SERVICE MANUAL

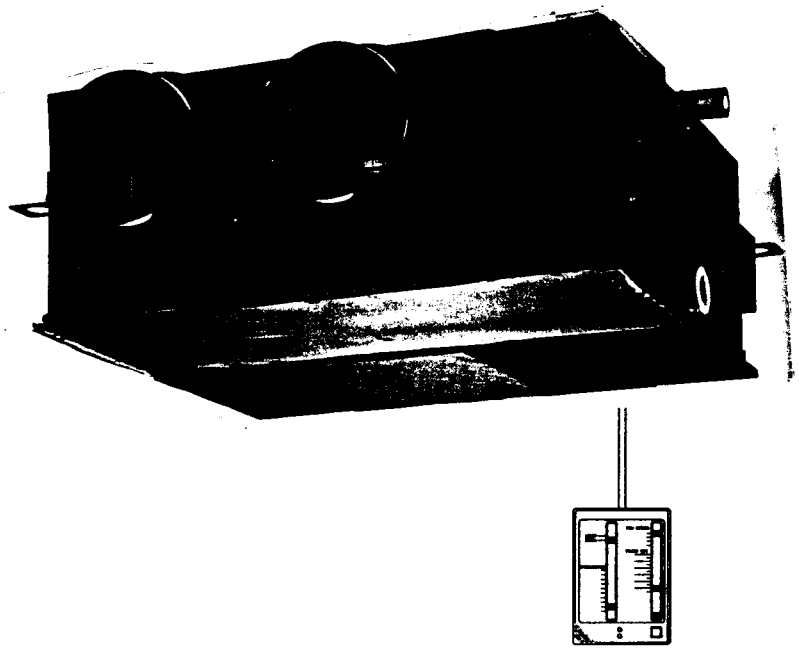
SANYO

FILE NO. A-44'19

SAP – U182GH5/SAP – C182GH5

SPLIT SYSTEM AIR CONDITIONER

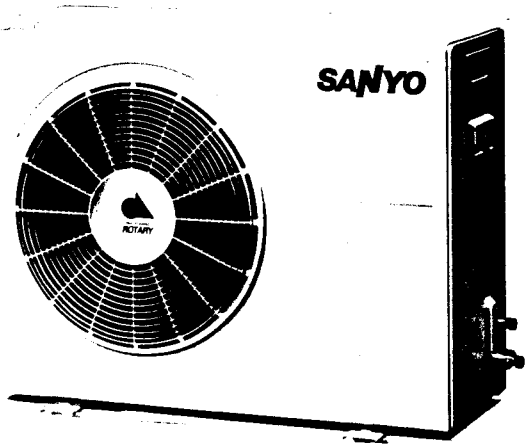
Indoor Unit



SAP – U182GH5

1-854-009-19 J

Outdoor Unit



SAP – C182GH5

1-852-743-07 J
1-852-745-17 S
1-852-746-04 E

8526481026000

REFERENCE NO. SM – 700034

1. OPERATING RANGE

	Temperature	Indoor air intake temp.	Outdoor air intake temp.
Cooling	Maximum	35°C DB / 22°C WB	46°C DB
	Minimum	19°C DB / 14°C WB	19°C DB
Heating	Maximum	27°C DB / 19°C WB	24°C DB / 18°C WB
	Minimum	— DB / — WB	-8°C DB / -9°C WB

2. SPECIFICATIONS

1) Unit Specifications

Unit Model No.	Indoor unit		SAP-U182GH5	
	Outdoor unit		SAP-C182GH5	
Performance			Cooling	Heating
Capacity		BTU/hr.	16,900	19,800
		kW	4.95	5.80
Air circulation		m^3/hr.	780	780
External pressure		mmAq	5 (at shipment) , 10 (using the Booster cable)	
Moisture removal (High)		Liters/hr.	2.8	—
Electrical Rating				
Voltage rating		V	220 / 230 / 240	
Available voltage range		V	198 ~ 264	
Running amperes		A	10.0 / 10.0 / 10.1	10.6 / 10.4 / 10.2
Power input		W	2,100 / 2,140 / 2,200	2,220 / 2,250 / 2,270
Power factor		%	95 / 93 / 91	95 / 94 / 93
Starting amperes		A	46 / 48 / 50	
E.E.R.		BTU/Whr.	8.0 / 7.9 / 7.7	8.9 / 8.8 / 8.7
Features				
Controls			Microprocessor	
Control switch			Remote control	
Temperature control			IC thermostat	
Timer			ON/OFF 12-hours	
Fan speeds		(Indoor unit)	3 and auto.	
Air filter			—	
Compressor			Rotary	
Refrigerant / control			R-22 / Capillary tube	
Operation sound	In-Hi/Me/Lo	dB-A	42 / 37 / 32	
	Out-Hi/Lo	dB-A	51 / 44	
Max. allowable tubing length		m(ft.)	(at shipment) 10 (33)	
Limit of tubing length		m(ft.)	20 (66)	
Limit of elevation difference between the two units		m(ft.)	Outdoor unit is higher than indoor unit. 7 (23) Outdoor unit is lower than indoor unit. 7 (23)	
Refrigerant tube o.d.	Narrow tube	mm(in.)	6.35 (1/4)	
	Wide tube	mm(in.)	12.7 (1/2)	
Refrigerant tube kit			Optional	
Accessory			Booster cable	
Dimensions & Weight			Indoor unit	Outdoor unit
Height		mm(in.)	316 (12- 7/16)	630 (24-13/16)
Width		mm(in.)	750 (29-17/32)	830 (32- 11/16)
Depth		mm(in.)	665 (26- 3/16)	305 (12)
Net weight		kg(lbs.)	32 (71)	59 (129.8)
Shipping volume		cu.m(cu.ft.)	0.3 (10.6)	0.3 (10.6)
Shipping weight (Approx.)		kg(lbs.)	38 (84)	64 (141.4)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Remarks: Rating conditions are
Cooling; Outside air temps. : 35°C DB, Indoor unit entering air temps. : 27°C DB / 19°C WB
Heating; Outside air temps. : 7°C DB / 6°C WB, Indoor unit entering air temps. : 20°C DB

2) Major Component Specifications

a) Indoor Unit

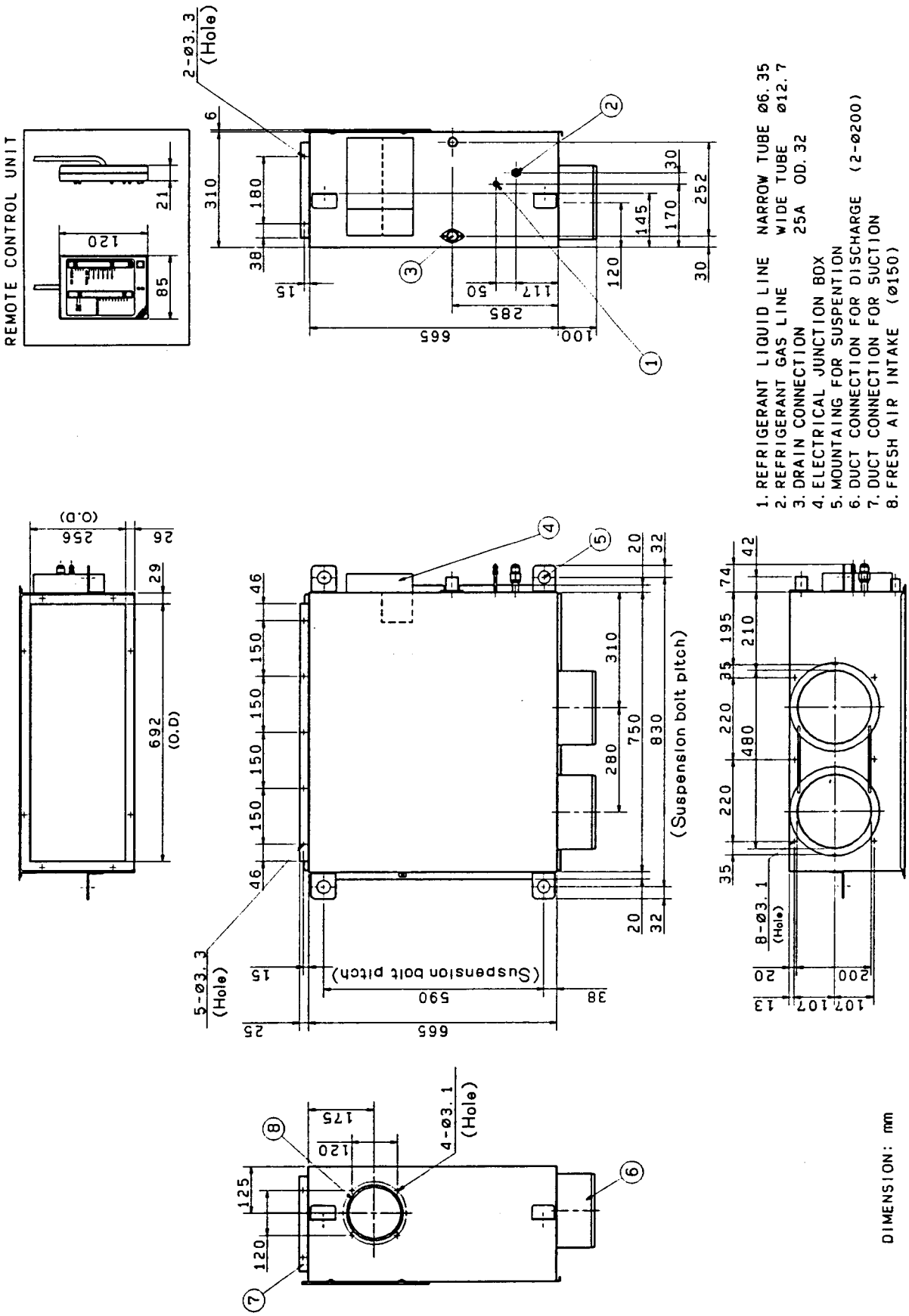
Unit Model No.			SAP-U182GH5
Remote Control Unit			RCS-U182GH
Controller P.C.B.			POW-AD18H
Controls			Microprocessor
Control circuit fuse			250V - 3A
Fan			Centrifugal
Number....dia.(mm)			2....ϕ200 (L 230)
Fan Motor			
Model....number			KFG4X-71A5P....1
No. of pole....rpm(230V,High)			4....1,040
Nominal output		W	70
Coil resistance (Ambient temp. 20°C)		Ω	WHT - BRN : 81.1 ORG - VLT : 36.8 YEL - ORG : 51.4 BLK - YEL : 20.6 WHT - VLT : 12.7 VLT - PNK : 44.2
Safety devices			Internal type
Operating temp.	Open	°C	130 ± 8
	Close	°C	79 ± 15
Run capacitor		μF	4.5
		VAC	440
Drain Pump			
Model			WP20SL-9
Rated			AC 230V - 50Hz , 14.7W
Total head & capacity			400 mm , 600 cc/min
Heat Exch.			
Coil			Aluminum plate fin / Copper tube
Rows....fin pitch(mm)			3....2.0
Face area		m^2	0.125
External Finish			Acrylic baked-on enamel finish

