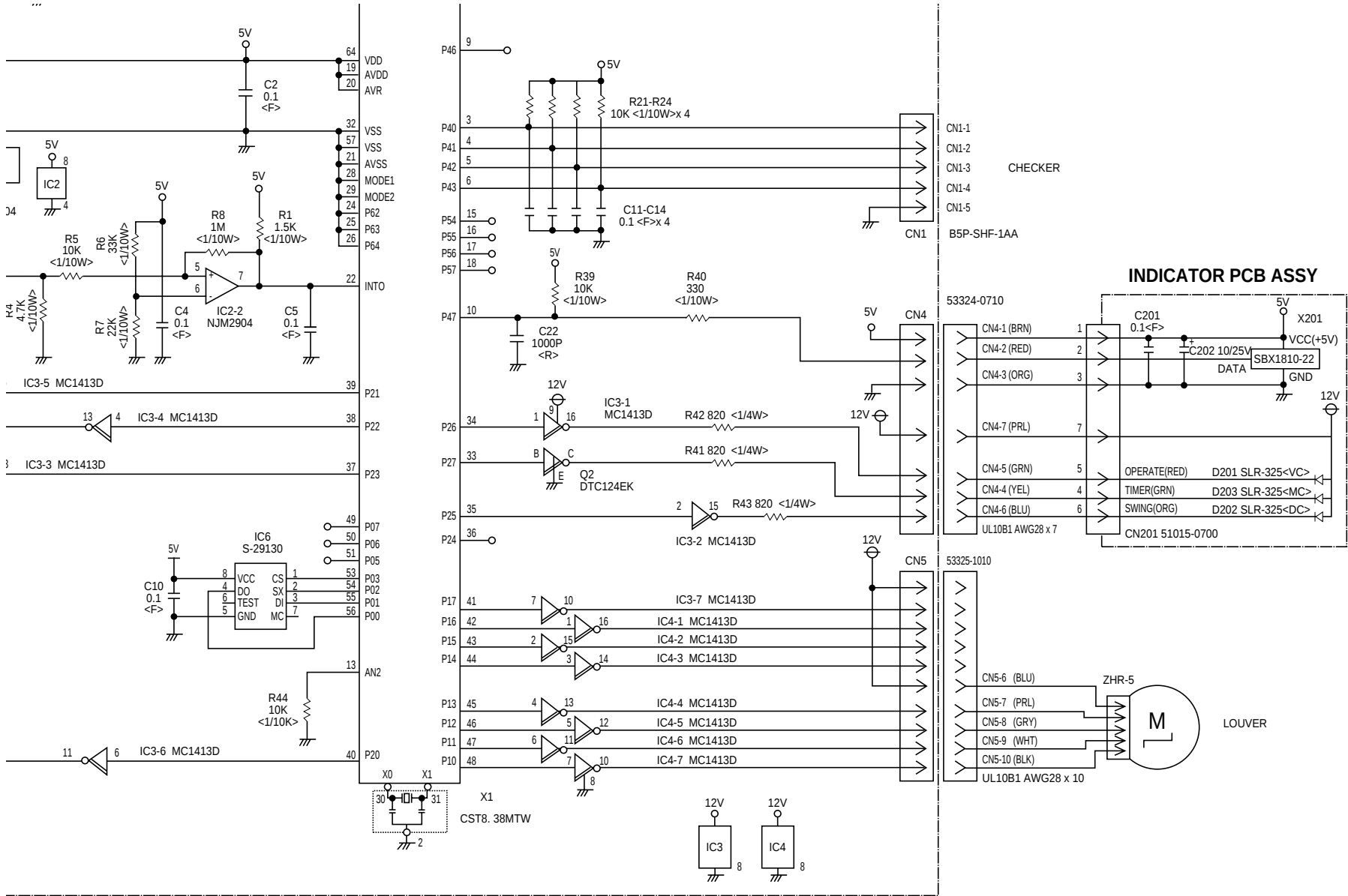
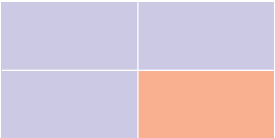
Model : AS*7A



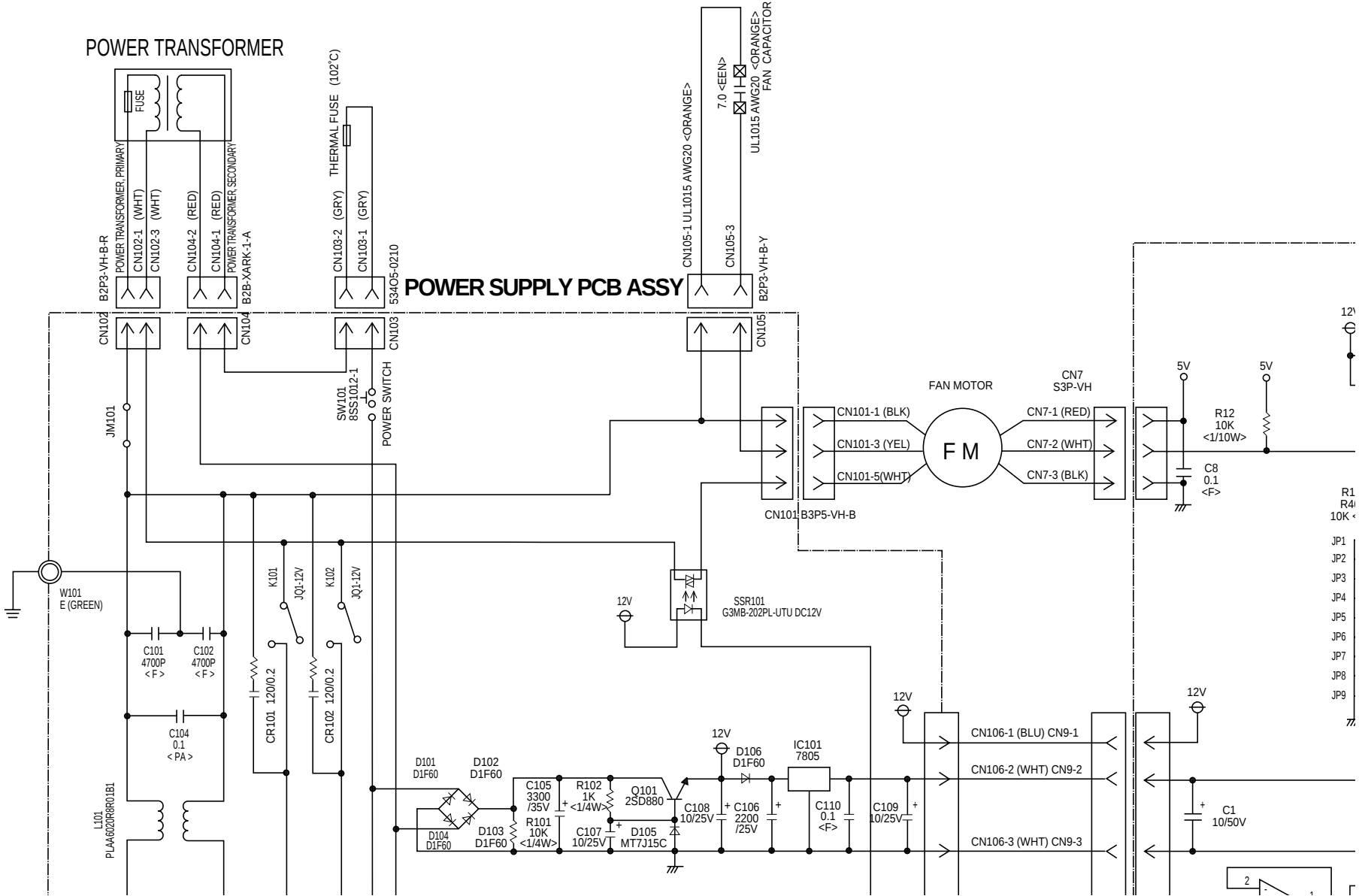
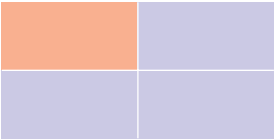
CONTROLLER PCB ASSY



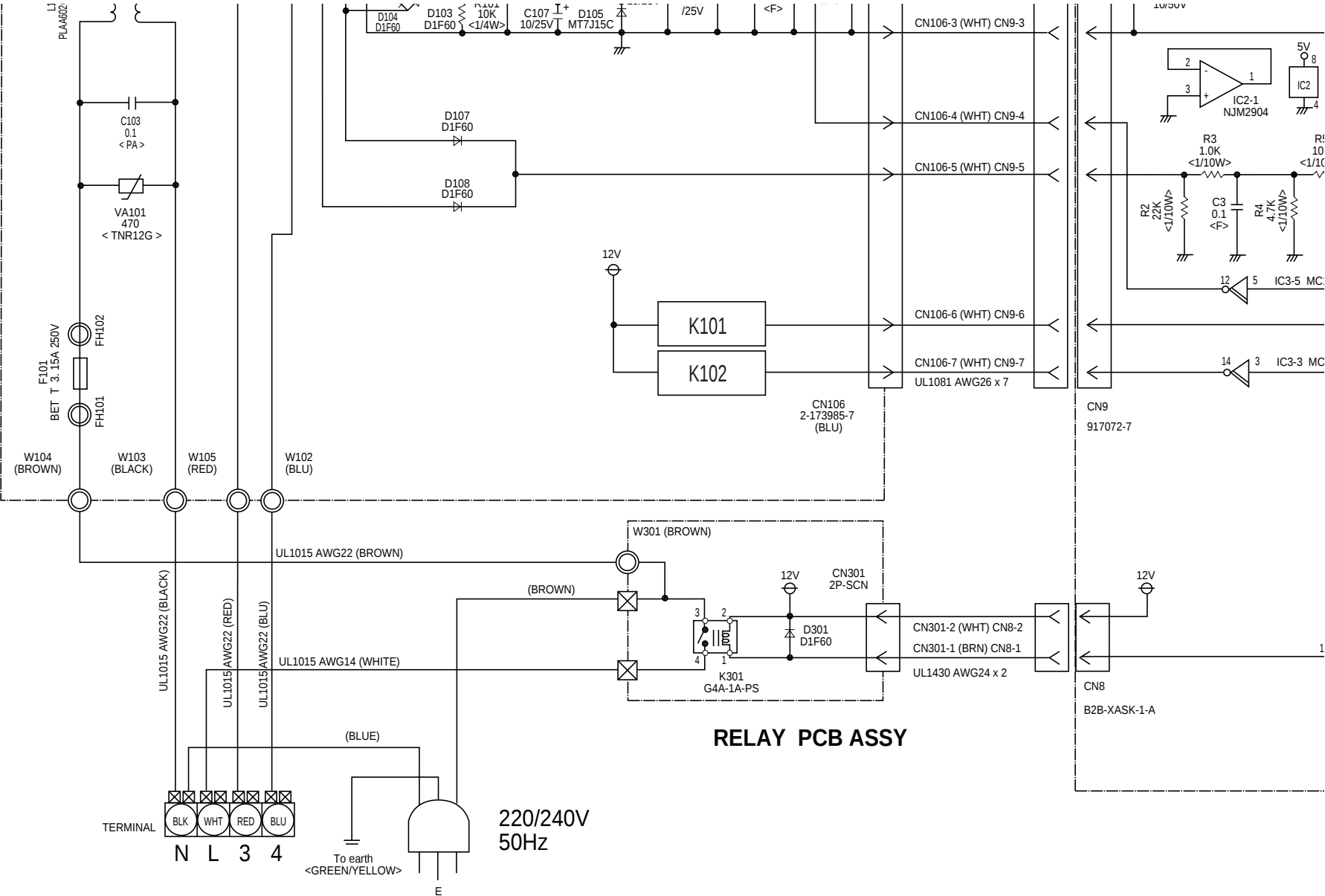
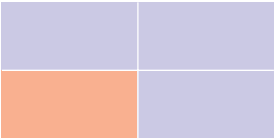
Model : AS*7A



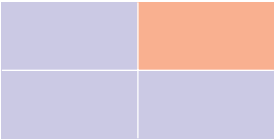
Model : AS*7R



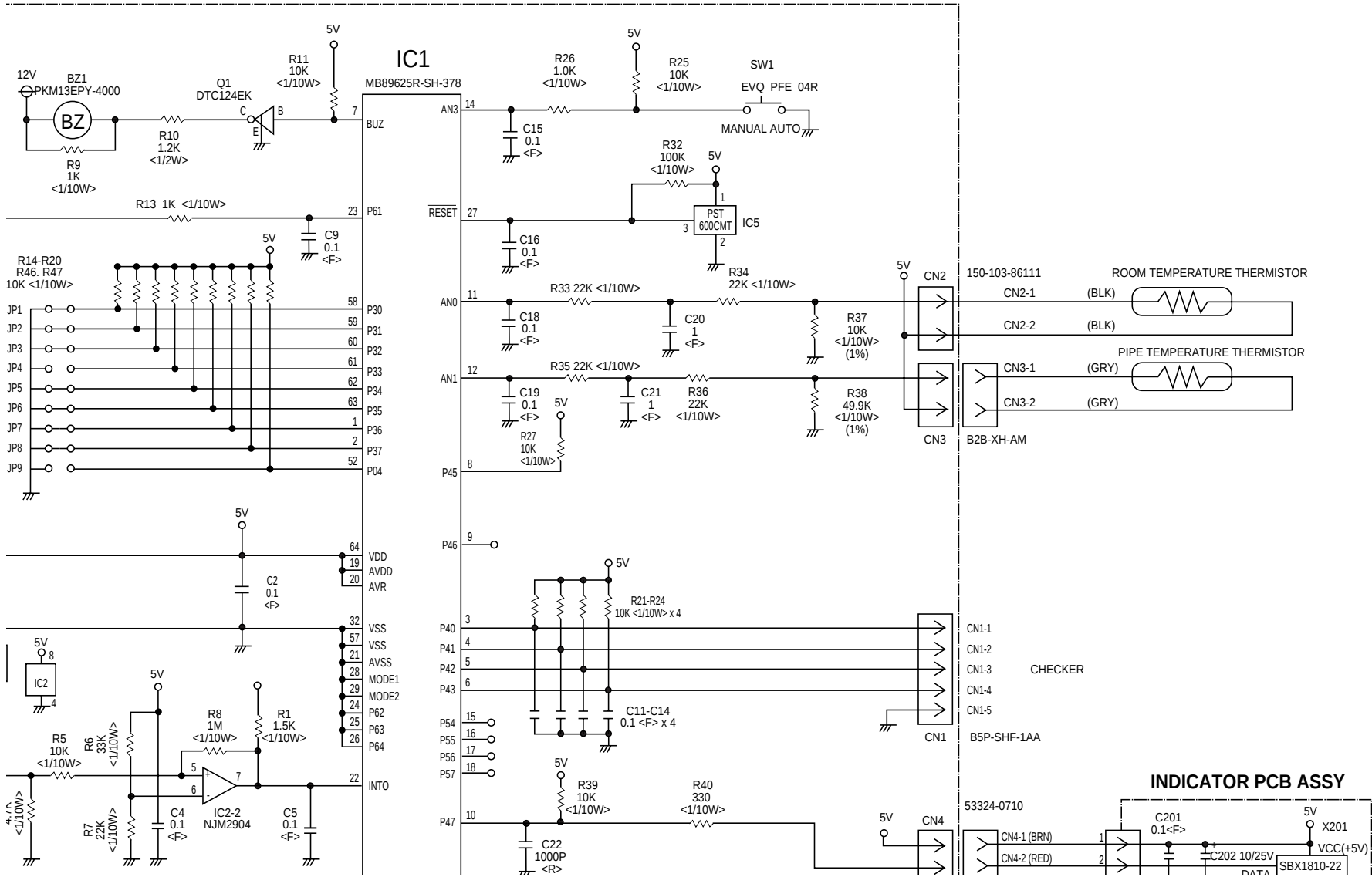
Model : AS*7R



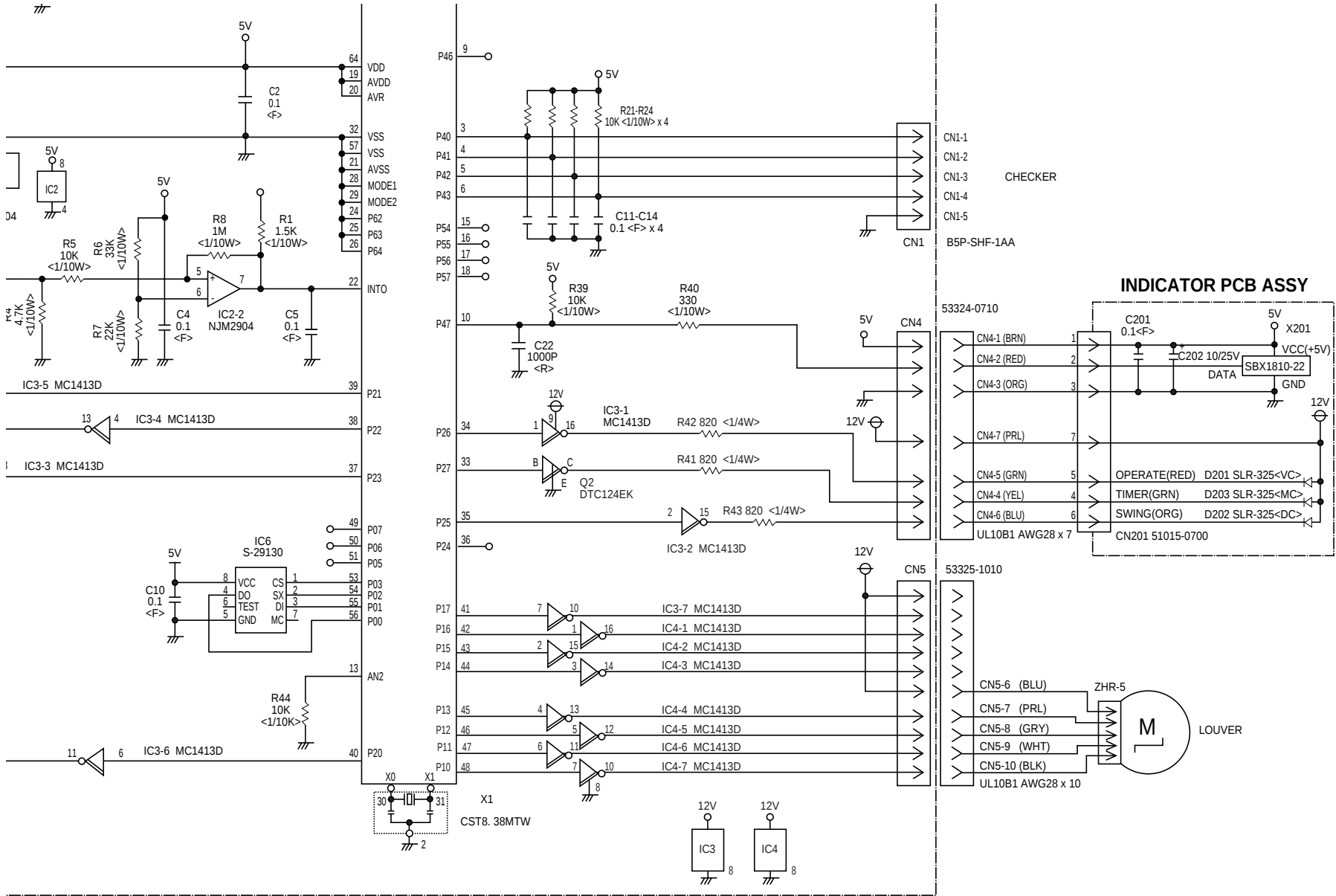
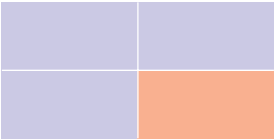
Model : AS*7R