b) Outdoor Unit

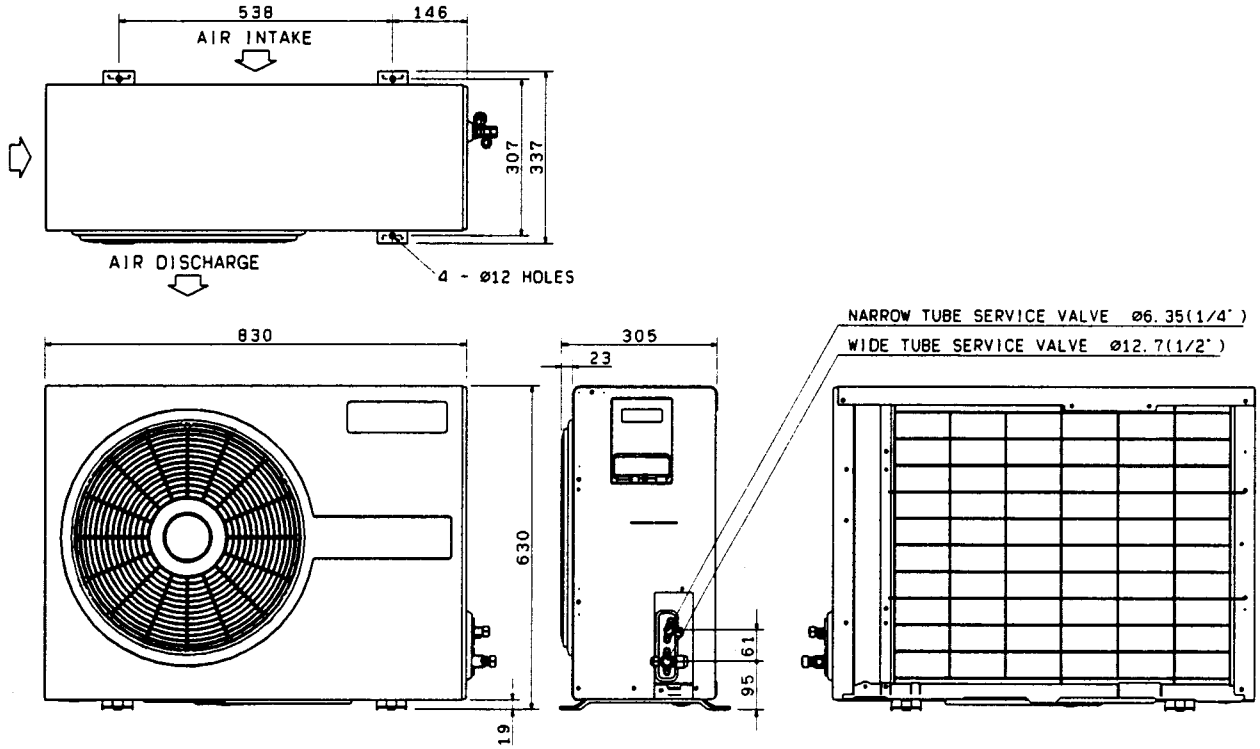
Unit Model No.			SAP-C182GH5	
Controller			POW-C92GH	
Compressor			Rotary (Hermetic)	
Model....number			C-R170H5V....1	
No. of cyl. ....rpm			1....2,900	
Nominal output		W	1,700	
Compressor oil		cc	1,200	
Coil resistance (Ambient temp. 25°C)		Ω	C - R : 1.04 C - S : 3.93	
Safety devices			External type	—
Overload relay models			MRA8967-9200	—
Operating temp.	Open	°C	160 ± 5	—
	Close	°C	84 ± 11	—
Operating amp. (Ambient temp. 25°C)			Trip in 6~16 sec. at 41A	—
Run capacitor		μF	35	
		VAC	400	
Crank case heater			240V - 30W	
Fan			Propeller	
Number....dia(mm)			1....φ400	
Fan Motor				
Model			SG6S-51B5P	
No. of pole....rpm(230V,High)			6....912	
Nominal output		W	50	
Coil resistance (Ambient temp. 20°C)		Ω	WHT - BRN : 89.1 WHT - YEL : 111.7 YEL - PNK : 55.8	
Safety device			Internal type	
Operating temp.	Open	°C	130 ± 8	
	Close	°C	79 ± 15	
Run capacitor		μF	2	
		VAC	440	
Heat Exch.				
Coil			Aluminium plate fin / Copper tube	
Rows....fin pitch(mm)			2....1.6	
Face area		m^2	0.523	
External Finish			Acrylic baked-on enamel finish	

3. DIMENSIONAL DATA

Indoor Unit



Outdoor Unit



DIMENSION: mm

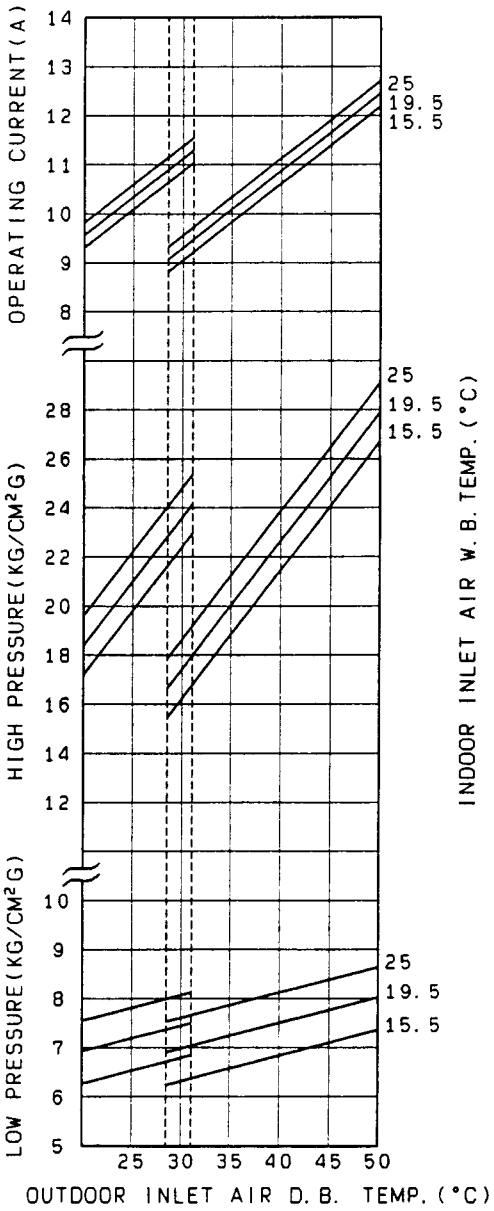
4. PERFORMANCE CHARTS

Operating characteristics versus outdoor ambient temperature and indoor temperature.

Conditions:		
	Power source	50Hz - 240V
	Indoor air velocity	High
	Refrigerant	Quantity of shipment
	Tubing length	5m.

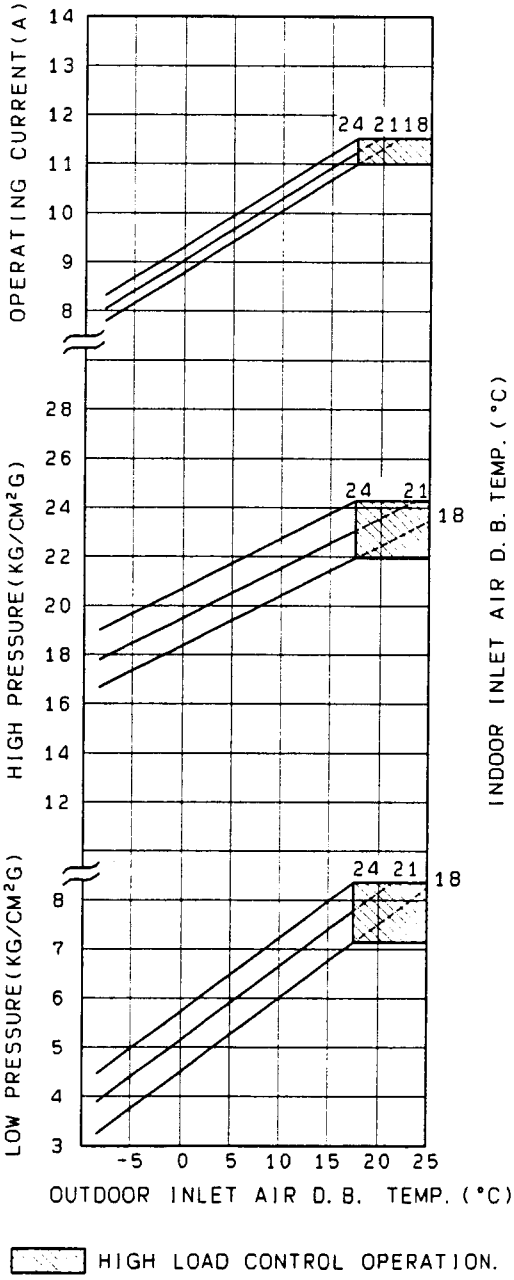
Cooling characteristics

Indoor relative humidity 50%



Heating characteristics

Outdoor relative humidity 85%

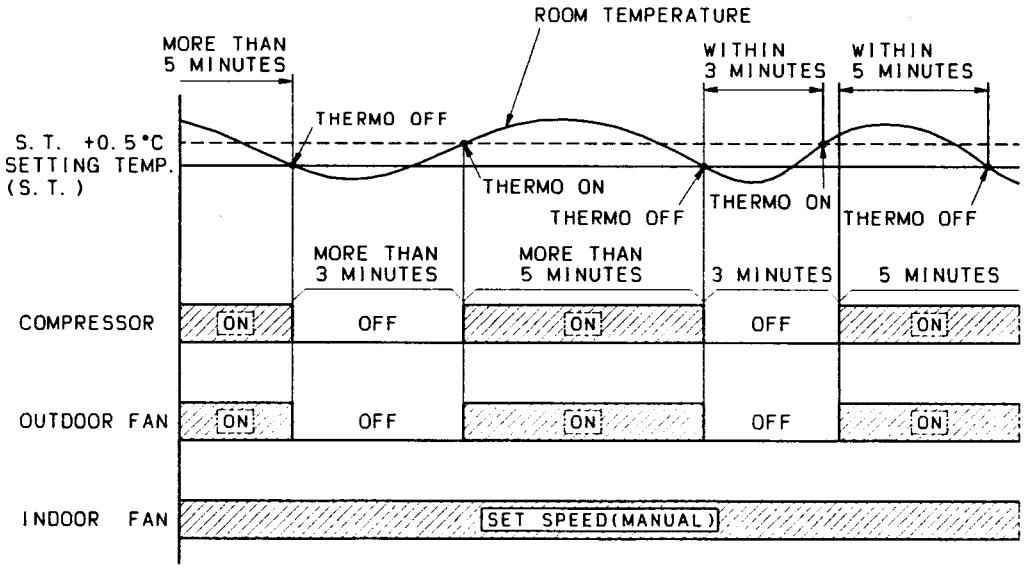


5. FUNCTION

1) Room Temperature Control

- Room temperature control is obtained by cycling the compressor ON and OFF under control of the room temperature sensor in the remote control unit.

■Cooling



- The control circuit will not attempt to turn the compressor ON until the compressor has been OFF for at least 3 minutes.
  To protect the compressor from stalling out when trying to start against the high side refrigerant pressure, the control circuit has a built-in automatic time delay to allow the internal pressure to equalize.

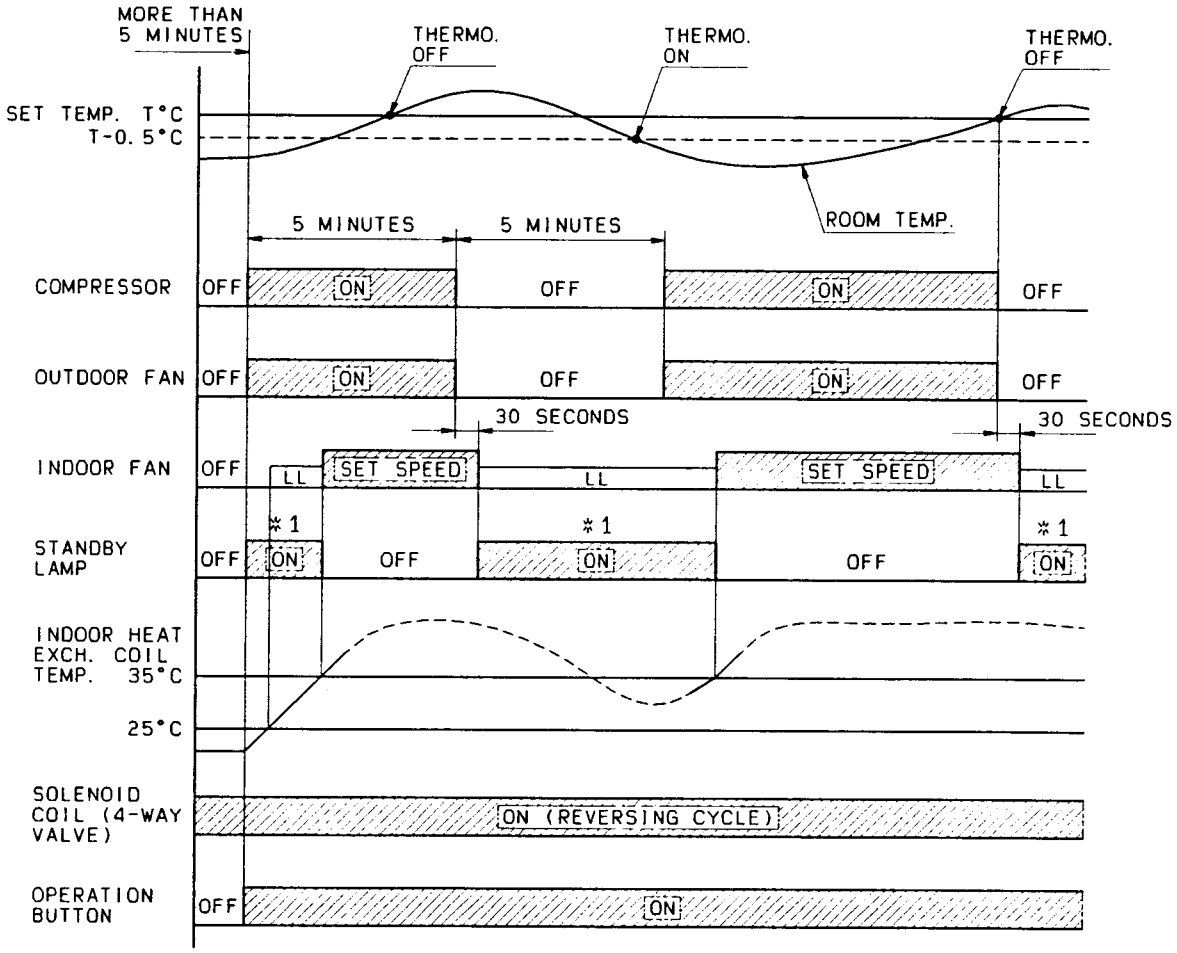
- As a protective measure, the control circuit switches the compressor OFF after 5 minutes or more of compressor operation.

- Thermo. ON : When the room temperature is above T + 0.5°C (T°C is set temperature.)
  Compressor ⇒ ON

- Thermo. OFF : When the room temperature is equal to or below set temperature T°C.
  Compressor ⇒ OFF

(Room Temperature Control)

■Heating



*1: COLD DRAFT PREVENTION

- The control circuit will not attempt to turn the compressor ON until the compressor has been OFF for at least 5 minutes.
  To protect the compressor from stalling out when trying to start against the high side refrigerant pressure, the control circuit has a built-in automatic time delay to allow the internal pressure to equalize.

- As a protective measure, the control circuit switches the compressor OFF after 5 minutes or more of compressor operation.

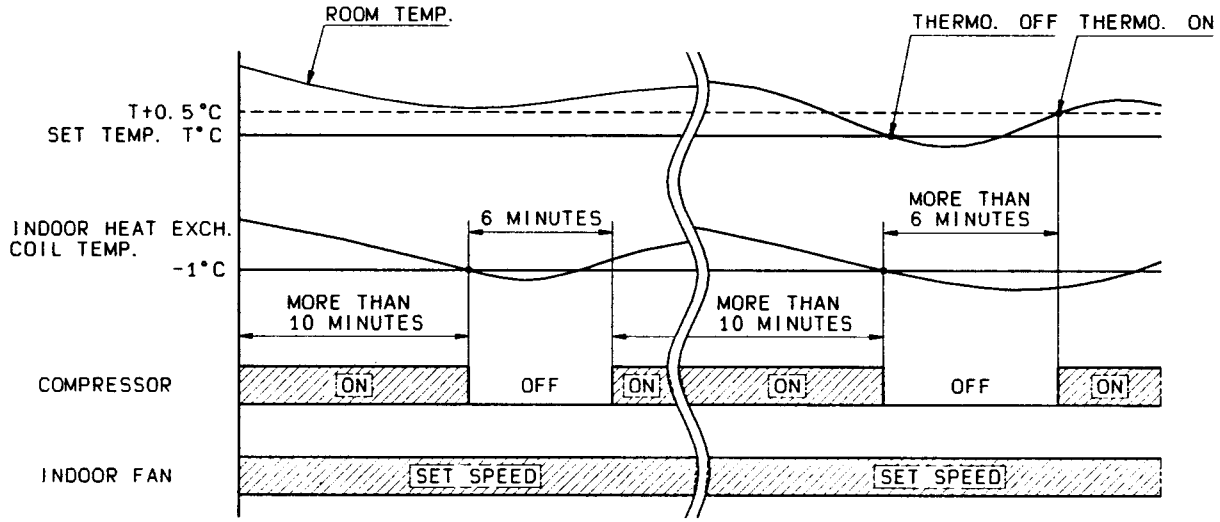
- Thermo. ON : When the room temperature is equal to or below set temperature T°C.
  Compressor ⇨ ON

- Thermo. OFF : When the room temperature is equal to or above T - 0.5°C (T°C is set temperature.)
  Compressor ⇨ OFF

2) Freeze Prevention

■Cooling

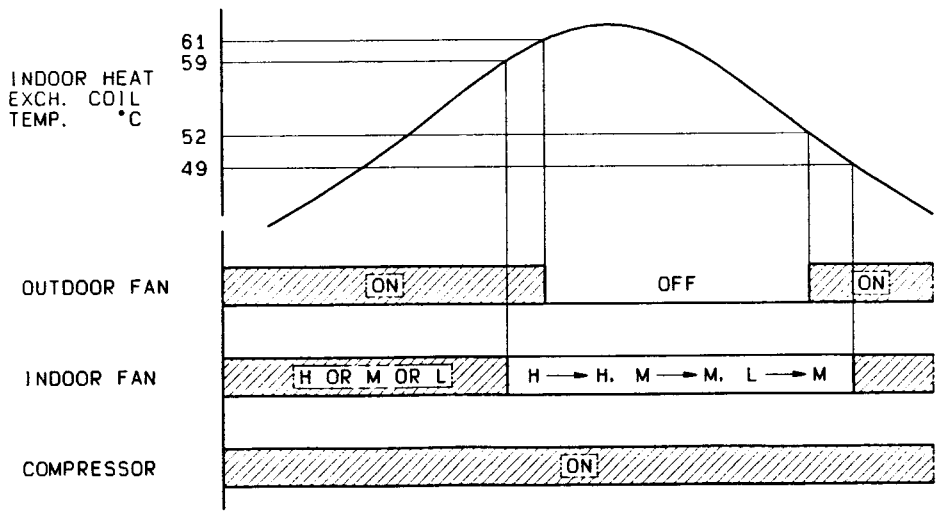
- This function prevents freezing of the indoor heat exchange coil.
- When the compressor has been running for 10 minutes or more and the temperature of the indoor heat exchange coil falls below -1°C, the control circuit stops the compressor for at least 6 minutes.