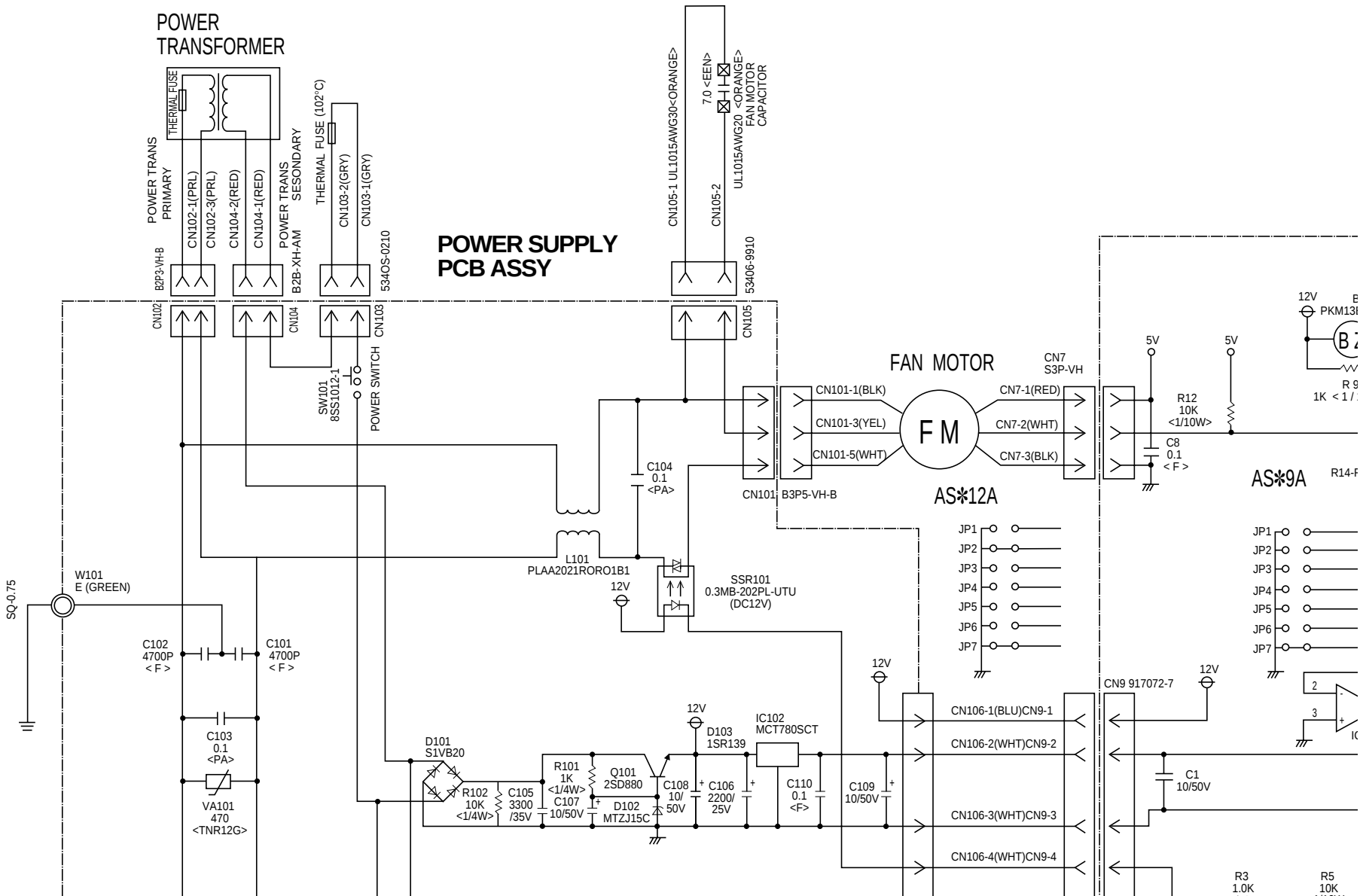
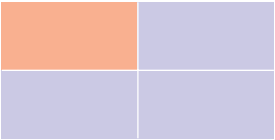
CONTROLLER PCB ASSY



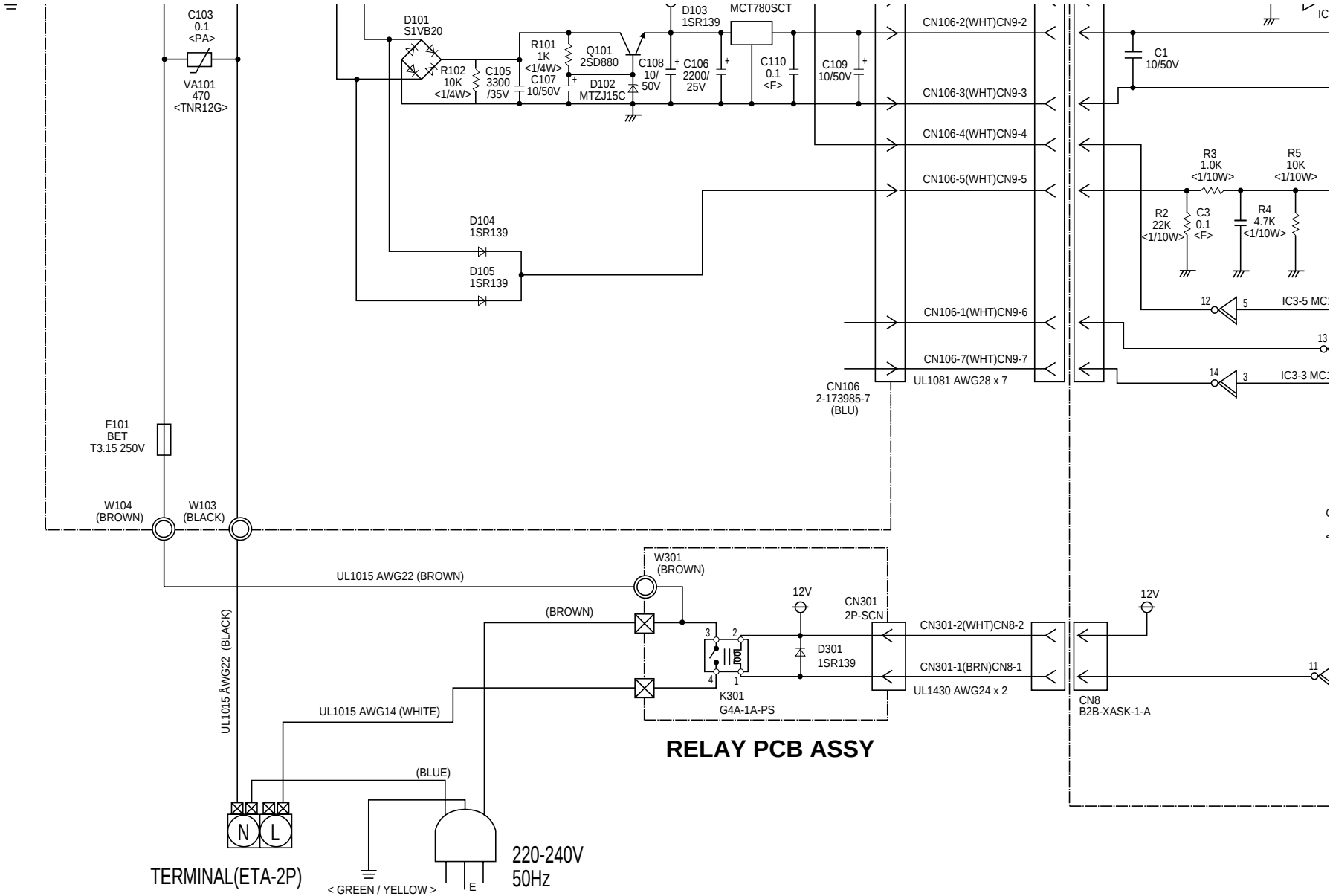
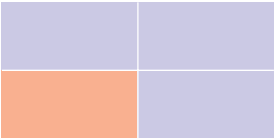
Model : AS*7R