3) Overload Prevention

■Heating

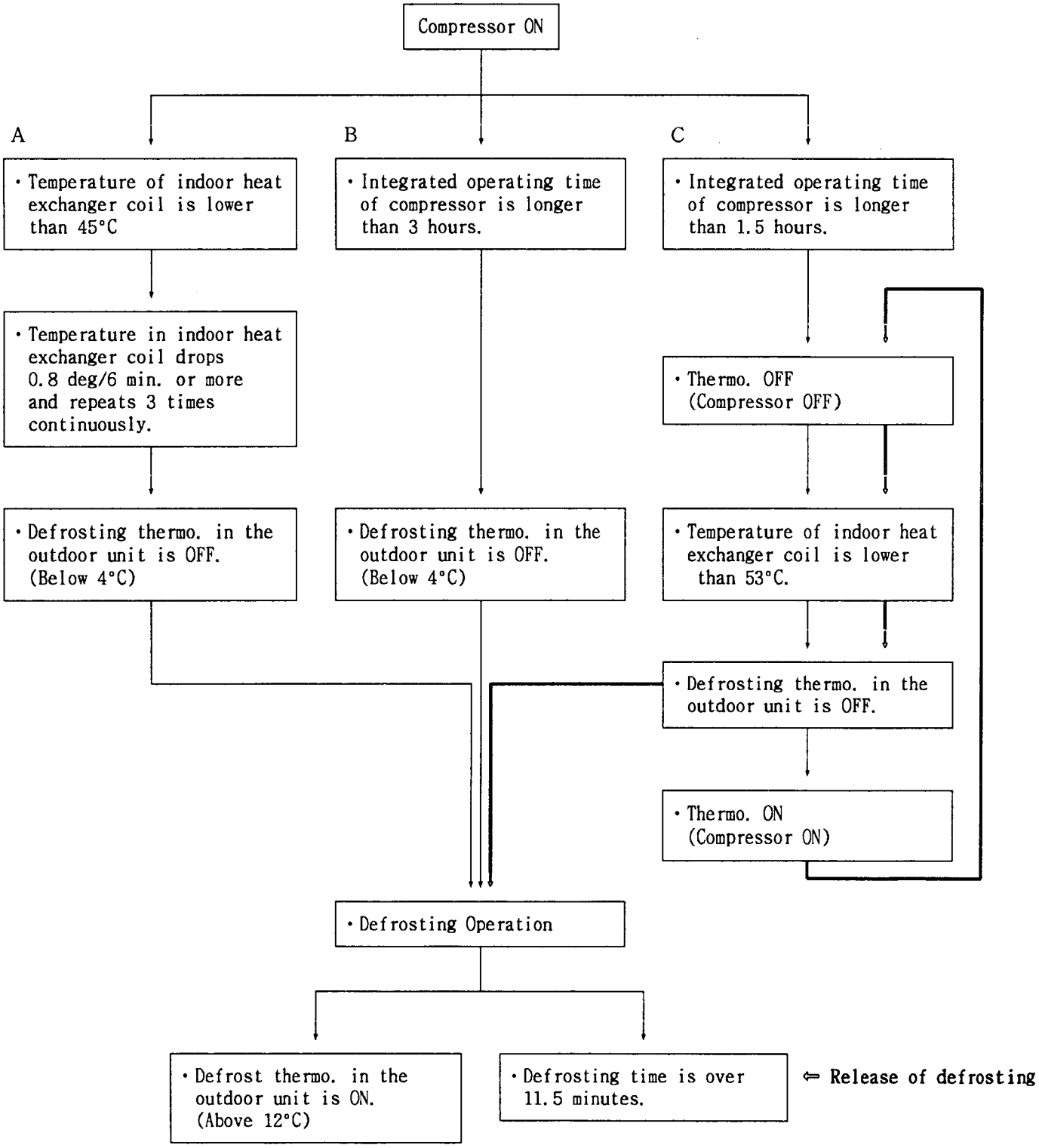
- Extreamly high temperature in indoor heat exchanger coil causes the air conditioner to overload. To lower the indoor heat exchanger coil temperature, the air conditioner temporarily stops the outdoor fan and controls the indoor fan speeds as shown below.



4) Defrosting Operation (Heating)

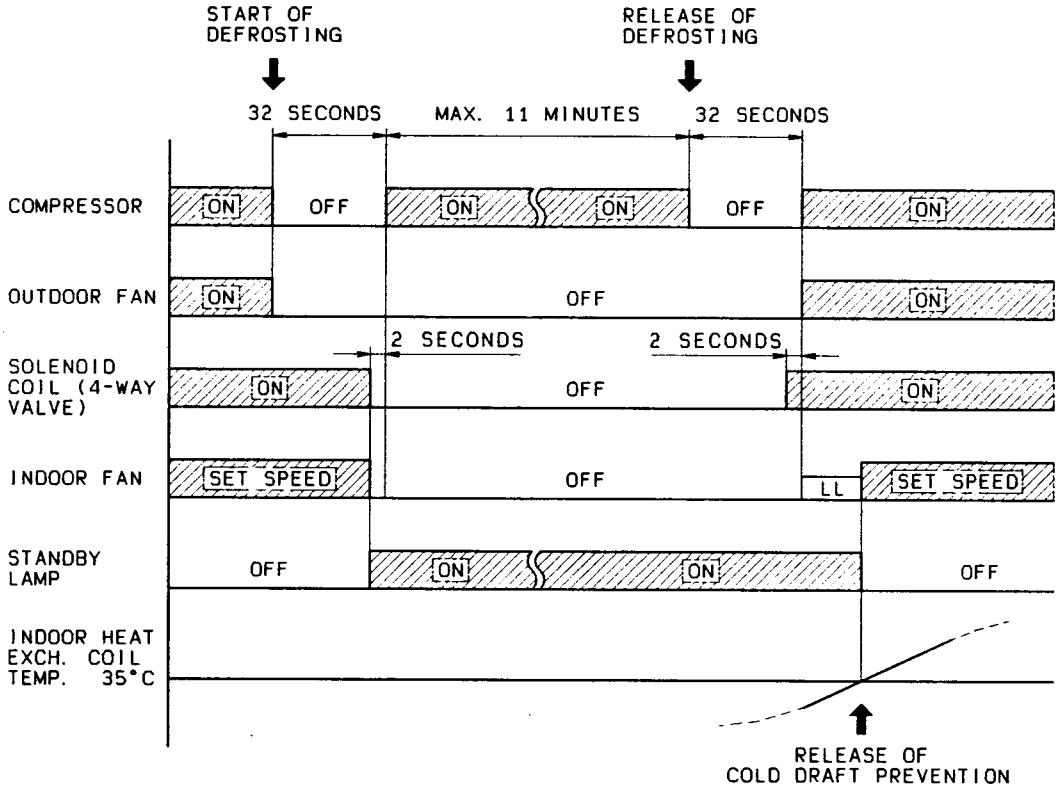
- When the capacity of the unit has been decreesed due to frosting up of the outdoor heat exchanger during heating, the temperature drop gradient is detected by the microcomputer-controlled temperature sensing system, and defrosting operation is started.

a. Defrosting Flowchart

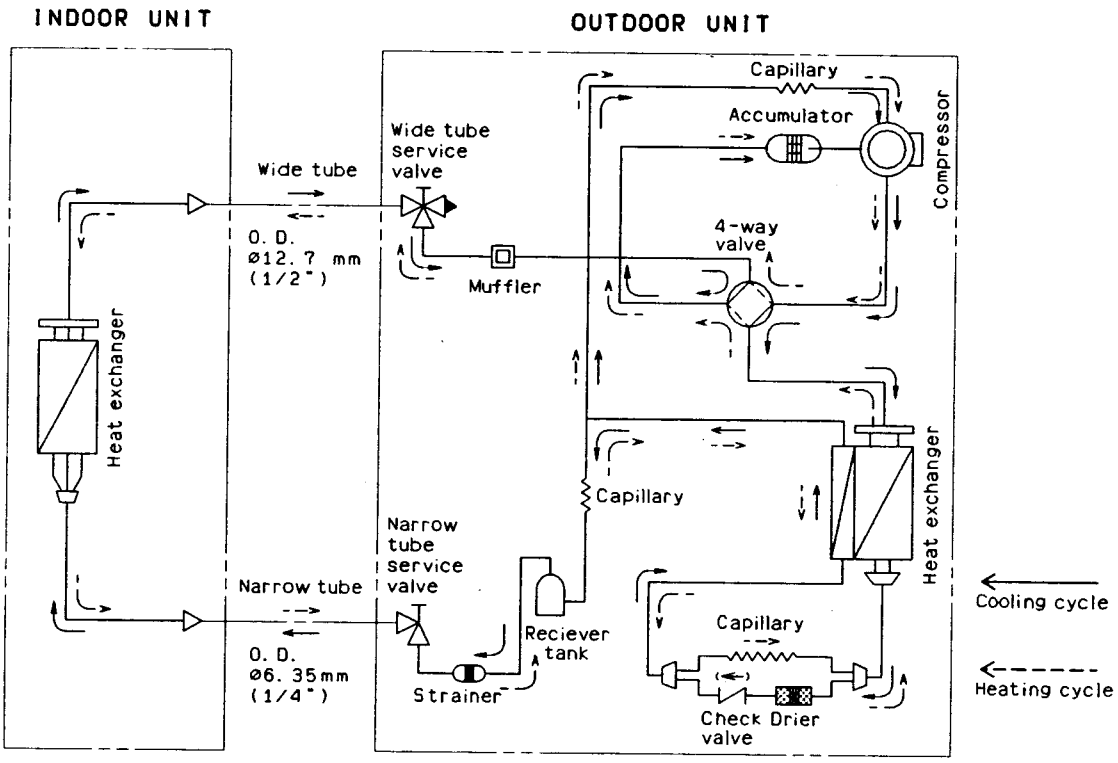


(Defrosting Mode)

b. Defrosting Mode Timing Chart

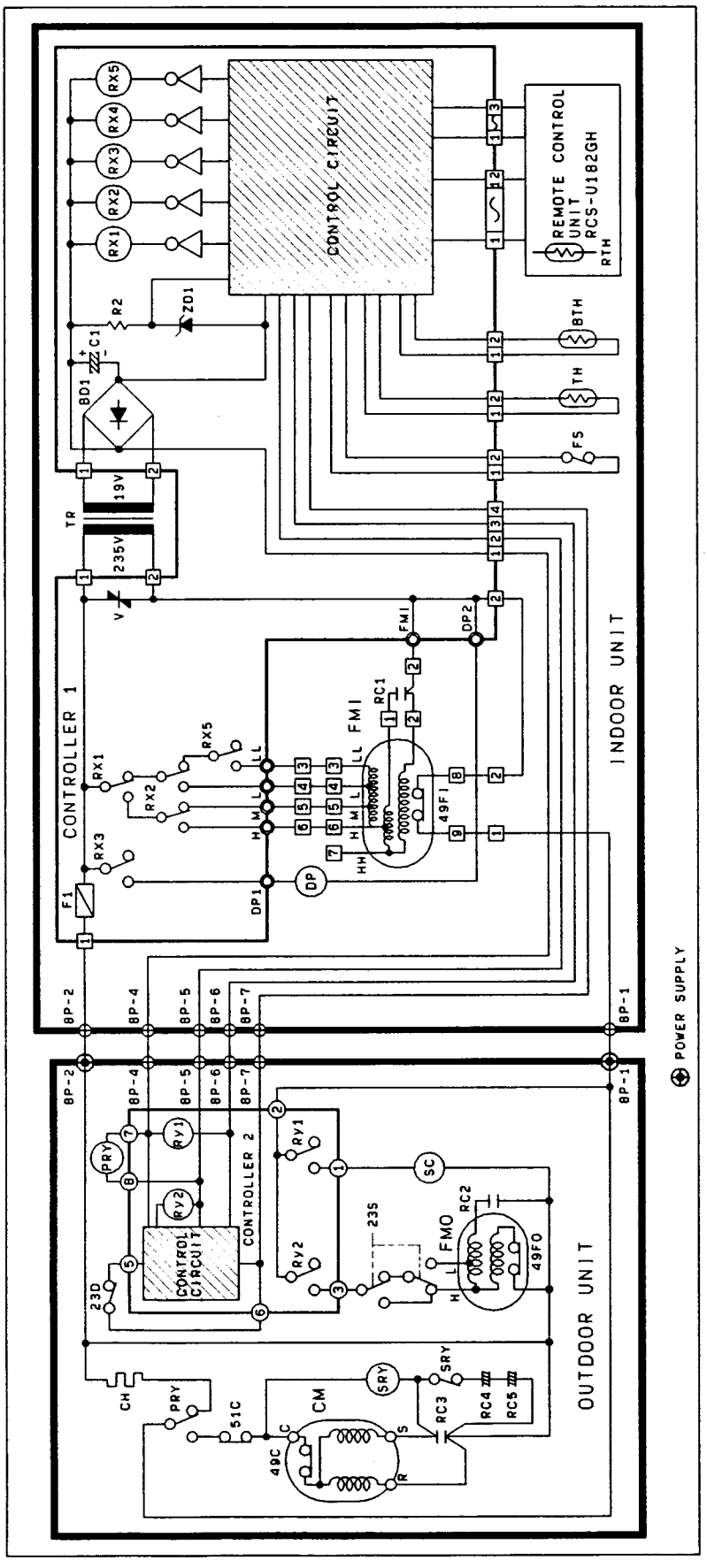


6. REFRIGERANT FLOW DIAGRAM



7. ELECTRICAL DATA

● Schematic Diagram



SYMBOL	PARTS NAME	SYMBOL	PARTS NAME
OUTDOOR UNIT	SAP-C182GH5	INDOOR UNIT	SAP-U182GH5
CM	COMPRESSOR MOTOR	DP	DRAIN PUMP
49C	CM INTERNAL THERMAL PROTECTOR	FMI	INDOOR FAN MOTOR
51C	OVERLOAD RELAY	49FI	FMI INTERNAL PROTECTOR
SRY	CM STARTING RELAY	RC1	CAPACITOR
CH	CRANK CASE HEATER	TR	TRANSFORMER
RC3, RC4, RC5	CAPACITOR	RTH	ROOM SENSOR
23D	DEFROST THERMO	BTH	BODY SENSOR
PRY	POWER RELAY	TH	COIL SENSOR
23S	THERMOSTAT (FAN SPEED CONTROL)	FS	FLOAT SWITCH
FMO	OUTDOOR FAN MOTOR	CONTROLLER 1	POW-AD1BH
49FO	FMO INTERNAL PROTECTOR	F1	FUSE 250V 3A
RC2	CAPACITOR	V	VARISTOR
SC	SOLENOID COIL	BD1	BRIDGE DIODE
CONTROLLER 2	POW-C92GH	C1	CAPACITOR
RY1, RY2	AUXILIARY RELAY	R2	RESISTOR
		ZD1	ZENER DIODE
		RX1, 2, 3, 4, 5	AUXILIARY RELAY

● PCB Ass'y　POW-AD18H

SYMBOLS	DESCRIPTION	SPECIFICATIONS
R1	RESISTOR(OXIDE)	100Ω ±5% 1W
R2	RESISTOR(OXIDE)	1KΩ ±5% 1W
R3	RESISTOR(METAL)	30KΩ ±1% 1/4W
R4	RESISTOR(METAL)	56KΩ ±1% 1/4W
R5	RESISTOR(METAL)	1.5KΩ ±1% 1/4W
R6	RESISTOR(METAL)	1.3KΩ ±1% 1/4W
R7	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R8	RESISTOR(METAL)	56KΩ ±1% 1/4W
R9	RESISTOR(METAL)	150KΩ ±1% 1/4W
R10	RESISTOR(METAL)	18KΩ ±1% 1/4W
R11	RESISTOR(METAL)	300KΩ ±1% 1/4W
R12	RESISTOR(METAL)	10KΩ ±1% 1/4W
R13	RESISTOR(METAL)	100KΩ ±1% 1/4W
R14	——	——
R15	RESISTOR(METAL)	8.2KΩ ±1% 1/4W
R16	RESISTOR(CARBON)	100Ω ±5% 1/4W
R17	RESISTOR(CARBON)	100Ω ±5% 1/4W
R18	RESISTOR(CARBON)	100Ω ±5% 1/4W
R19	RESISTOR(CARBON)	100Ω ±5% 1/4W
R20	RESISTOR(CARBON)	470Ω ±5% 1/4W
R21	RESISTOR(CARBON)	470Ω ±5% 1/4W
R22	RESISTOR(CARBON)	470Ω ±5% 1/4W
R23	RESISTOR(CARBON)	470Ω ±5% 1/4W
R24	RESISTOR(CARBON)	470Ω ±5% 1/4W
R25	RESISTOR(CARBON)	470Ω ±5% 1/4W

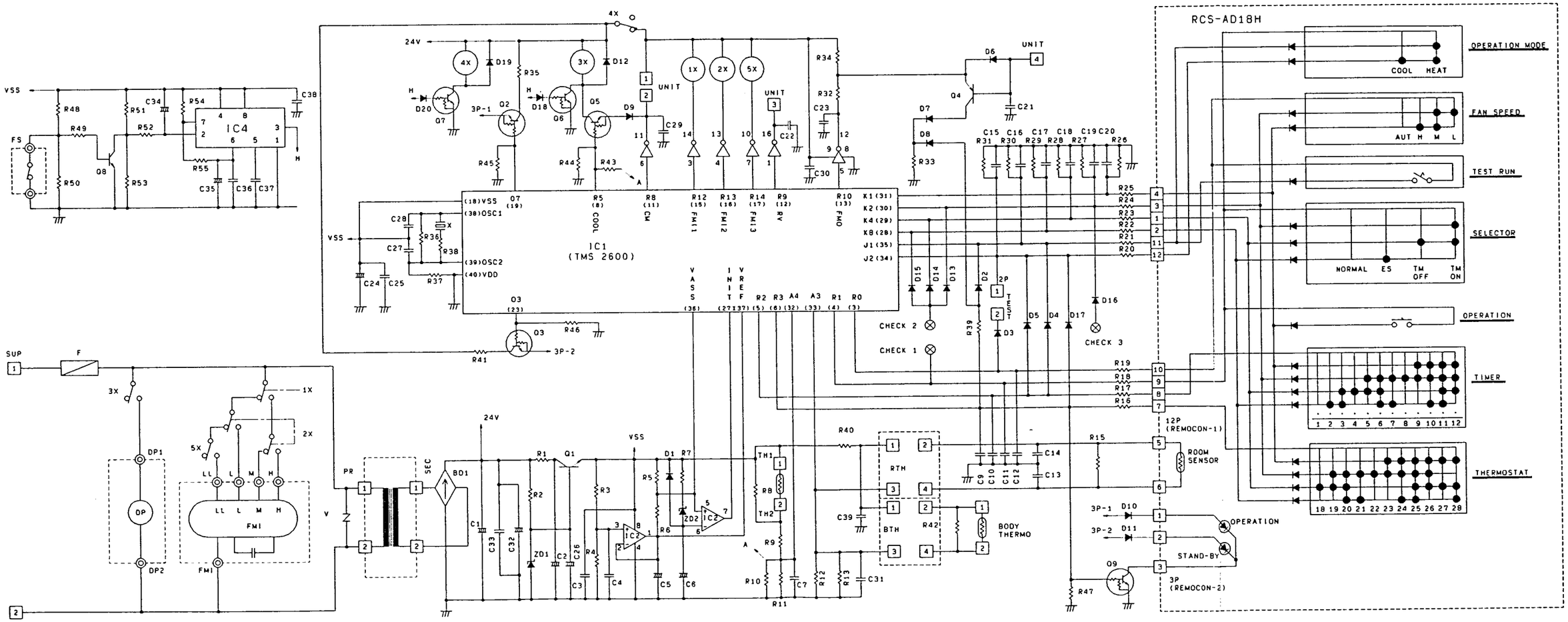
SYMBOLS	DESCRIPTION	SPECIFICATIONS
R26	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R27	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R28	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R29	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R30	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R31	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R32	RESISTOR(CARBON)	3.3KΩ ±5% 1/4W
R33	RESISTOR(CARBON)	3KΩ ±5% 1/4W
R34	RESISTOR(CARBON)	2KΩ ±5% 1/4W
R35	RESISTOR(OXIDE)	1KΩ ±5% 1W
R36	RESISTOR(CARBON)	56KΩ ±5% 1/4W
R37	RESISTOR(CARBON)	5.6KΩ ±5% 1/4W
R38	RESISTOR(CARBON)	100Ω ±5% 1/4W
R39	RESISTOR(CARBON)	6.8KΩ ±5% 1/4W
R40	RESISTOR(METAL)	100Ω ±1% 1/4W
R41	RESISTOR(OXIDE)	3KΩ ±5% 1W
R42	RESISTOR(CARBON)	8.2KΩ ±5% 1/4W
R43	RESISTOR(METAL)	330KΩ ±1% 1/4W
R44	RESISTOR(CARBON)	20KΩ ±5% 1/4W
R45	RESISTOR(CARBON)	10KΩ ±5% 1/4W
R46	RESISTOR(CARBON)	10KΩ ±5% 1/4W
R47	RESISTOR(CARBON)	10KΩ ±5% 1/4W
R48	RESISTOR(CARBON)	3.3KΩ ±5% 1/4W
R49	RESISTOR(CARBON)	2.2KΩ ±5% 1/4W
R50	RESISTOR(CARBON)	2.2KΩ ±5% 1/4W

SYMBOLS	DESCRIPTION	SPECIFICATIONS
R51	RESISTOR(CARBON)	5.6KΩ ±5% 1/4W
R52	RESISTOR(CARBON)	2.2KΩ ±5% 1/4W
R53	RESISTOR(CARBON)	100KΩ ±5% 1/4W
R54	RESISTOR(CARBON)	820KΩ ±5% 1/4W
R55	RESISTOR(CARBON)	470Ω ±5% 1/4W
C1	CAPACITOR	470μF 50V
C2	CAPACITOR	1μF 50V
C3	CAPACITOR	0.047μF 25V
C4	CAPACITOR	0.022μF 25V
C5	CAPACITOR	1μF 50V
C6	CAPACITOR	10μF 50V
C7	CAPACITOR	0.047μF 25V
C8	——	——
C9	CAPACITOR	0.0047μF 25V
C10	CAPACITOR	0.0047μF 25V
C11	CAPACITOR	0.0047μF 25V
C12	CAPACITOR	0.0047μF 25V
C13	CAPACITOR	0.0047μF 25V
C14	CAPACITOR	0.0047μF 25V
C15	CAPACITOR	0.0047μF 25V
C16	CAPACITOR	0.0047μF 25V
C17	CAPACITOR	0.0047μF 25V
C18	CAPACITOR	0.0047μF 25V
C19	CAPACITOR	0.0047μF 25V
C20	CAPACITOR	0.0047μF 25V

SYMBOLS	DESCRIPTION	SPECIFICATIONS
C21	CAPACITOR	0.047μF 25V
C22	CAPACITOR	0.022μF 25V
C23	CAPACITOR	0.022μF 25V
C24	CAPACITOR	10μF 16V
C25	CAPACITOR	0.047μF 25V
C26	CAPACITOR	10μF 25V
C27	CAPACITOR	0.00001μF 50V
C28	CAPACITOR	0.000027μF 50V
C29	CAPACITOR	0.022μF 25V
C30	CAPACITOR	0.022μF 25V
C31	CAPACITOR	0.022μF 25V
C32	CAPACITOR	100μF 50V
C33	CAPACITOR	0.01μF 25V
C34	CAPACITOR	1F 25V
C35	CAPACITOR	1000μF 25V
C36	CAPACITOR	0.022μF 25V
C37	CAPACITOR	0.1μF 25V
C38	CAPACITOR	0.022μF 25V
C39	CAPACITOR	0.01μF 25V
Q1	TRANSISTOR	2SD313EF
Q2	TRANSISTOR	3402
Q3	TRANSISTOR	3402
Q4	TRANSISTOR	2SA608EF
Q5	TRANSISTOR	3402
Q6	TRANSISTOR	3402