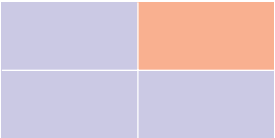
Models : AS*9A, 12A



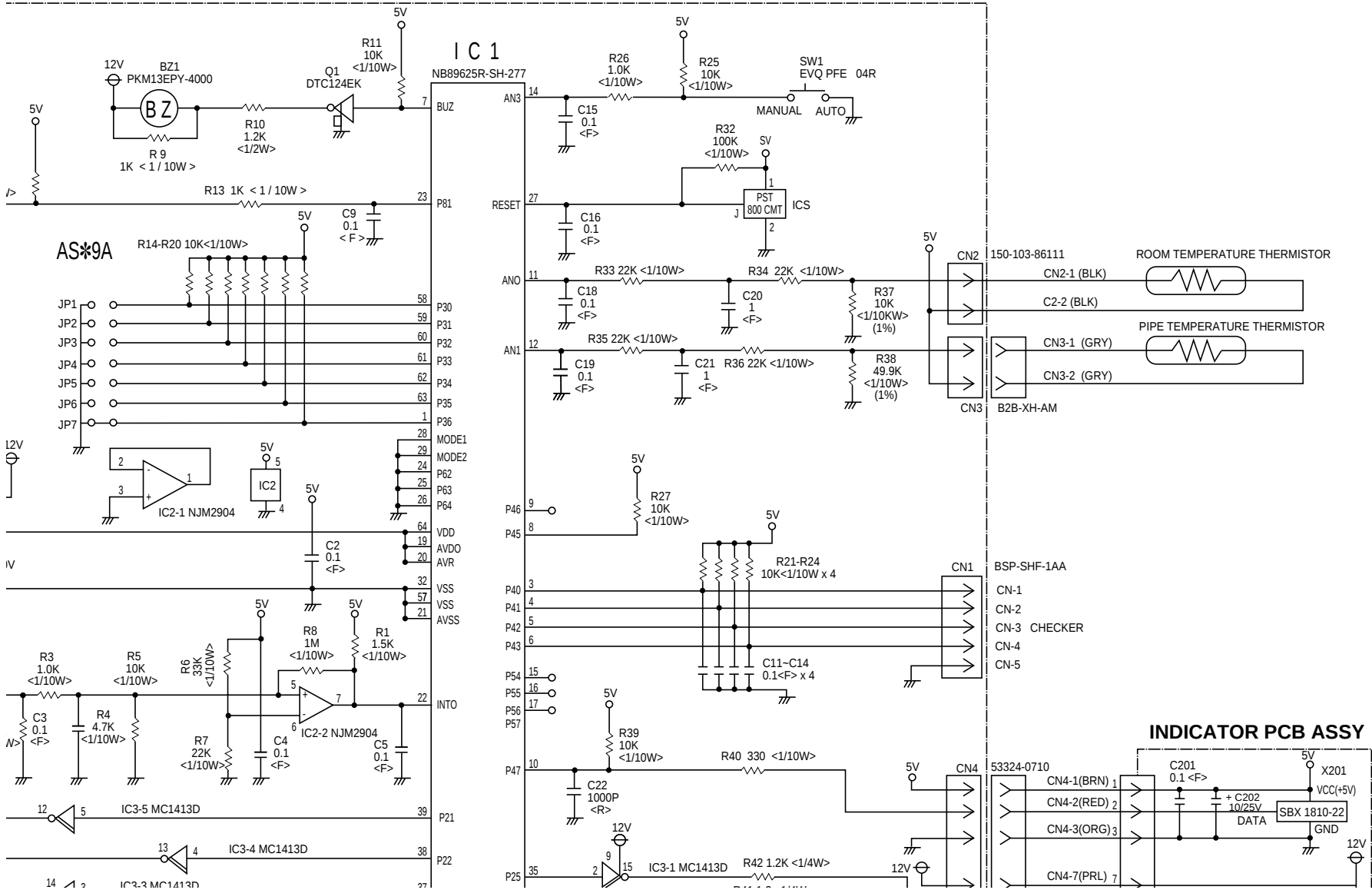
Models : AS*9A, 12A



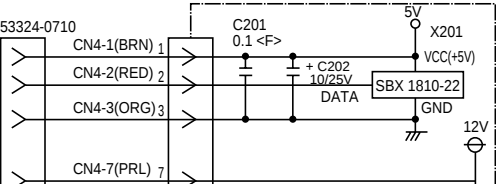
Models : AS*9A, 12A

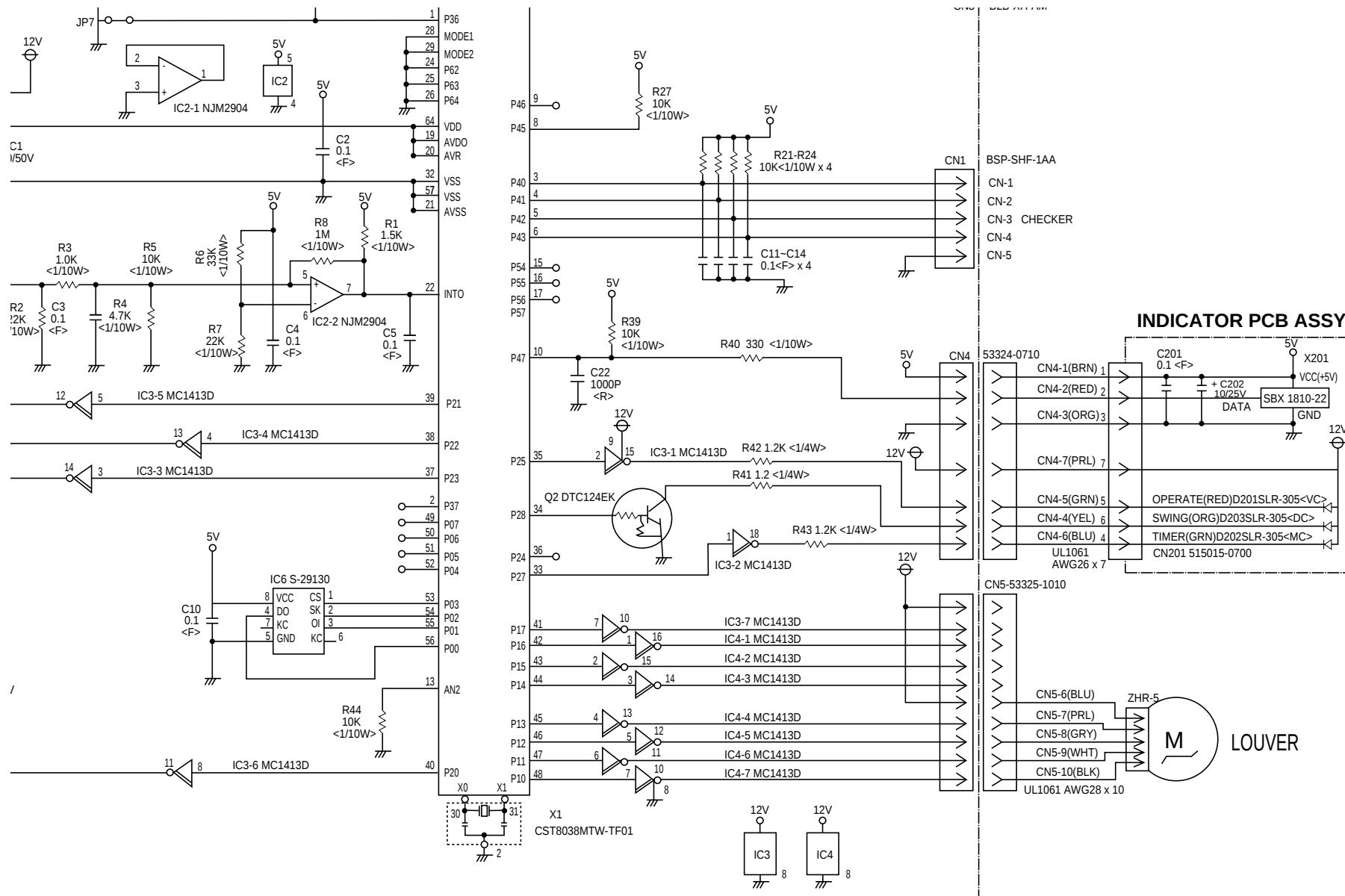


CONTROLLER PCB ASSEMBLY

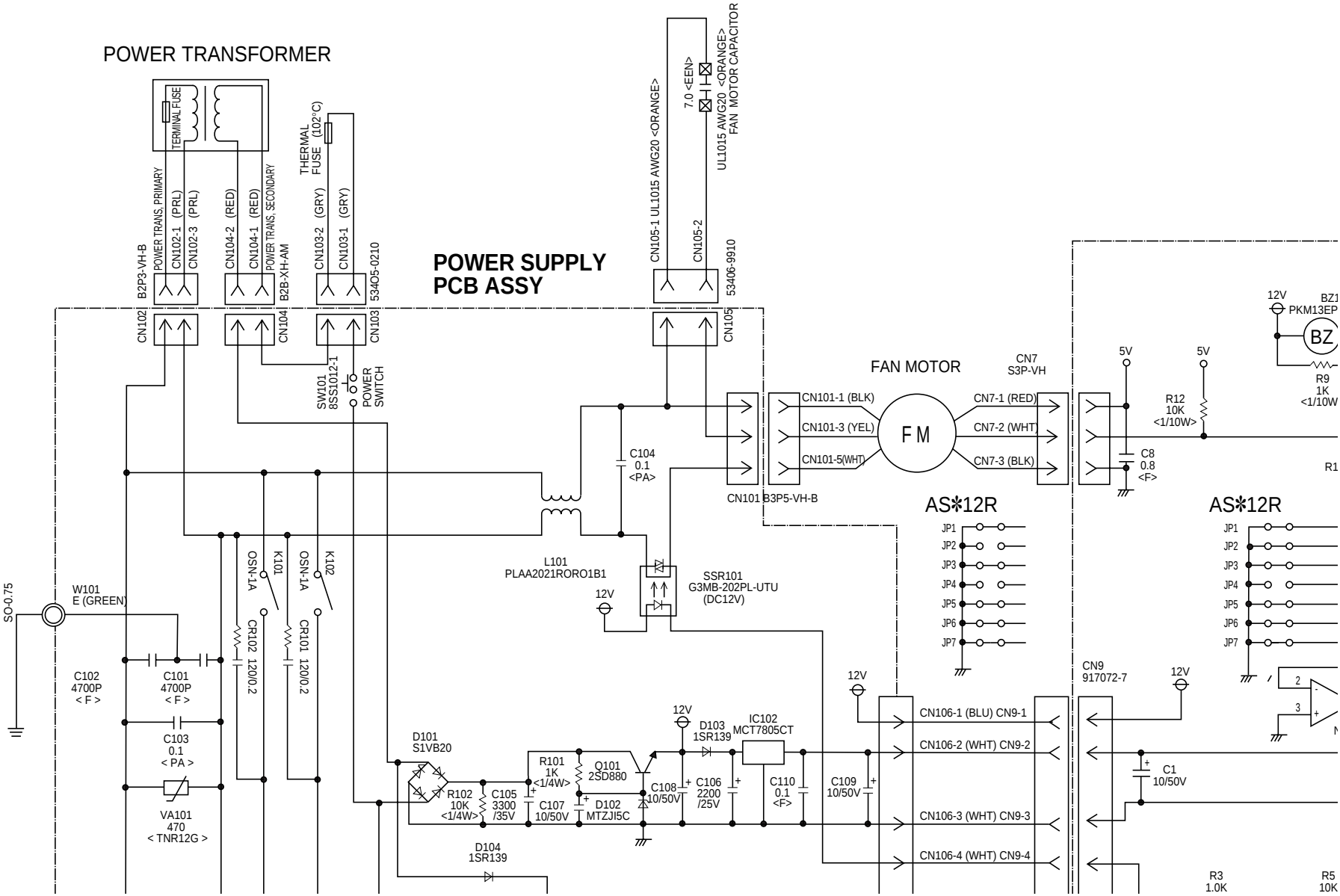
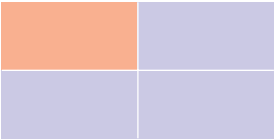


INDICATOR PCB ASSY

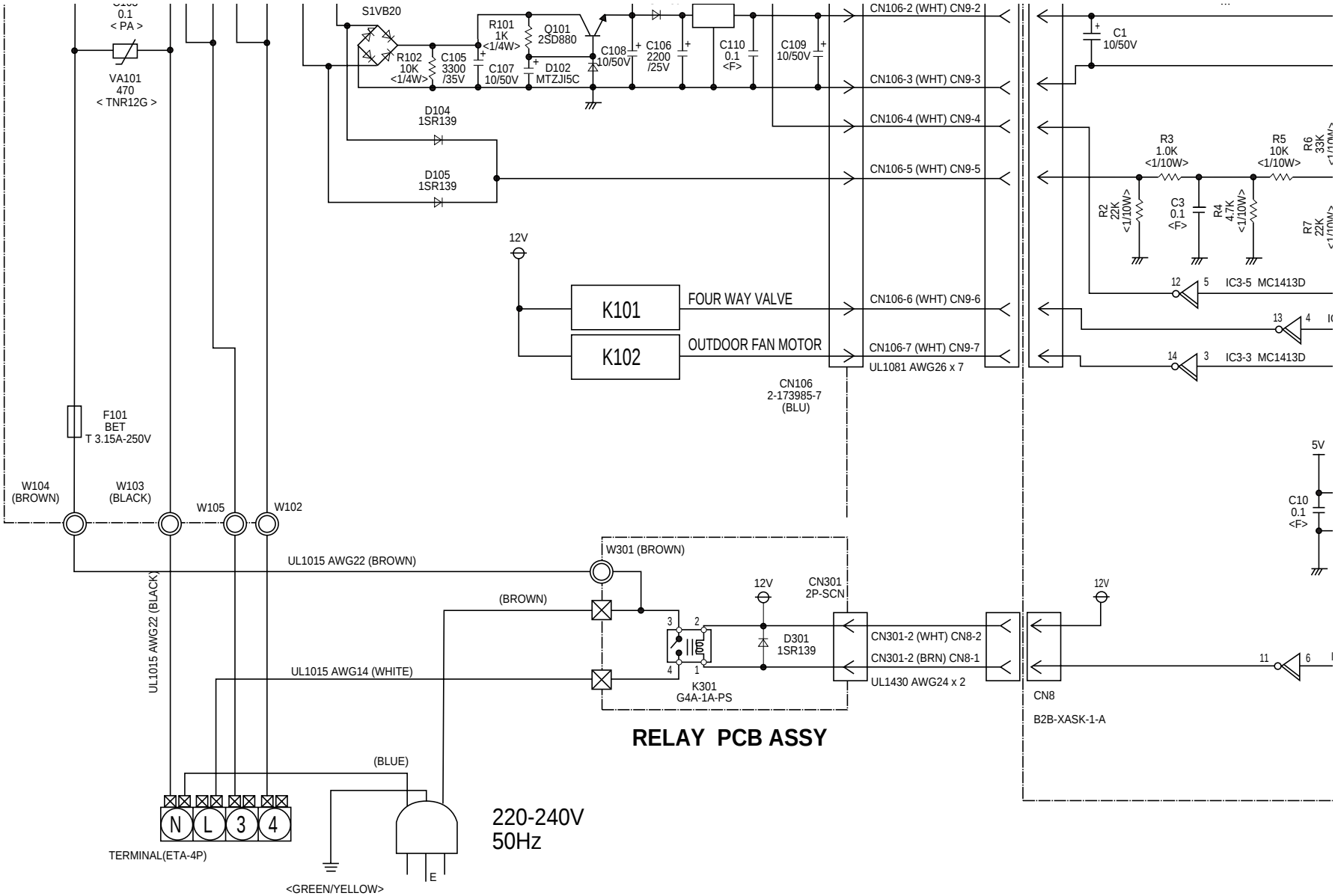
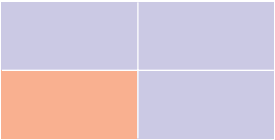




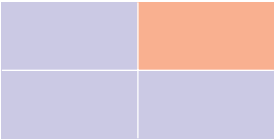
Models : AS*9R, 12R



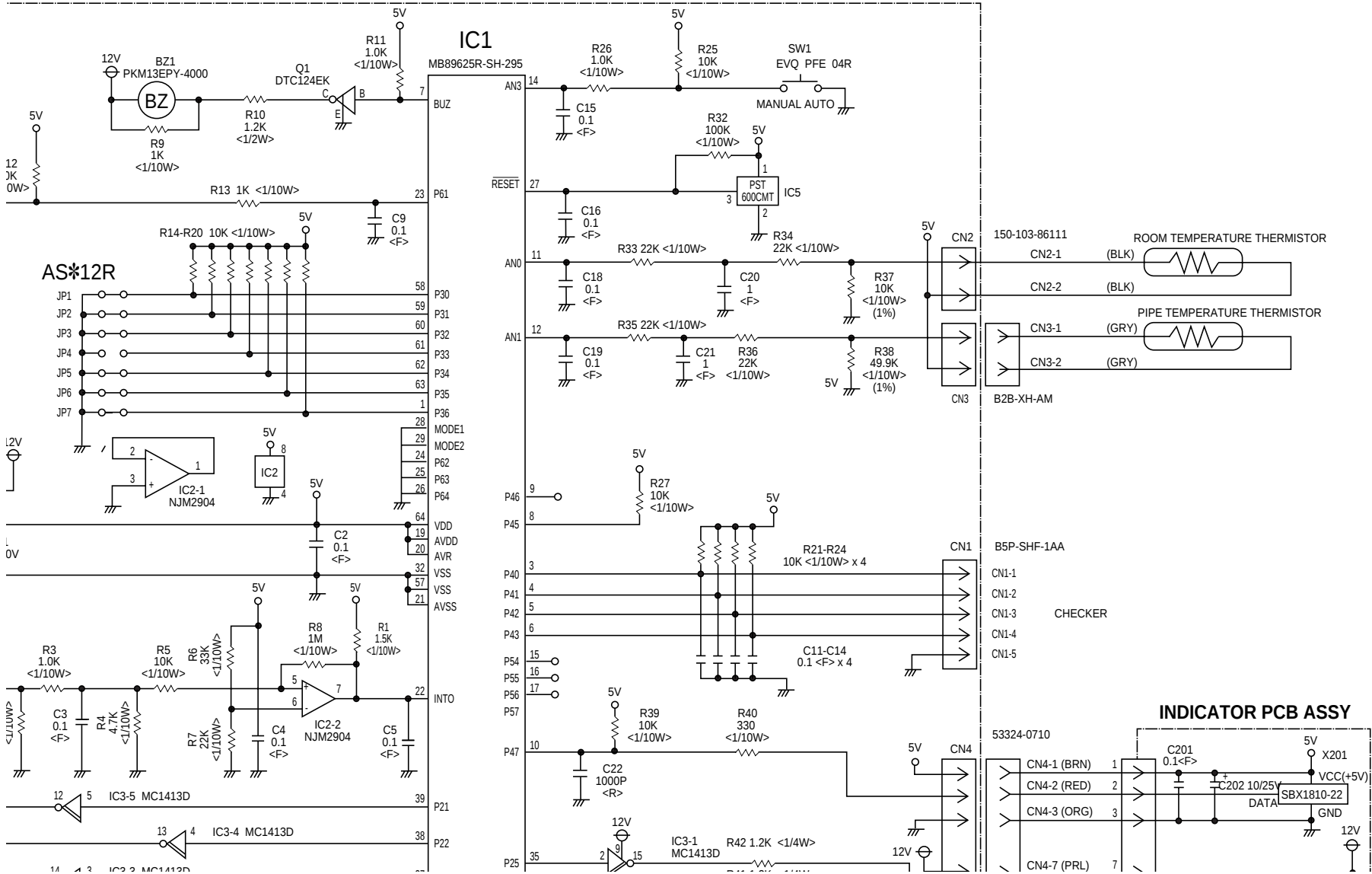
Models : AS*9R, 12R

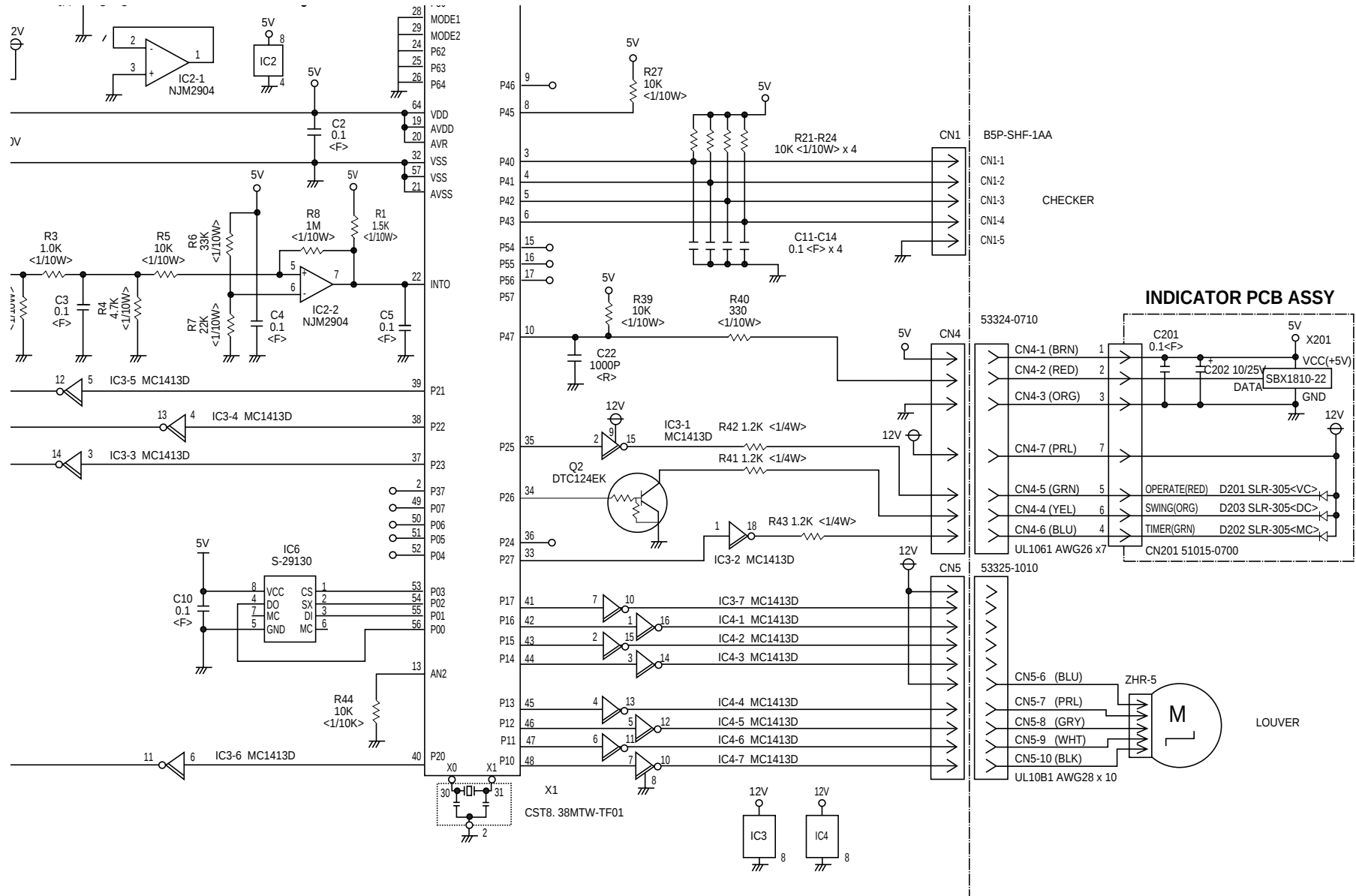


Models : AS*9R, 12R

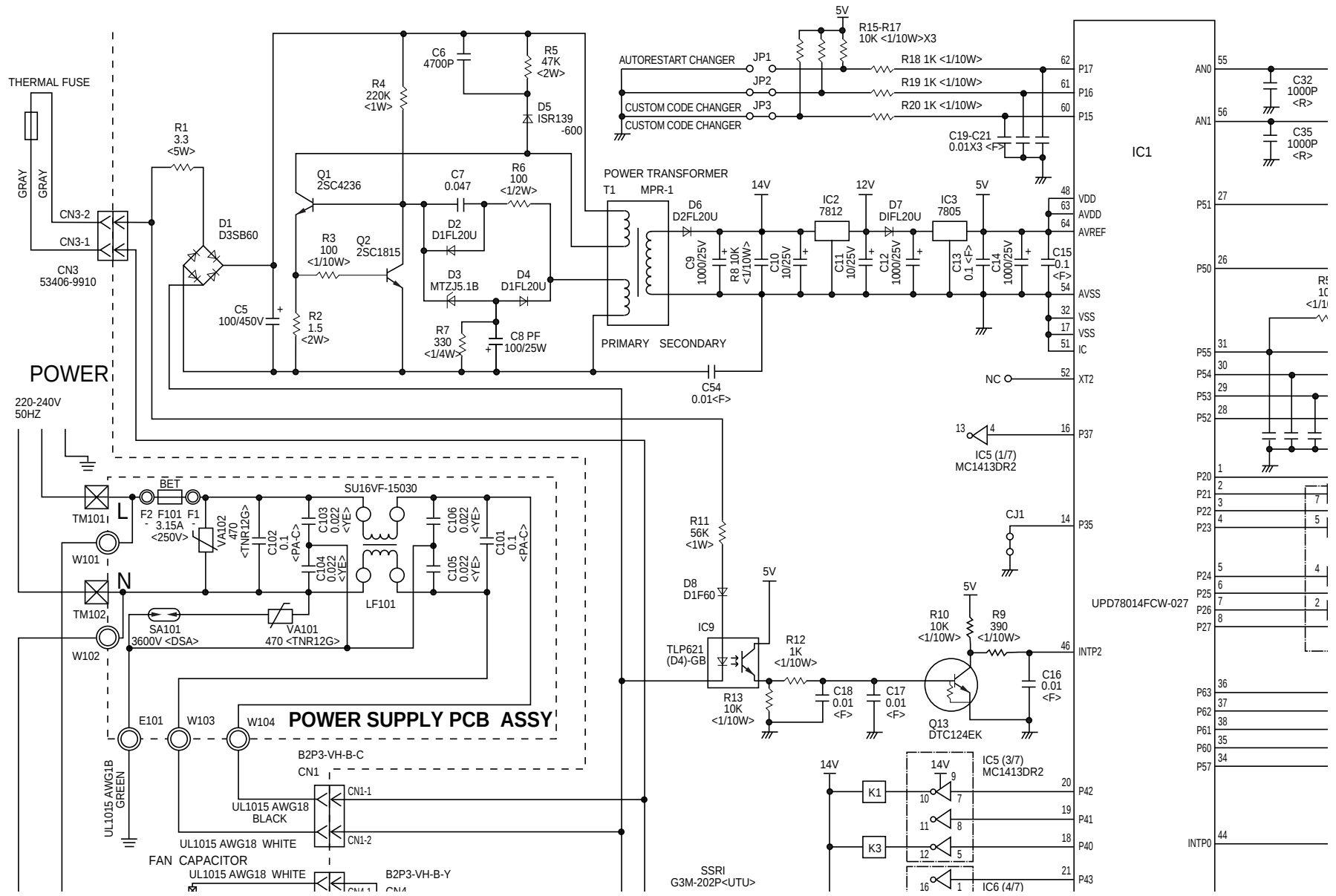
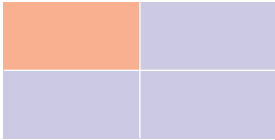


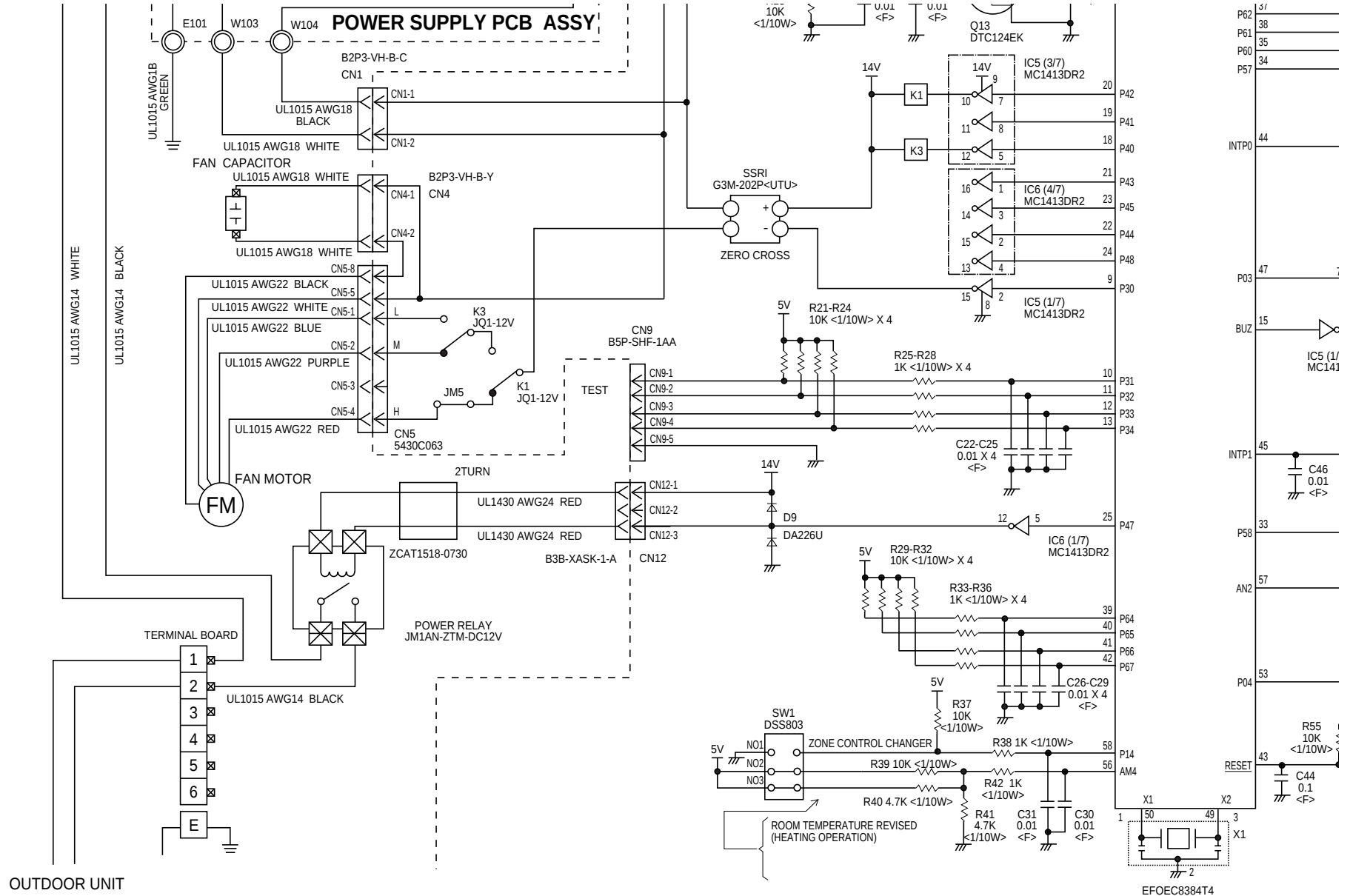
CONTROLLER PCB ASSEMBLY



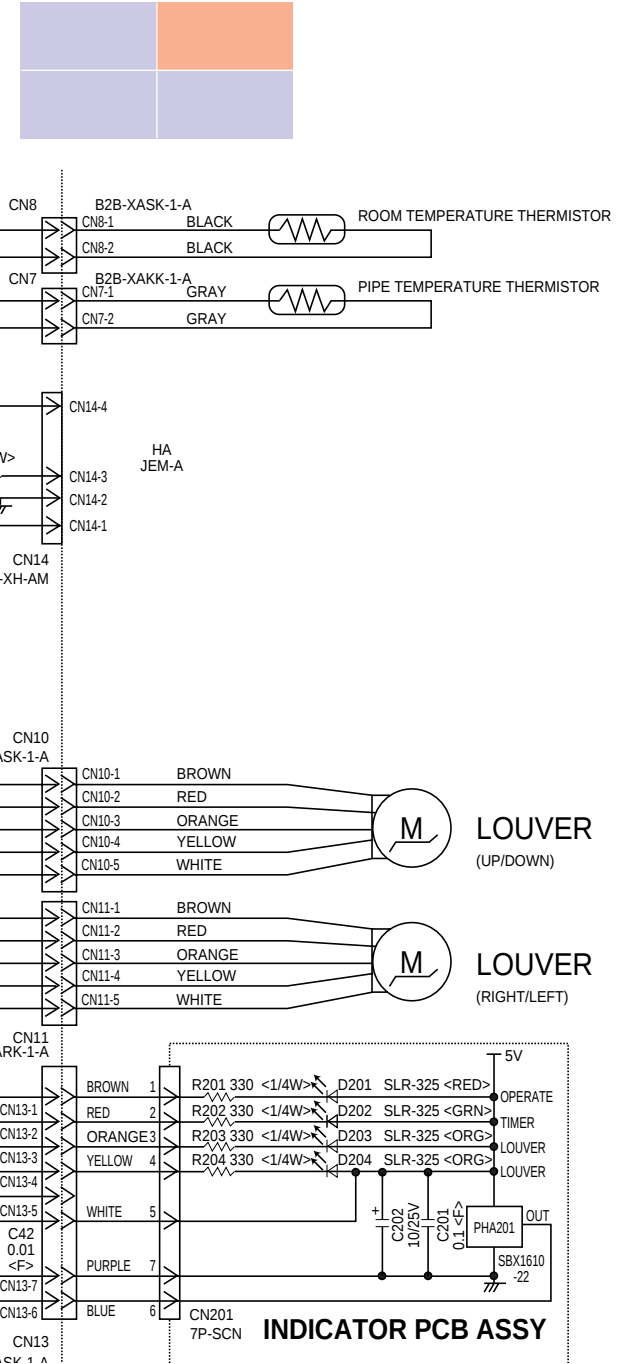


Models : AS*20A, AS*24A, ASS30A, ACS-7502, ACS-7602

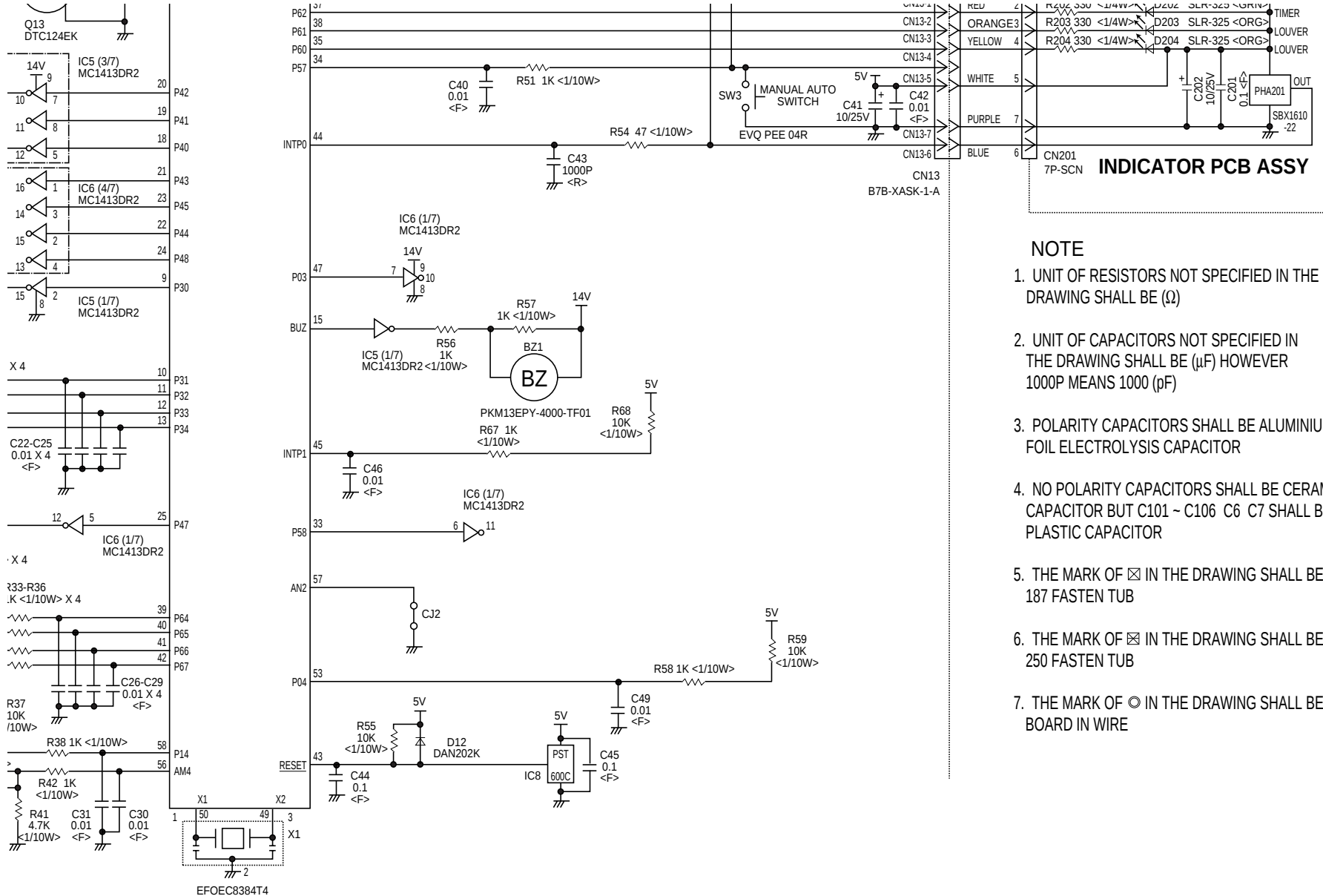
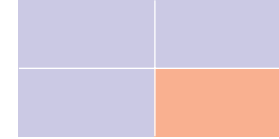