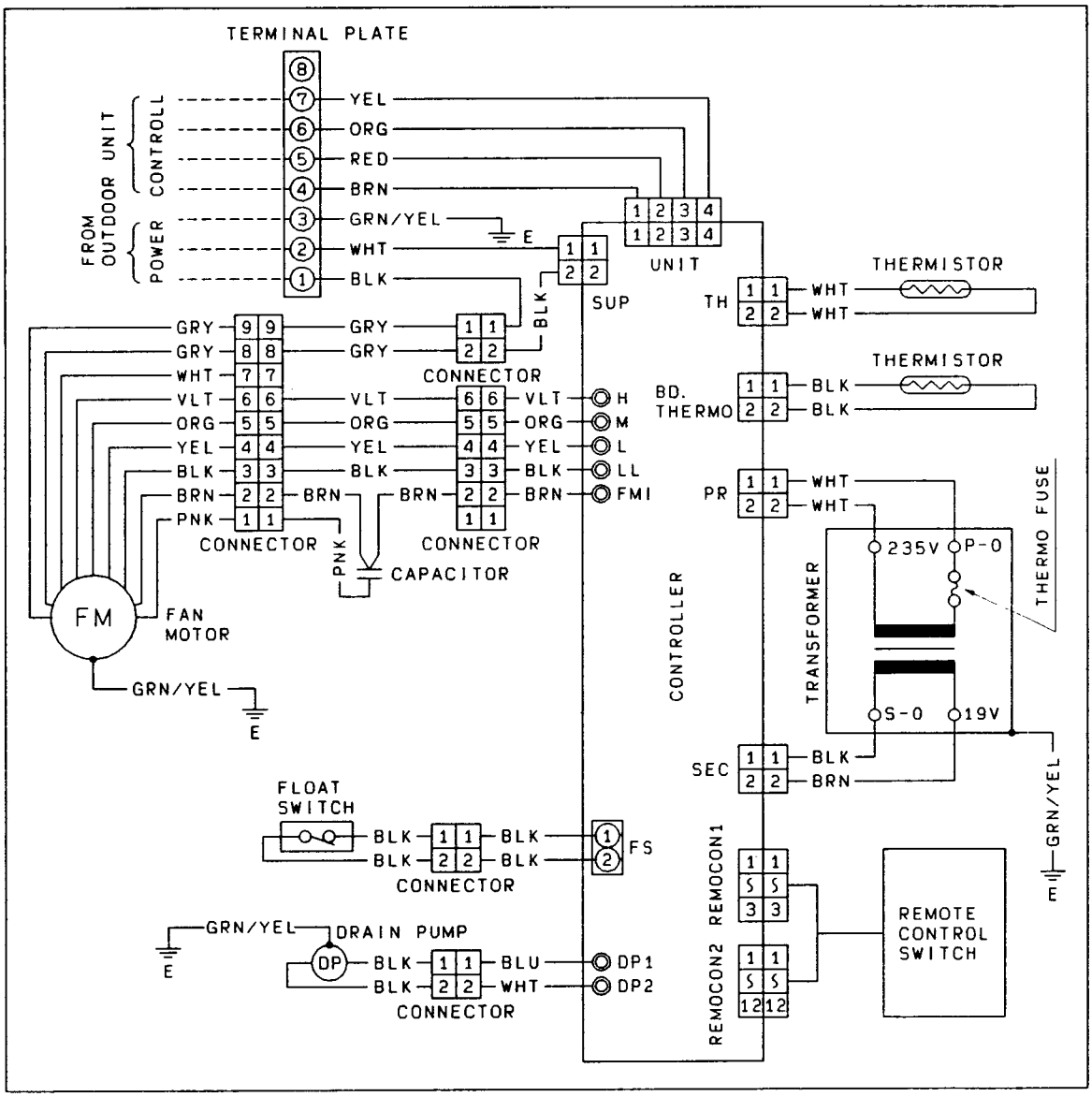
SYMBOLS	DESCRIPTION	SPECIFICATIONS
Q7	TRANSISTOR	3402
Q8	TRANSISTOR	2SC536EF
Q9	TRANSISTOR	3402
IC1	IC	TMS2600-MP94002
IC2	IC	LA6458
IC3	IC	LB1234
IC4	IC	HA17555PS
D1	DIODE	DS442X
?		
D20	DIODE	DS442X
ZD1	ZENER DIODE	GZA9.1Z
ZD2	ZENER DIODE	GZA2.4Z
BD	BRIDGE DIODE	DBA10C
X	CRYSTAL	
V	VARISTOR	SNR-14A420K
F	FUSE	250V 3A
1X	RELAY	V824TBU
2X	RELAY	V824TBU
3X	RELAY	LZ-195-TS
4X	RELAY	LZ-169
5X	RELAY	LZ-195-TS

SYMBOLS	DESCRIPTION	SPECIFICATIONS
REMOCON-1	CONNECTOR	E12B-EH
REMOCON-2	CONNECTOR	E3B-EH
UNIT	CONNECTOR	5273-04A
SUP	CONNECTOR	2-173270-2
PR	CONNECTOR	8-173270-2
SEC	CONNECTOR	5273-02A
BODY THERMO	CONNECTOR	5273-02A-RE
TH	CONNECTOR	171825-2
RTH	CONNECTOR	171825-4
BTH	CONNECTOR	8-171825-4
TEST	CONNECTOR	2-171825-2
CHECK 1	BOARD PIN	
CHECK 2	BOARD PIN	
CHECK 3	BOARD PIN	



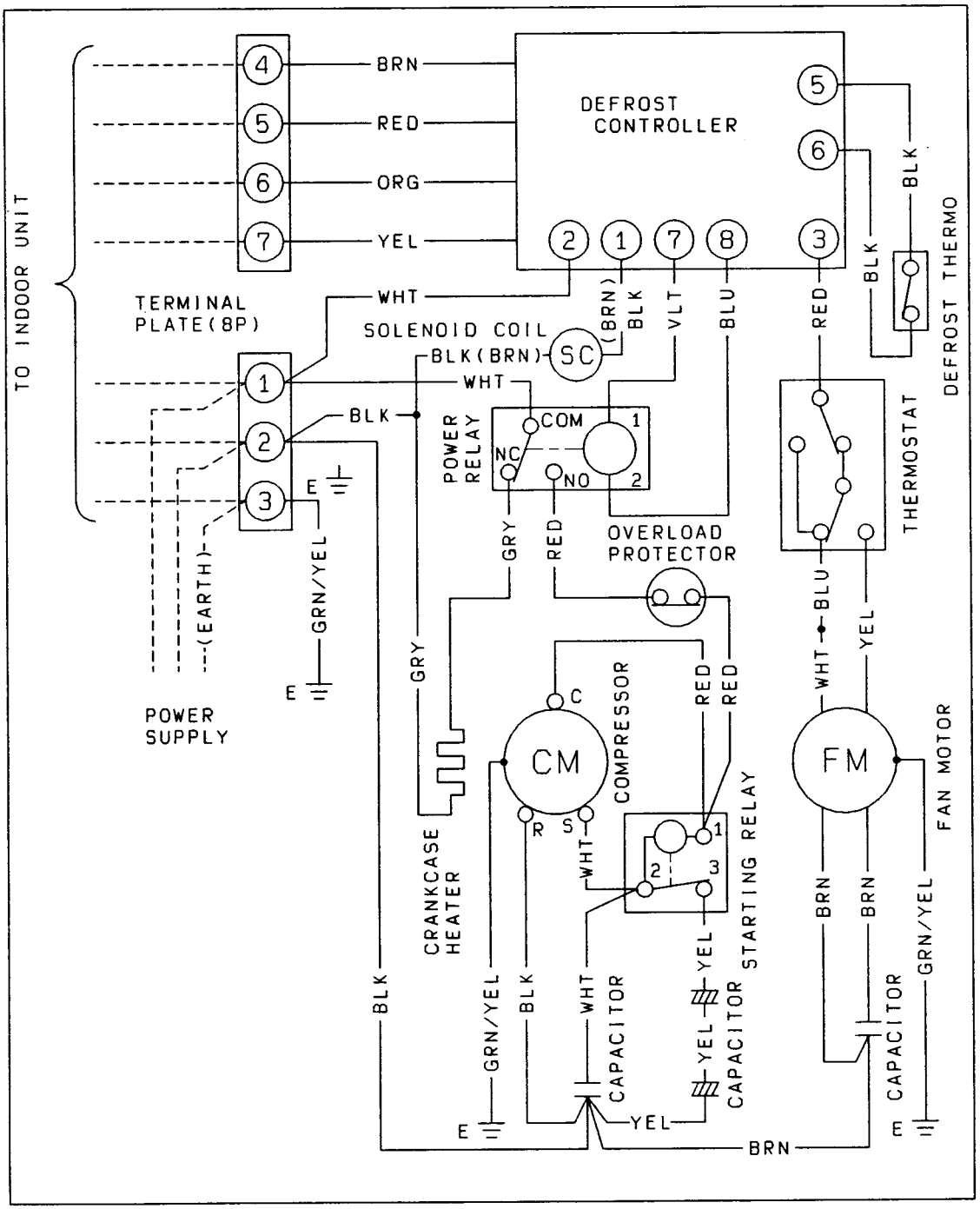
● Electric Wiring Diagram

SAP-U182GH5



● Electric Wiring Diagram

SAP-C182GH5



8. TROUBLESHOOTING

1. Check before and after "TROUBLESHOOTING"

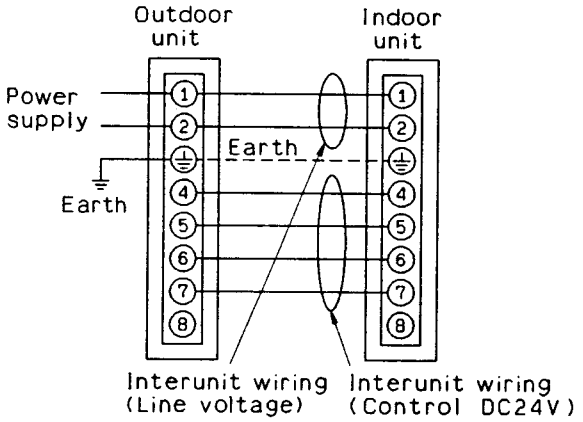
A. Check power supply wiring.

- Check that power supply wires are correctly connected to terminals No.1 and No.2 on the 8P terminal plate in the outdoor unit.

B. Check inter-unit power wiring and inter-unit control wiring.

- Check that inter-unit wires are correctly connected to indoor unit from outdoor unit.

Power supply:
50Hz, single-phase,
220/230/240V



C. Check power supply.

- Check that voltage is in specified range (±10% of the rating).
- Check that power is being supplied.