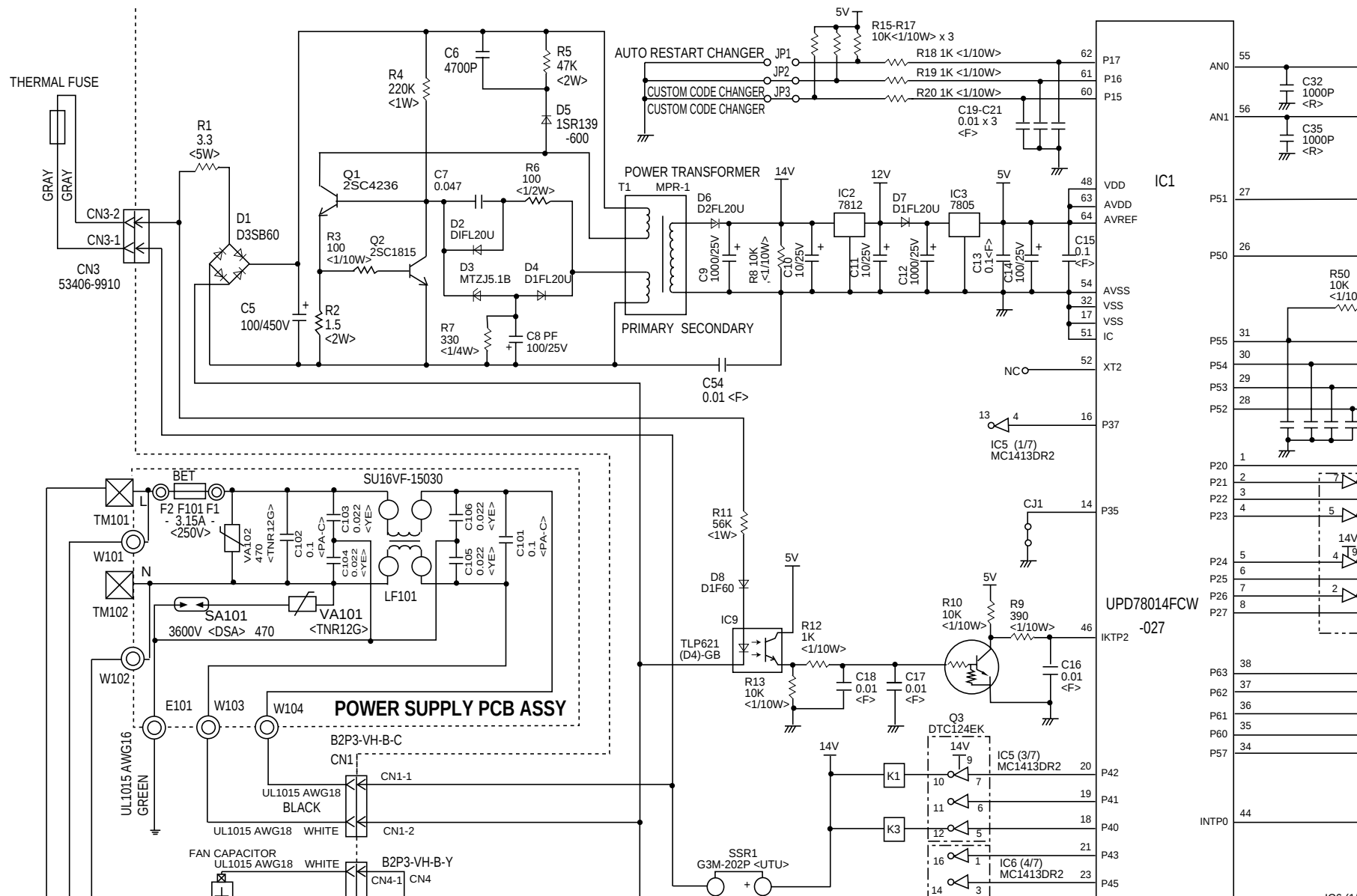


Models : AS*20A, AS*24A, ASS30A, ACS-7502, ACS-7602

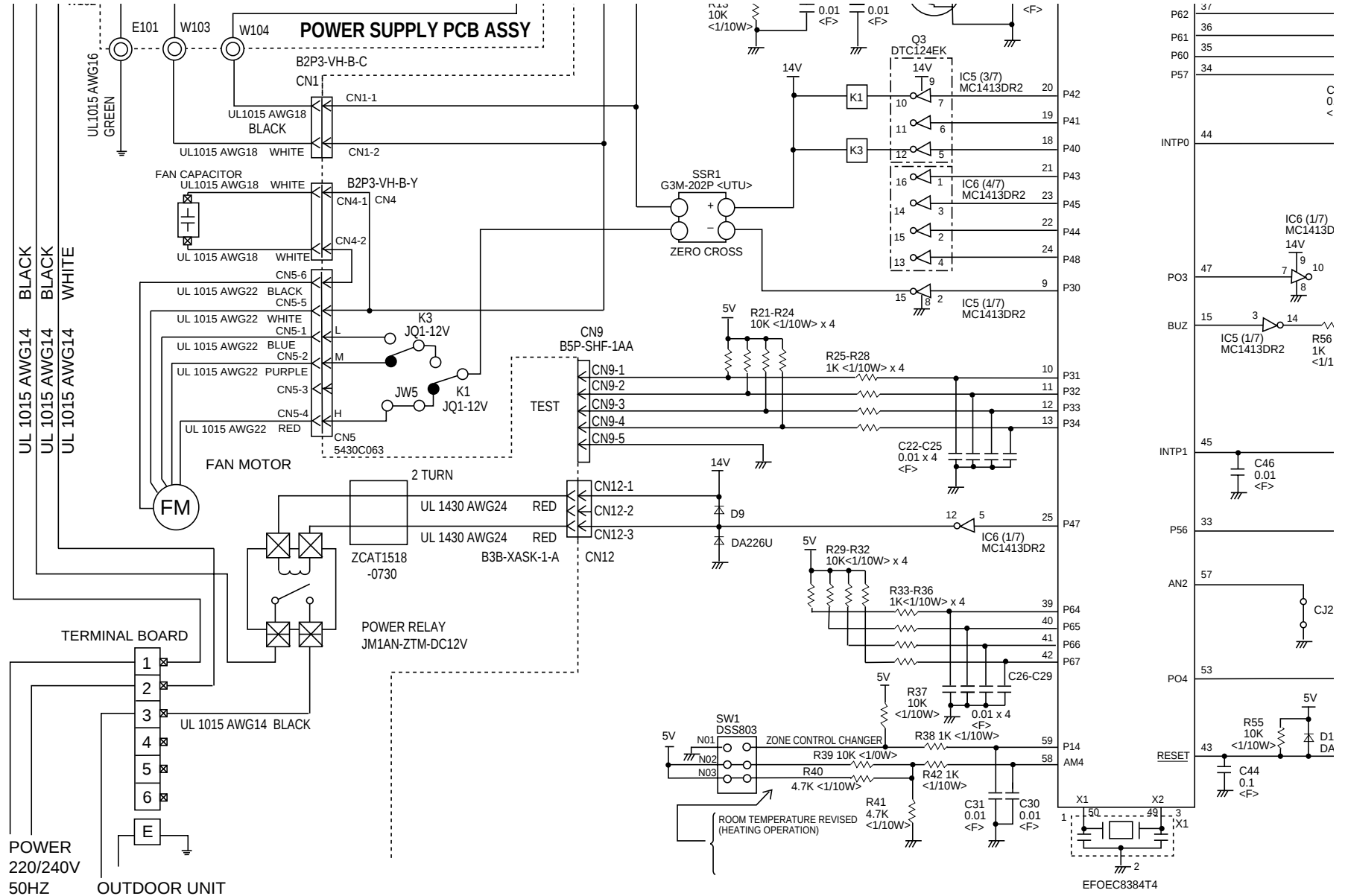


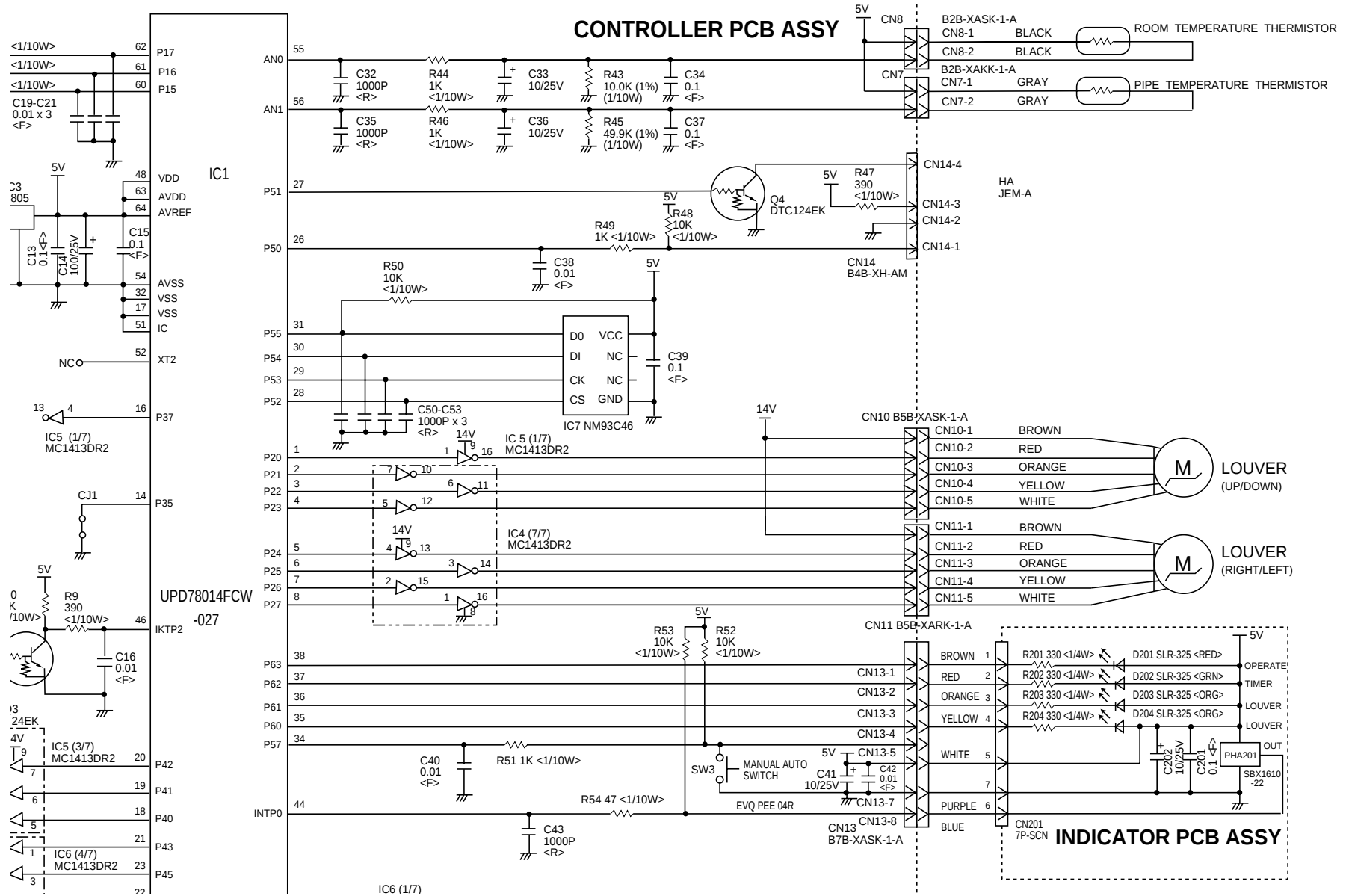
Models : AS*20A, AS*24A, ASS30A, ACS-7502, ACS-7602



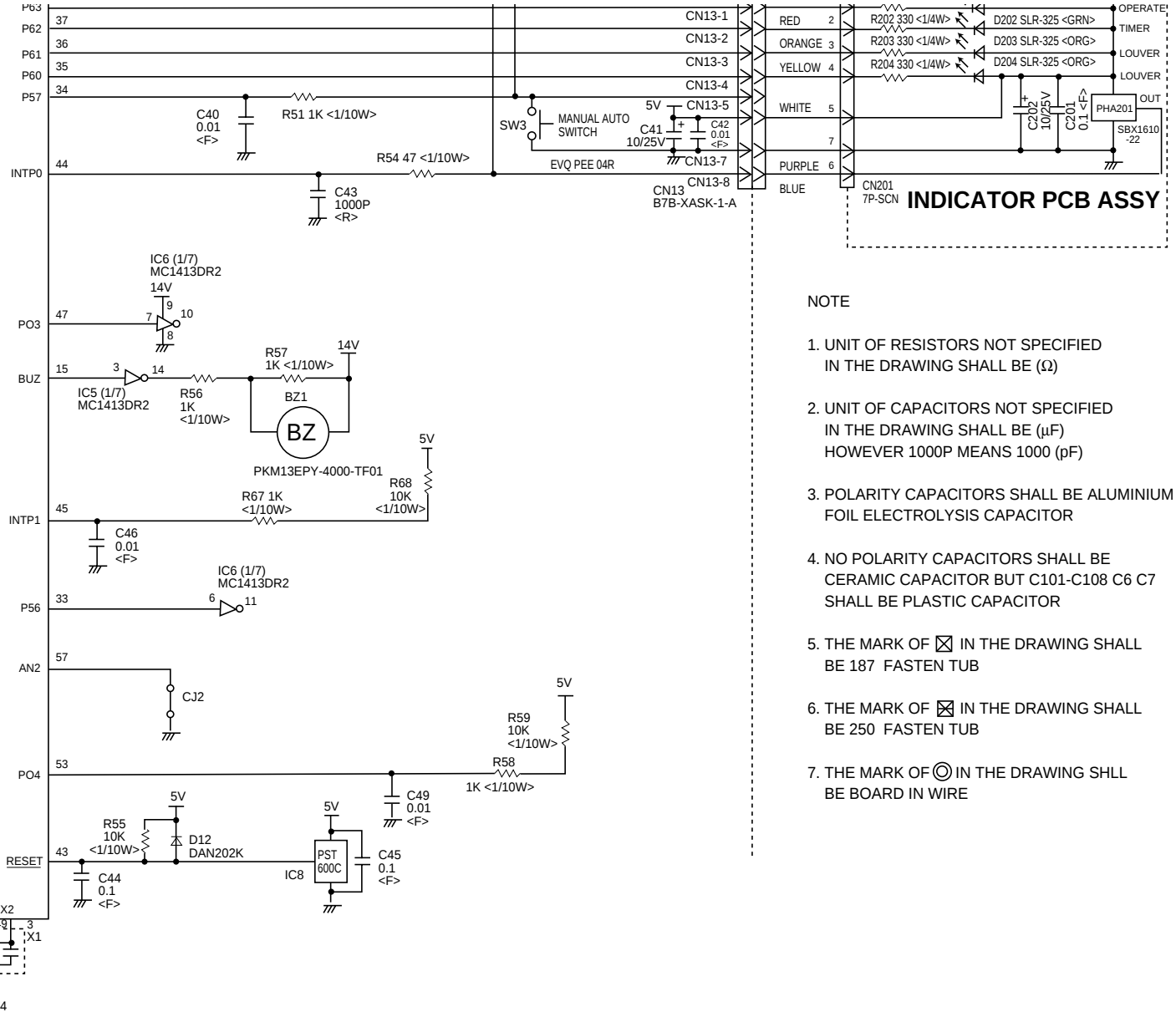
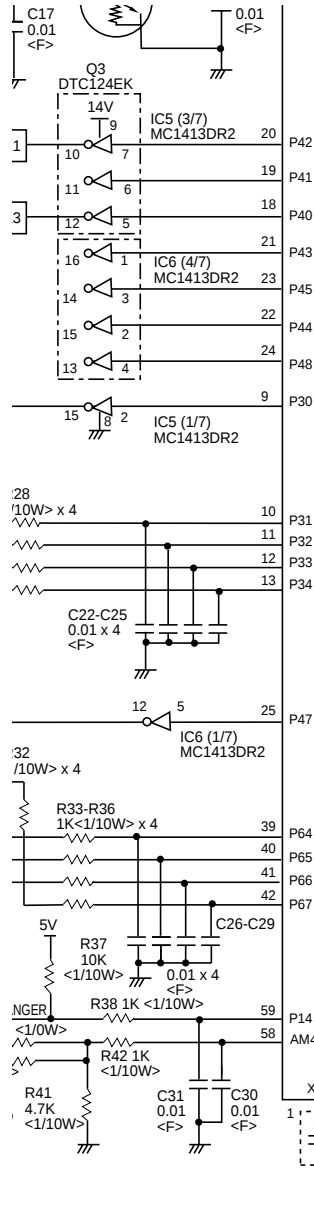
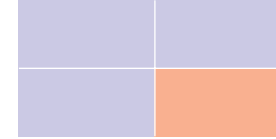


Model : AS*30A





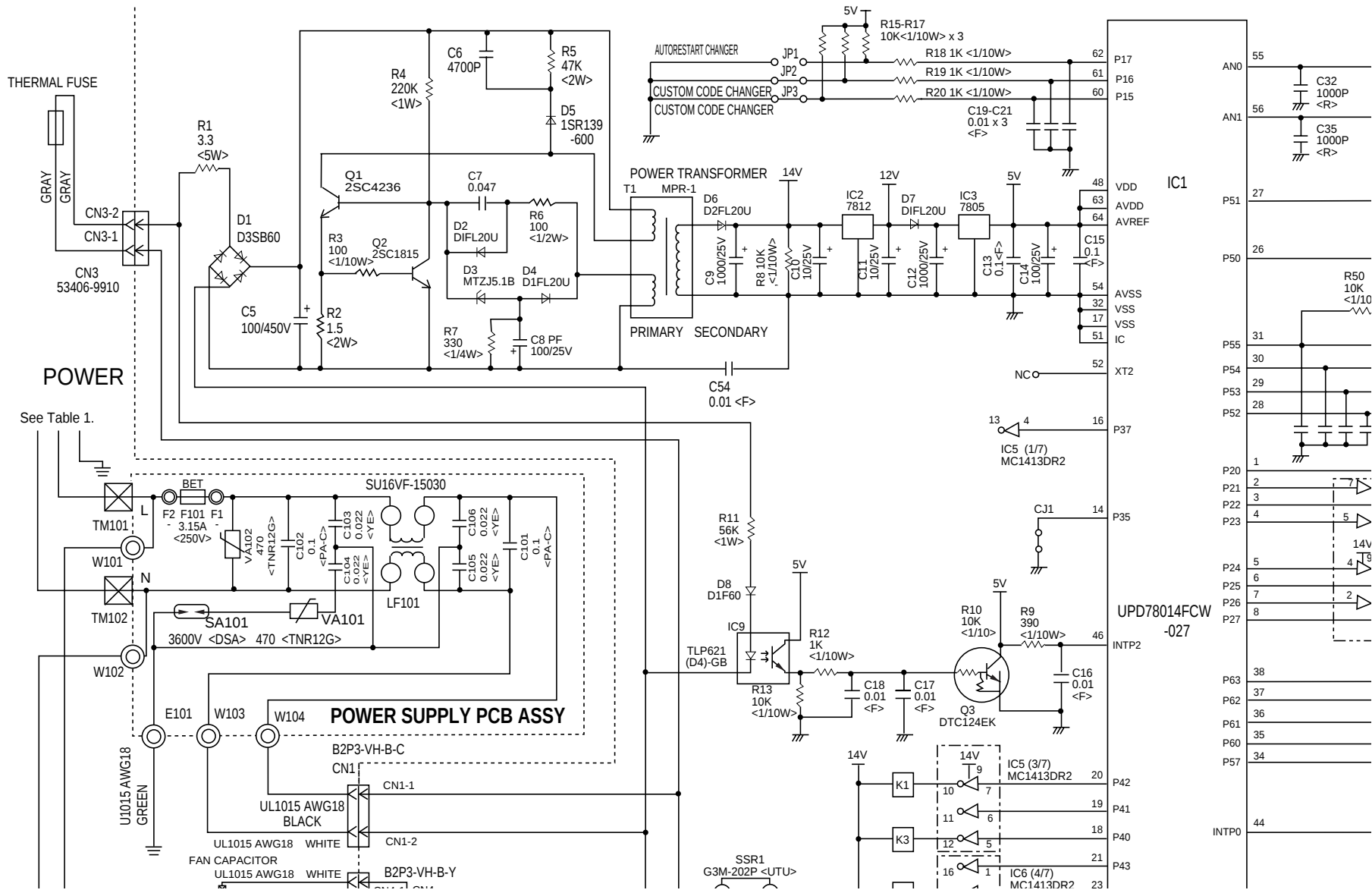
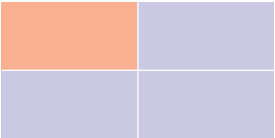
Model : AS*30A



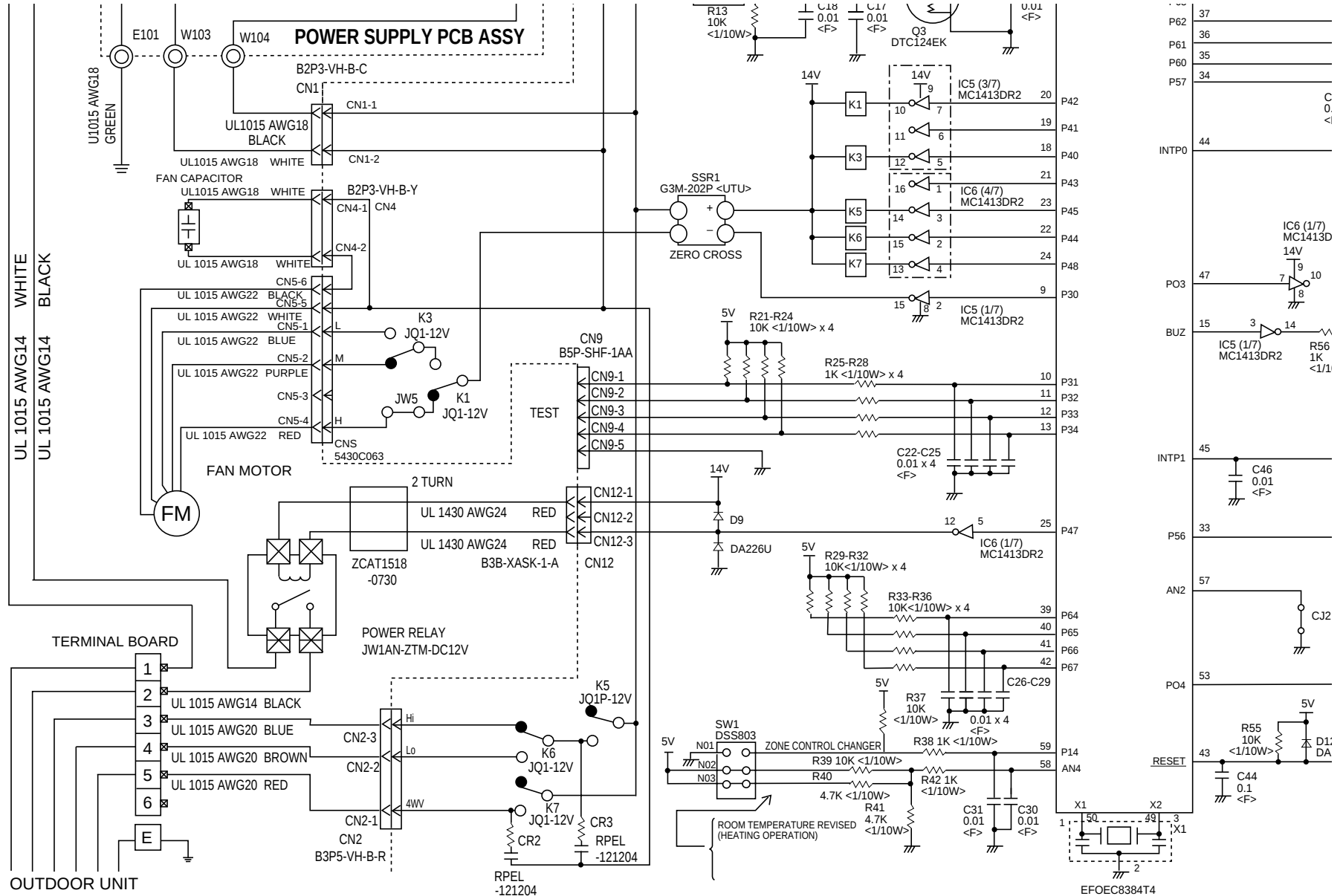
NOTE

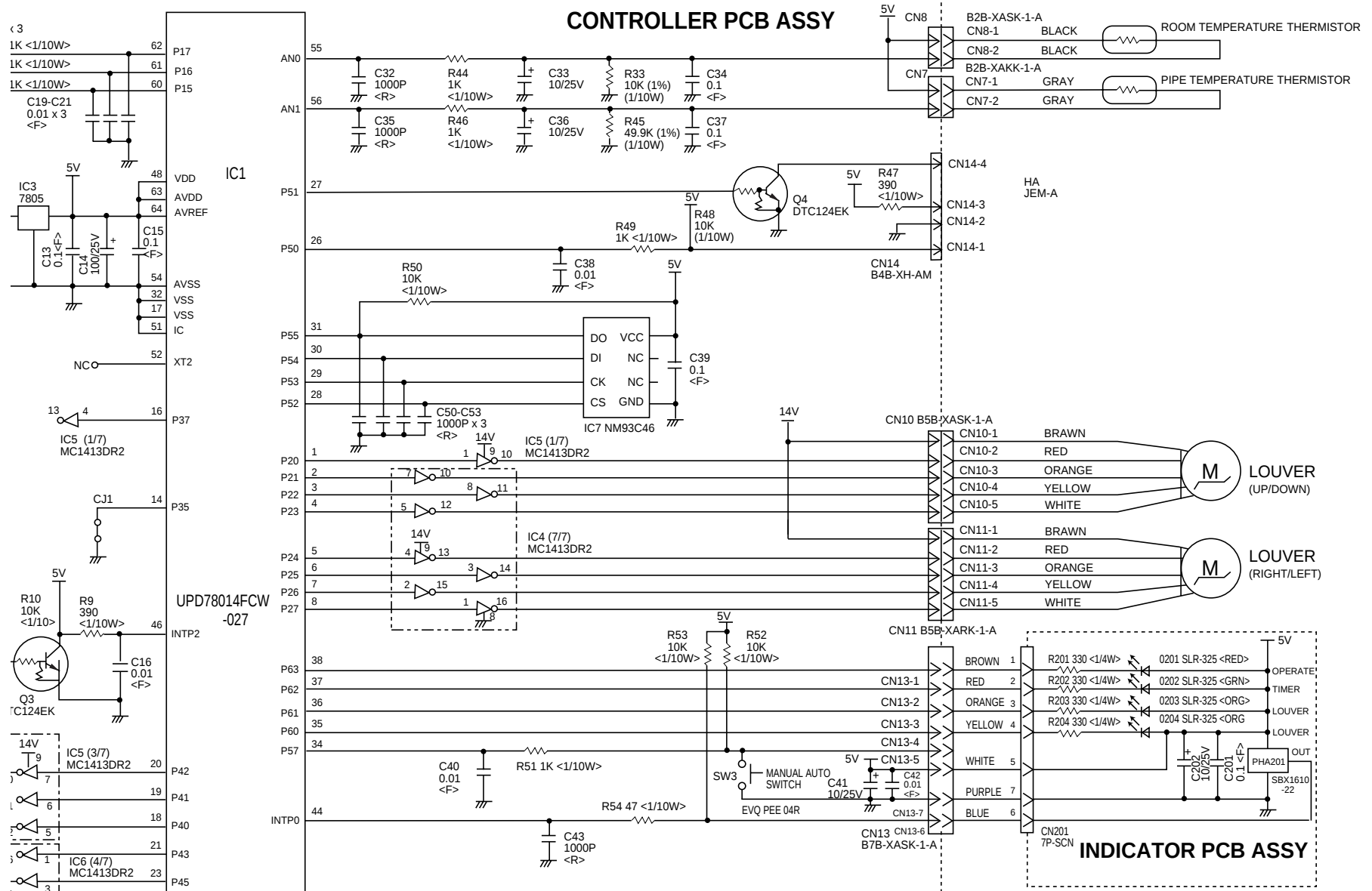
1. UNIT OF RESISTORS NOT SPECIFIED IN THE DRAWING SHALL BE (Ω)
2. UNIT OF CAPACITORS NOT SPECIFIED IN THE DRAWING SHALL BE (μ F) HOWEVER 1000P MEANS 1000 (pF)
3. POLARITY CAPACITORS SHALL BE ALUMINIUM FOIL ELECTROLYSIS CAPACITOR
4. NO POLARITY CAPACITORS SHALL BE CERAMIC CAPACITOR BUT C101-C108 C6 C7 SHALL BE PLASTIC CAPACITOR
5. THE MARK OF $\boxtimes$ IN THE DRAWING SHALL BE 187 FASTEN TUB
6. THE MARK OF $\boxtimes$ IN THE DRAWING SHALL BE 250 FASTEN TUB
7. THE MARK OF $\odot$ IN THE DRAWING SHALL BE BOARD IN WIRE

Models : AS*20R, AS*24R, ASS30R



Models : AS*20R, AS*24R, ASS30R



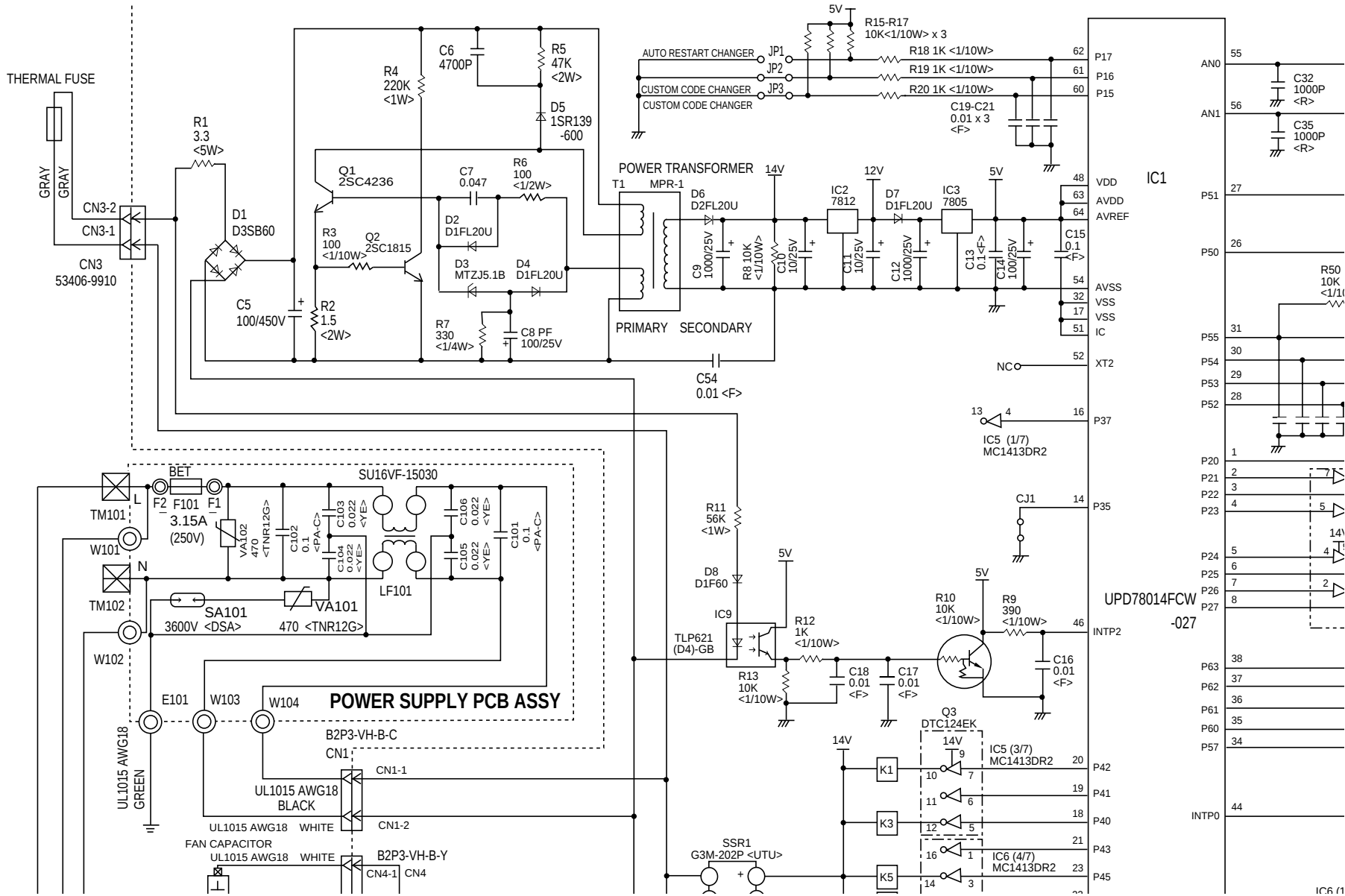
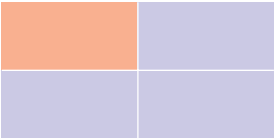