If the following troubleshooting must be done with power being supplied, be careful about any uninsulated live part that can cause **ELECTRIC SHOCK.**

D. Check lead wires and connectors in indoor and outdoor units.

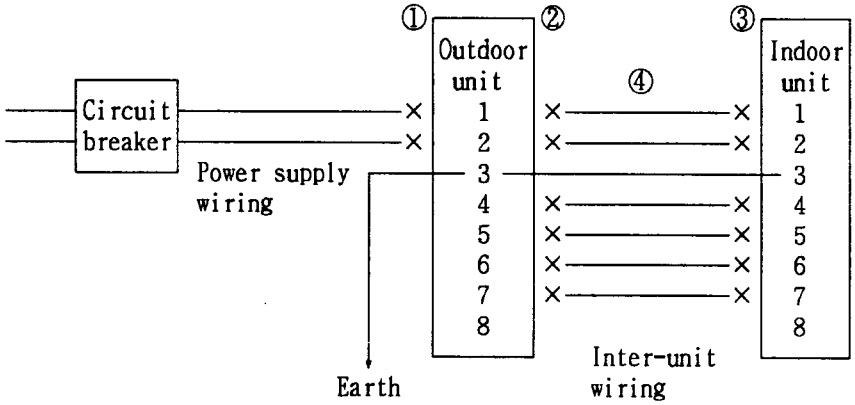
- Check that coating of lead wires is not damaged.
- Check that lead wires and connectors are connected firmly.
- Check that wiring is correct.

2. Air conditioner does not operate

(1) Circuit breaker trips (or fuse blows).

A. When circuit breaker is set to ON, it trips in a few moments.
(Resetting is not possible.)

- There is a possibility of ground fault.
- Measure insulation resistance.
  If resistance value is 1MΩ or less, insulation is defective (NO).



*Set circuit breaker to OFF.

① Remove power supply wires from terminal plate in outdoor unit.
- Measure insulation resistance of power supply wires.

NO → Do rewiring.

② Remove inter-unit wires from terminal plate in indoor unit.
- Measure insulation resistance of indoor unit.

NO → Insulation of indoor unit is defective.
- Measure insulation resistance of electrical parts in indoor unit.

③ Remove inter-unit wires from terminal plate in outdoor unit.
- Measure insulation resistance of outdoor unit.

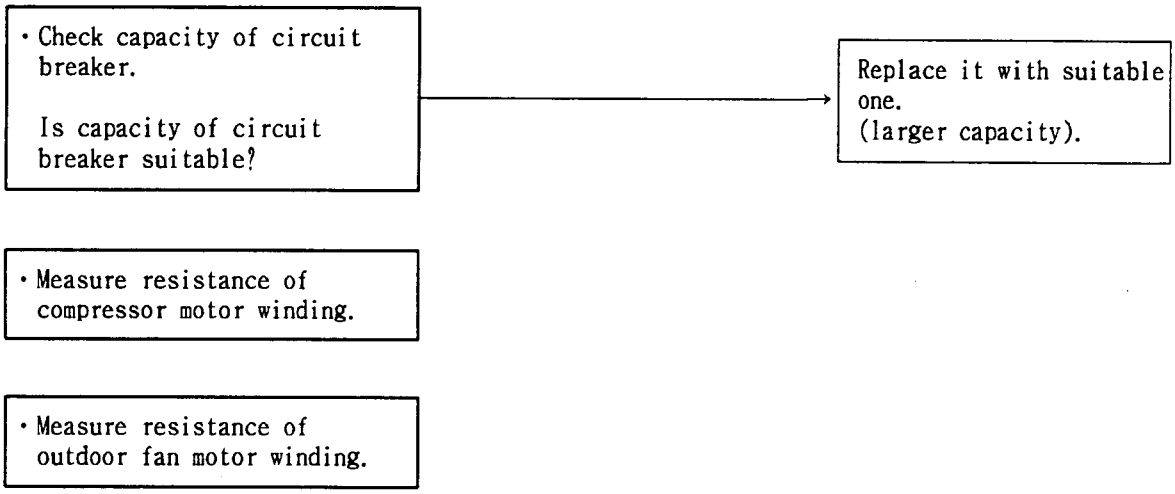
NO → Insulation of outdoor unit is defective.
- Measure insulation resistance of electrical parts in outdoor unit.

④ Measure insulation resistance of inter-unit wires.

NO → Do rewiring.

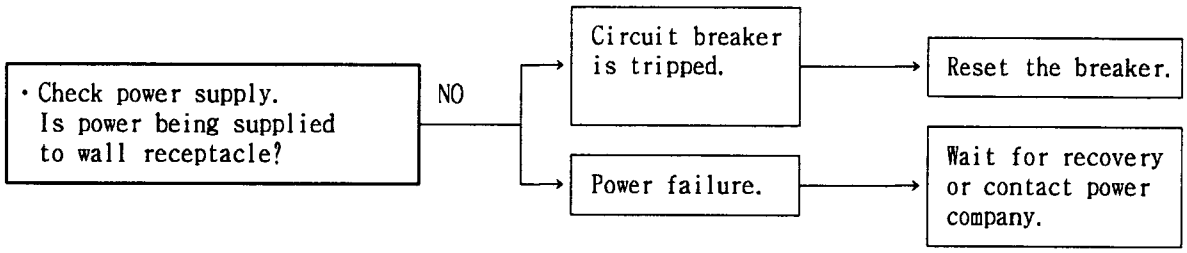
B. Circuit breaker trips in several minutes after turning air conditioner ON.

· There is a possibility of short circuit.



(2) Neither indoor unit nor outdoor unit runs.

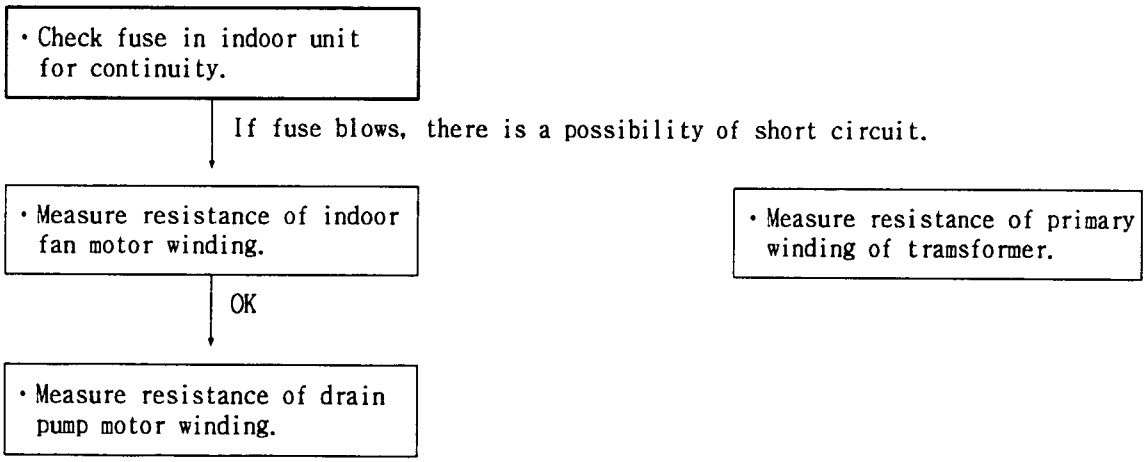
A. Power is not supplied.



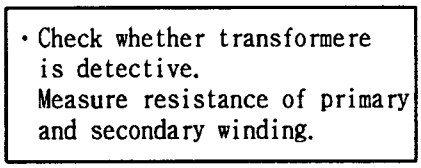
B. Check remote control unit.

Refer to 9-4 Checking Remote Control Unit Proper

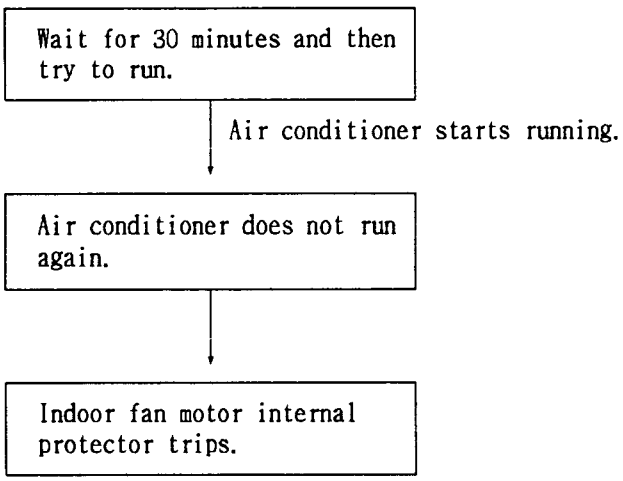
C. Check fuse on PCB Ass'y in indoor unit.

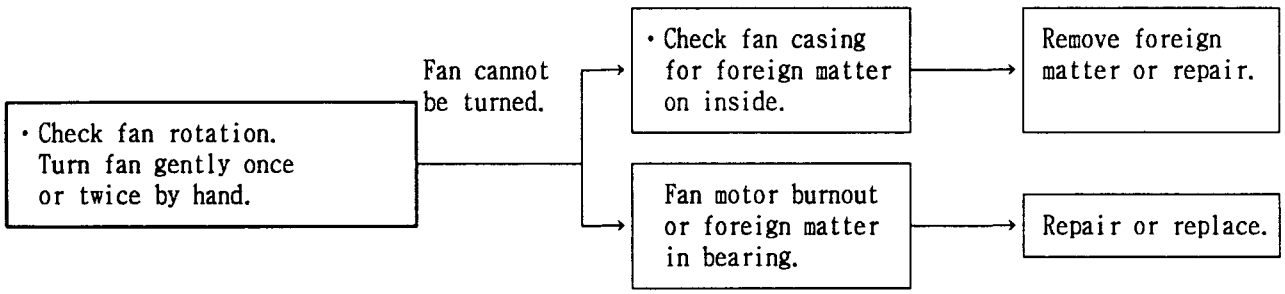


D. Check transformer in indoor unit.



E. Check indoor fan motor protector.





(3) Only outdoor unit does not run.