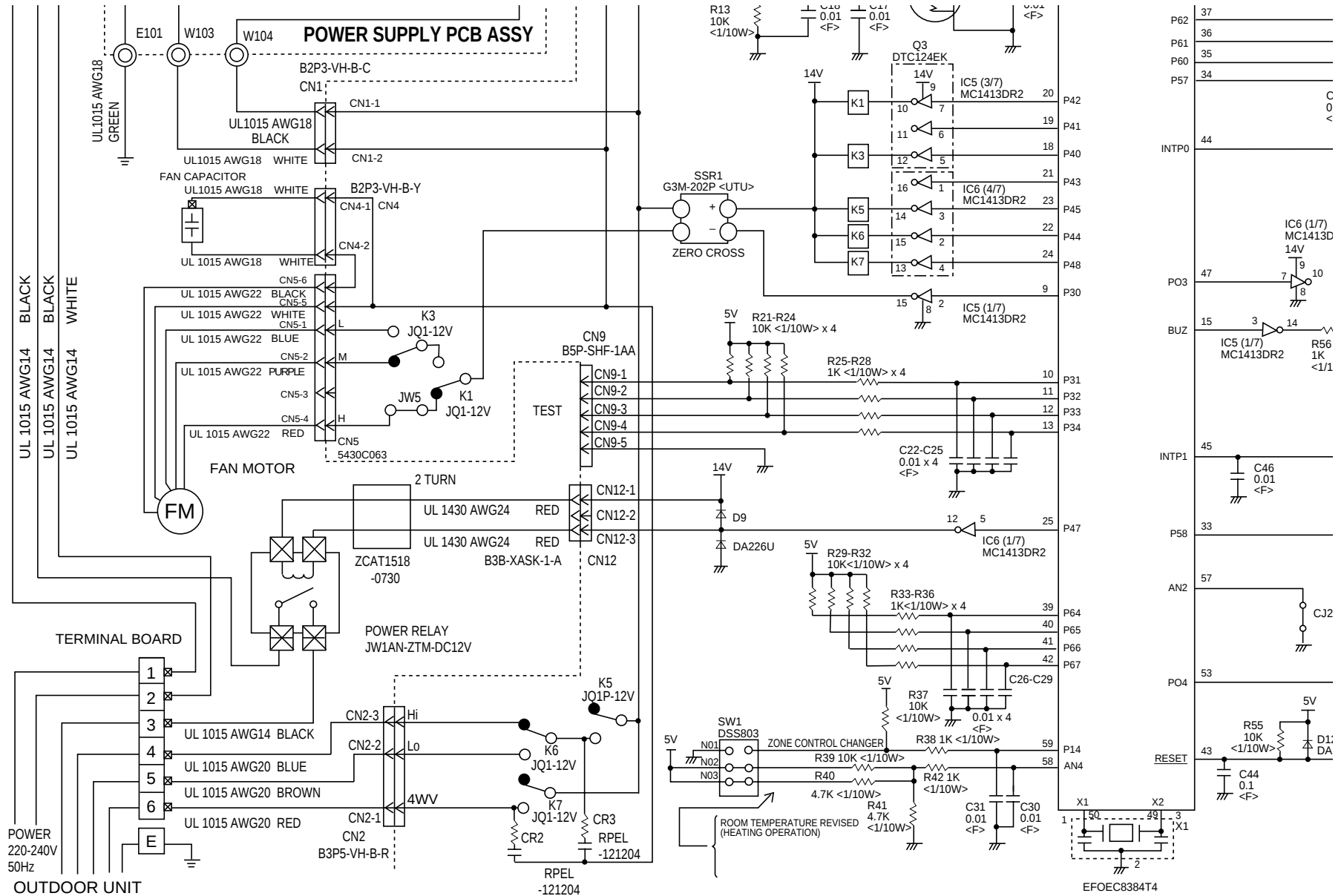


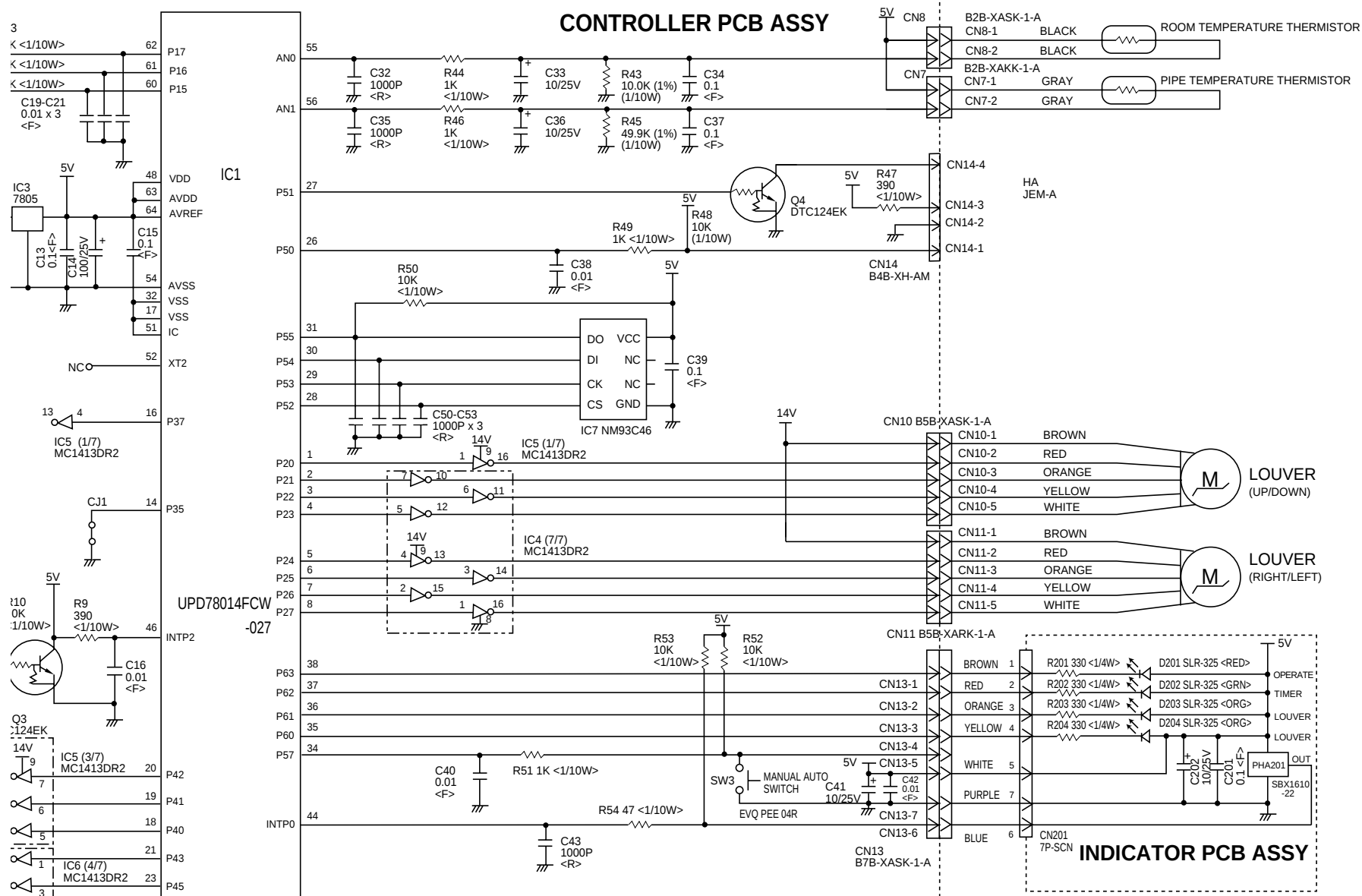
1. UNIT OF RESISTORS NOT SPECIFIED
IN THE DRAWING SHALL BE (Ω)
2. UNIT OF CAPACITORS NOT SPECIFIED
IN THE DRAWING SHALL BE (μ F)
HPWEVER 1000P MEANS 1000 (pF)
3. POLARITY CAPACITORS SHALL BE ALUMINIUM
FOIL ELECTROLYSIS CAPACITOR
4. NO POLARITY CAPACITORS SHALL BE
CERAMIC CAPACITOR BUT C101-C108 C6 C7
SHALL BE PLASTIC CAPACITOR
5. THE MARK OF ☒ IN THE DRAWING SHALL
BE 187 FASTEN TUB
6. THE MARK OF ☒ IN THE DRAWING SHALL
BE 250 FASTEN TUB
7. THE MARK OF ☉ IN THE DRAWING SHLL
BE BOARD IN WIRE

Models	Power Supply
AS * 20R AS * 24R	220-240V 50Hz
ASS30R	220V 60Hz

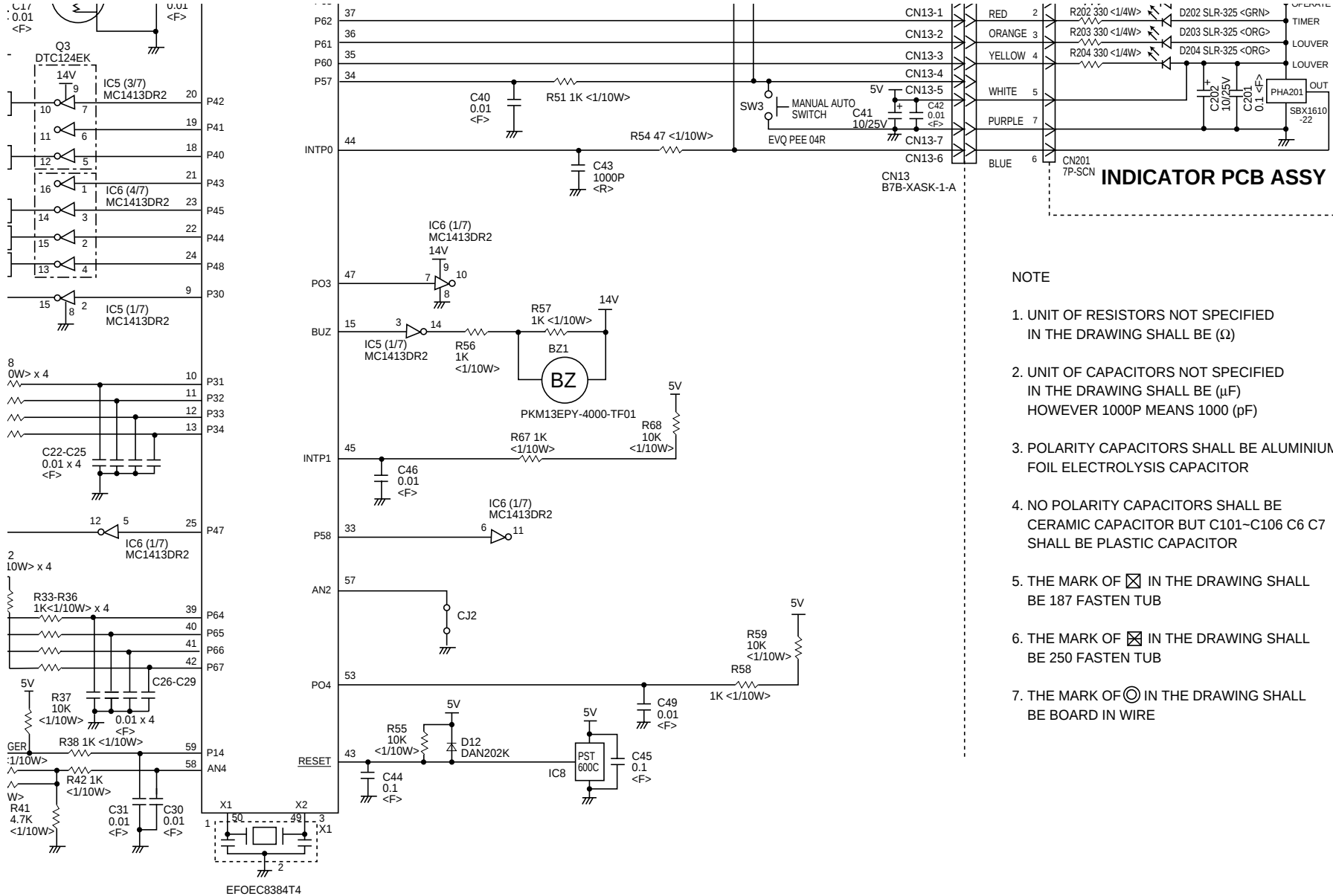
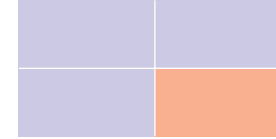
Model : AS*30R



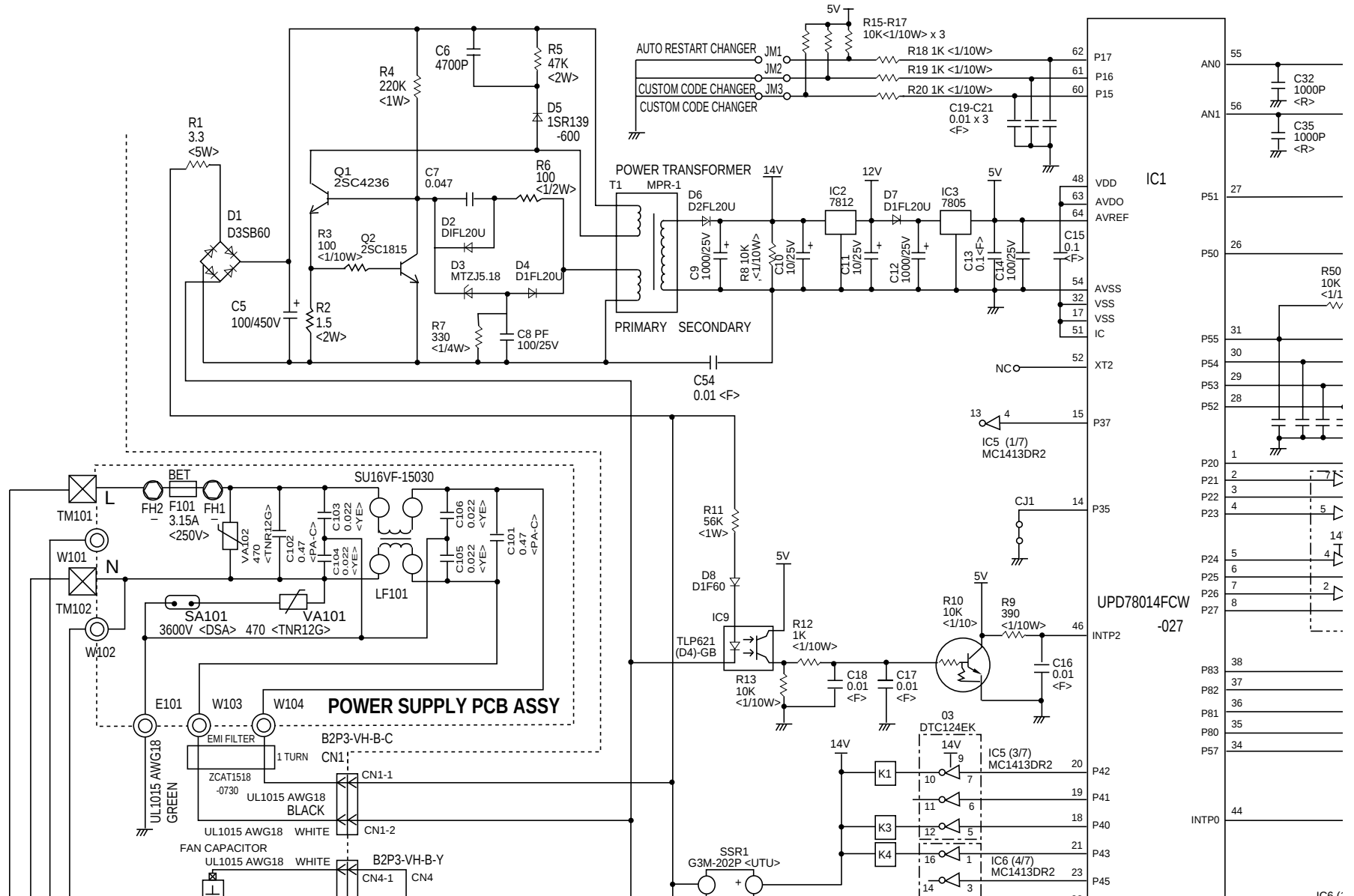


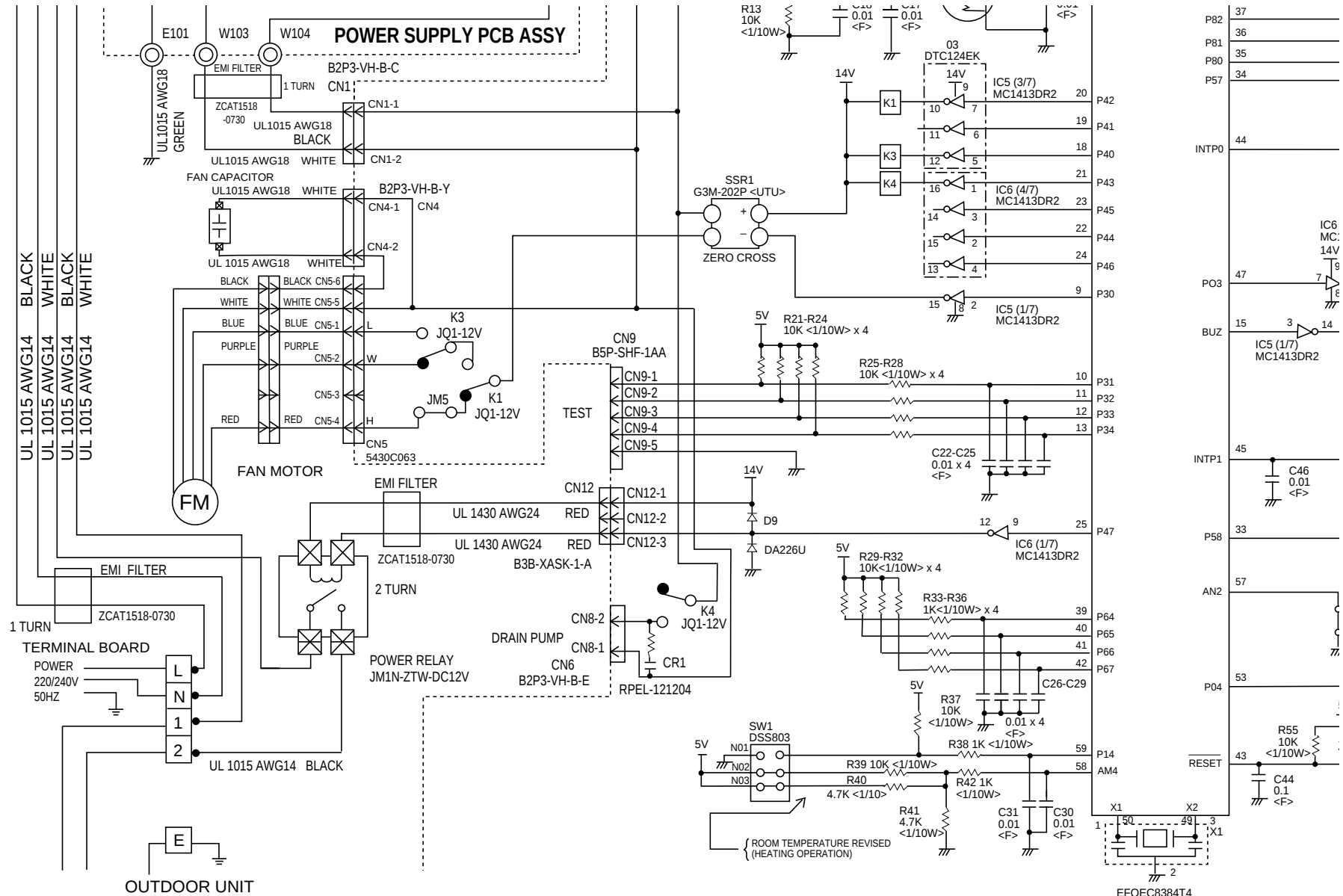


Model : AS*30R

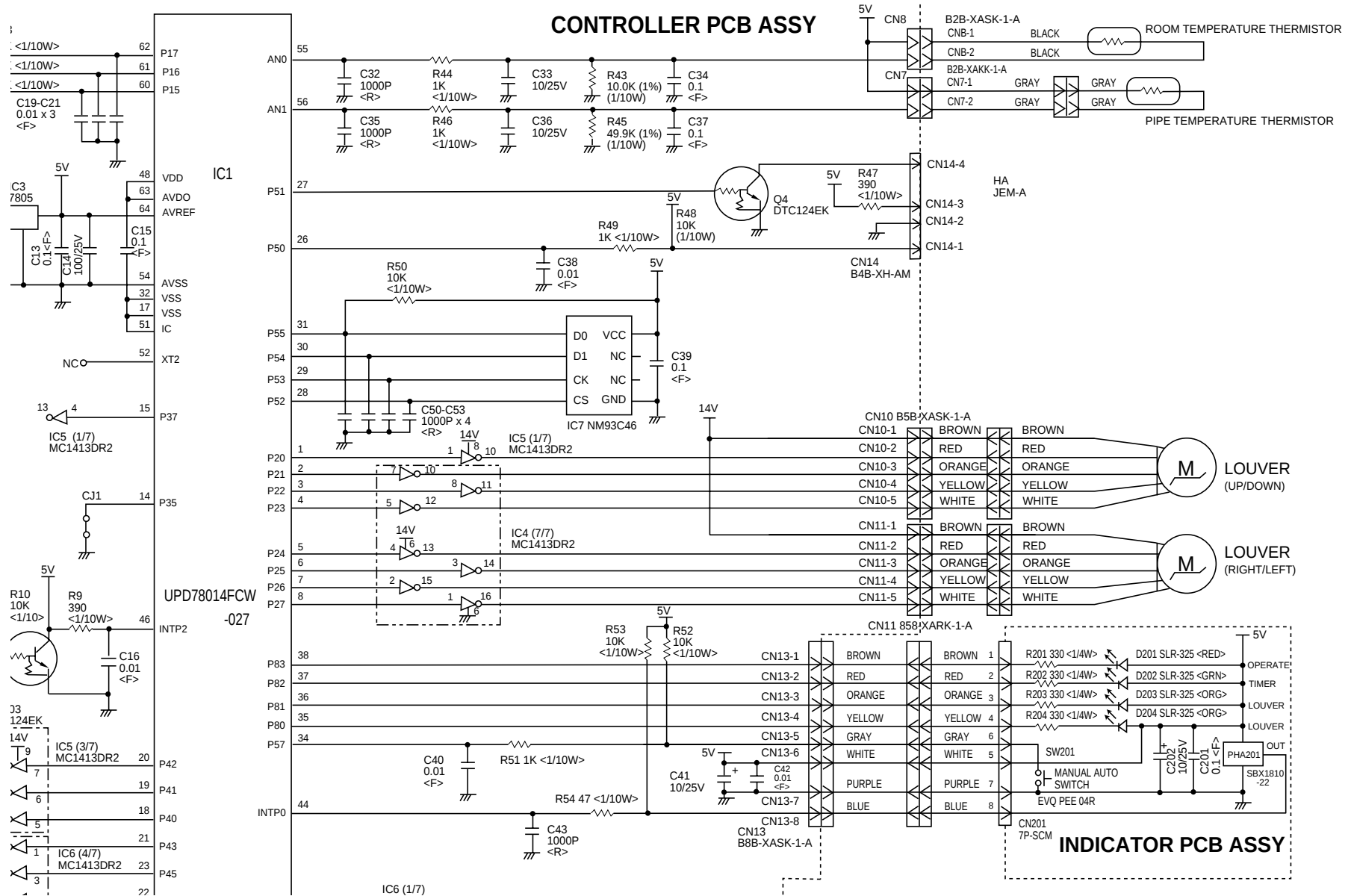
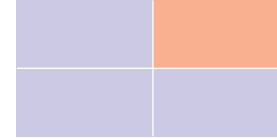


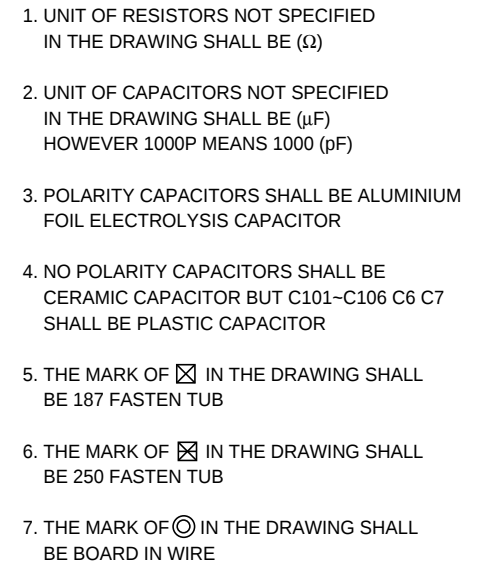
EFOEC8384T4



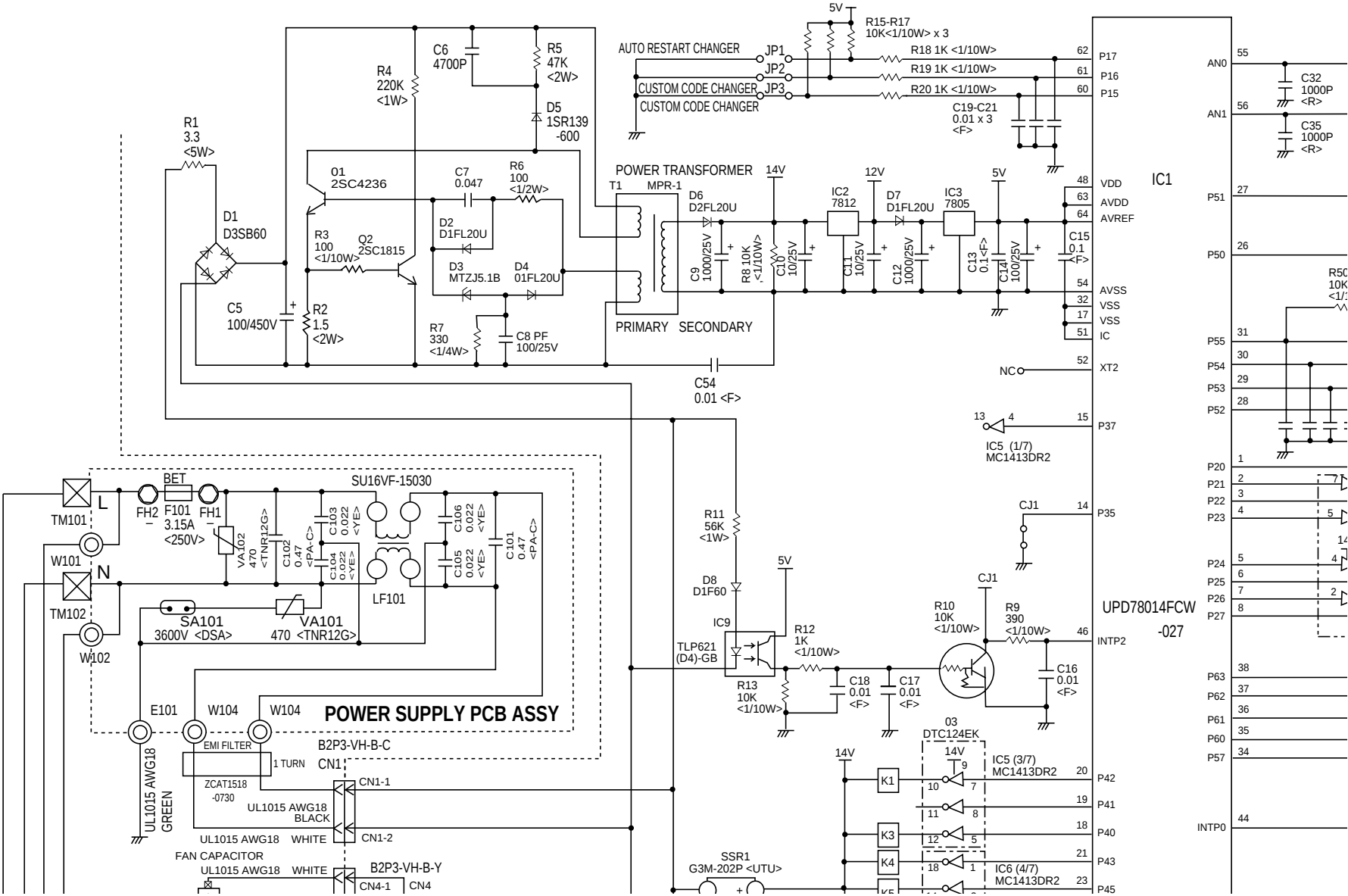
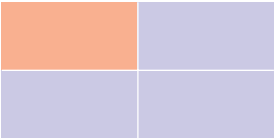


Models : AB*14A, AB*18A, AB*24A

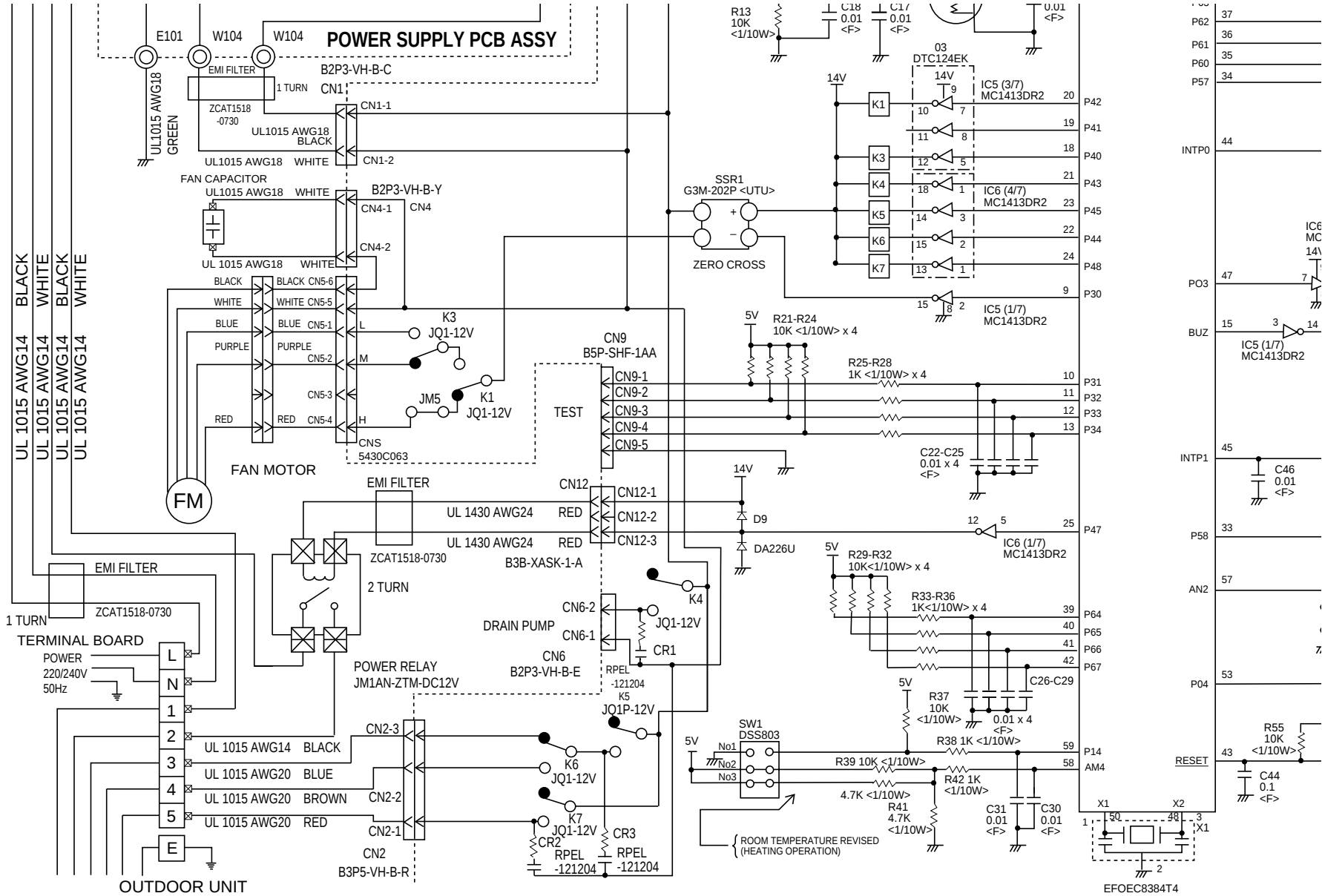
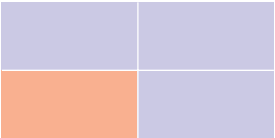


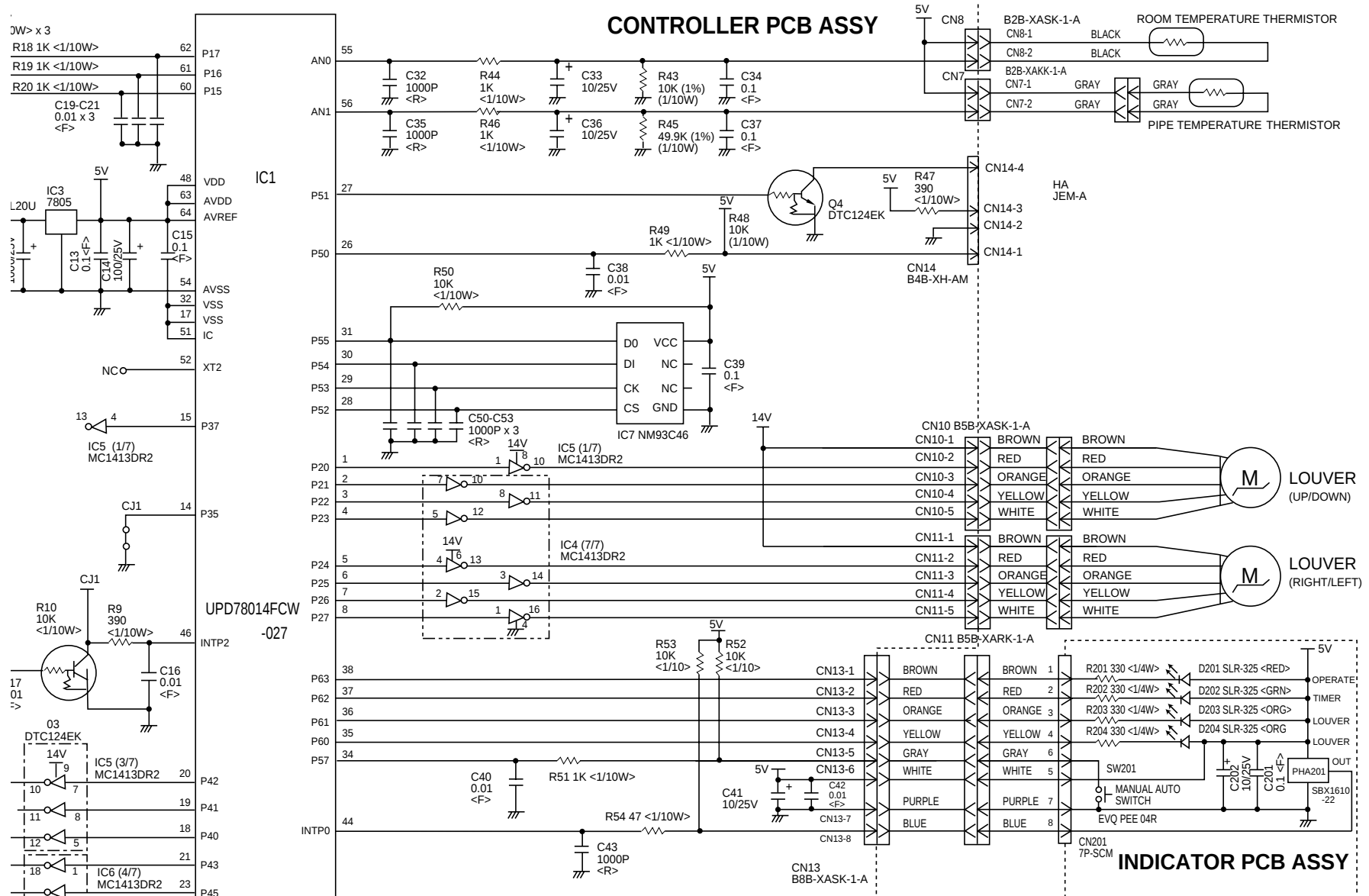


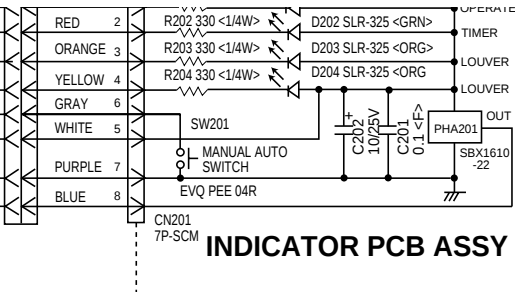
Models : AB*14R, AB*18R, AB*24R



Models : AB*14R, AB*18R, AB*24R







CM INDICATOR PCB ASSY

1. UNIT OF RESISTORS NOT SPECIFIED
IN THE DRAWING SHALL BE (Ω)
2. UNIT OF CAPACITORS NOT SPECIFIED
IN THE DRAWING SHALL BE (μ F)
HOWEVER 1000P MEANS 1000 (pF)
3. POLARITY CAPACITORS SHALL BE ALUMINIUM
FOIL ELECTROLYSIS CAPACITOR
4. NO POLARITY CAPACITORS SHALL BE
CERAMIC CAPACITOR BUT C101-C106 C6 C7
SHALL BE PLASTIC CAPACITOR
5. THE MARK OF ☒ IN THE DRAWING SHALL
BE 187 FASTEN TUB
6. THE MARK OF ☒ IN THE DRAWING SHALL
BE 250 FASTEN TUB
7. THE MARK OF ☉ IN THE DRAWING SHALL
BE BOARD IN WIRE