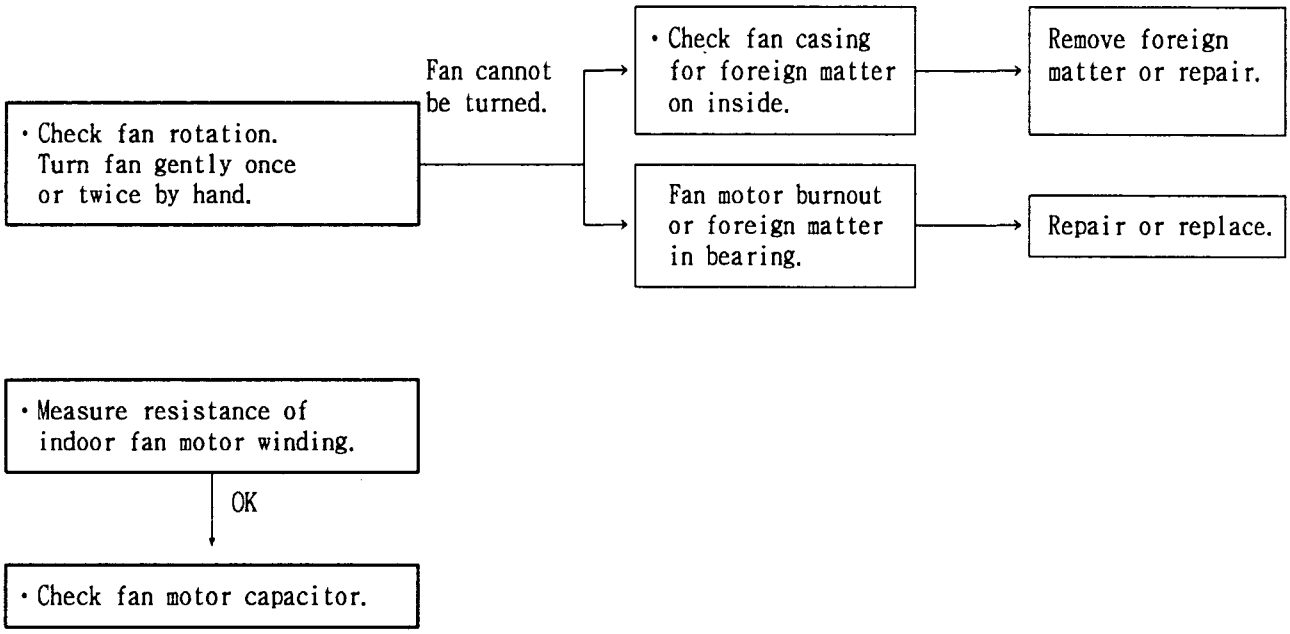
A. Outdoor unit does not run when air conditioner is in following conditions.

- During thermo OFF.
- During freeze prevention (for at least 6 minutes).
- During drain pump works (for at least 12 minutes).

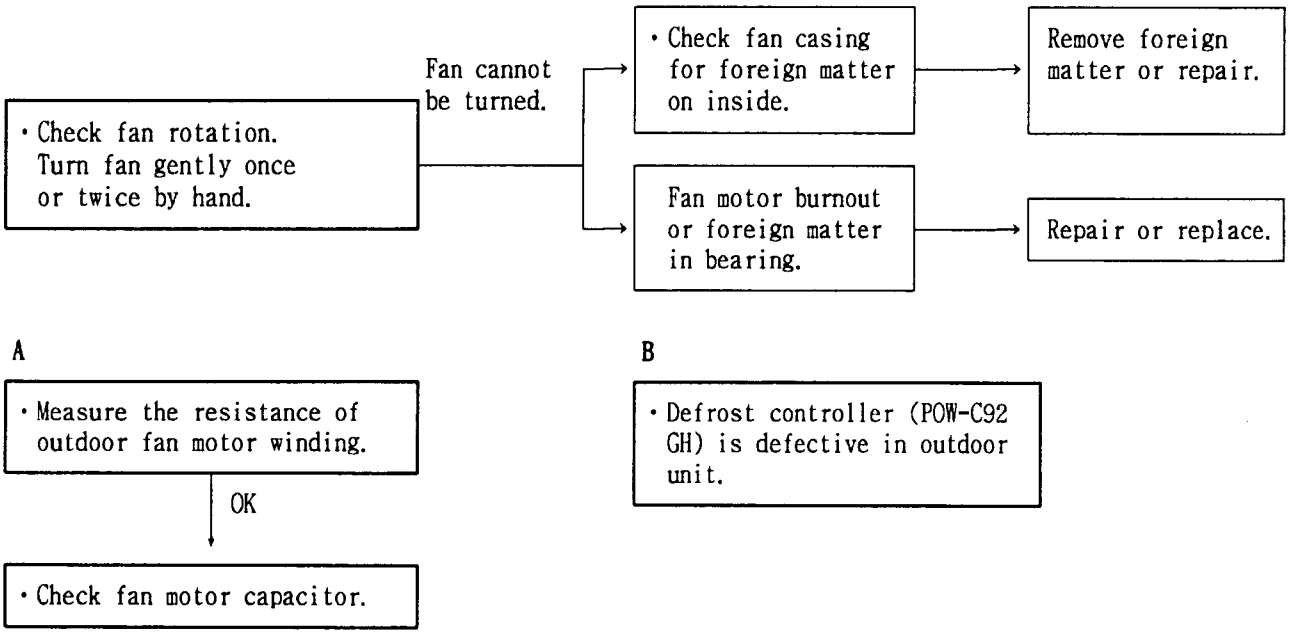
B. PCB Ass'y in indoor unit is defective.

3. A particular component of air conditioner does not operate.

(1) Only indoor fan does not run.

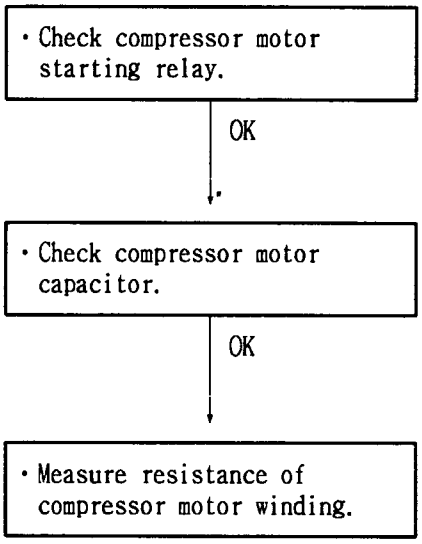


(2) Only outdoor fan does not run.

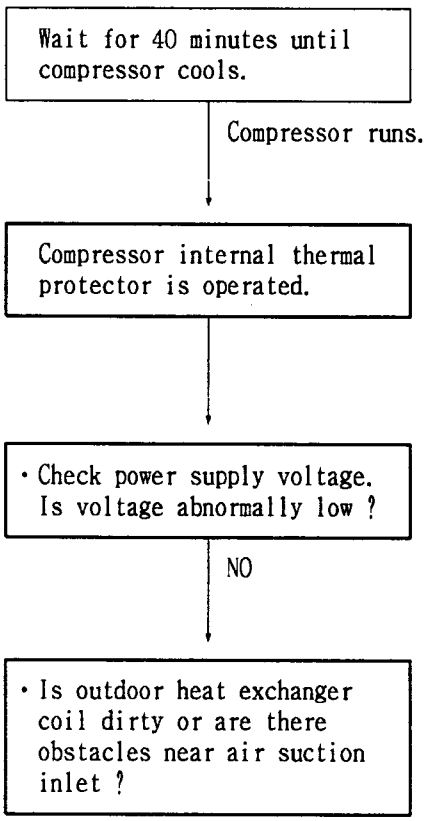


(3) Only compressor does not run.

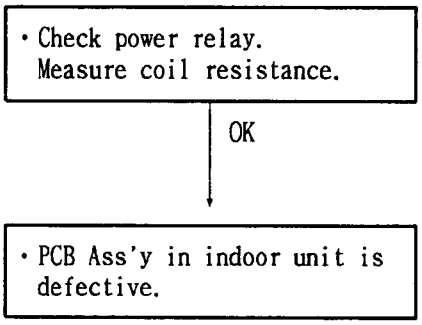
A



B

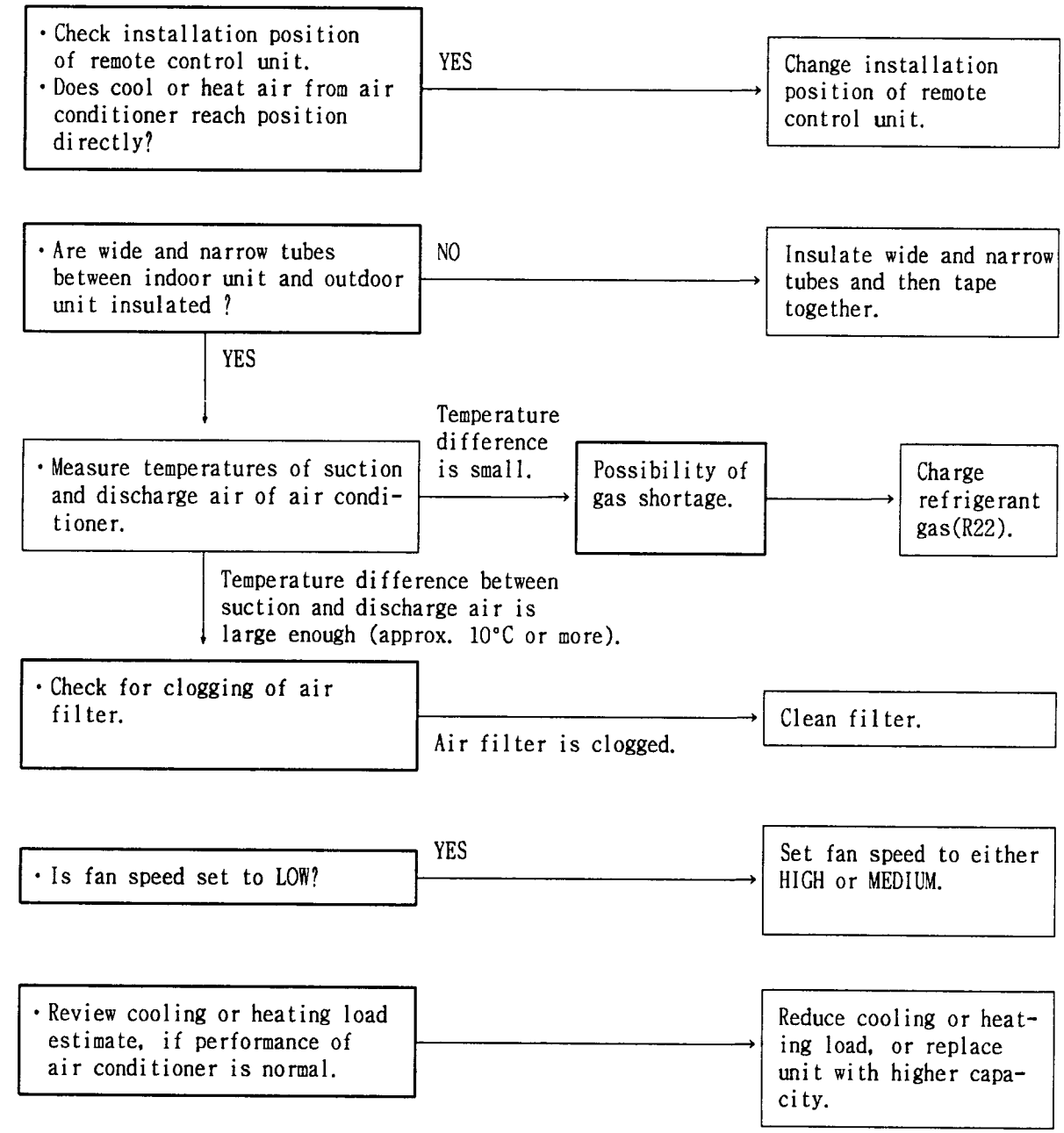


C



4. Air conditioner operates, but abnormalities occur.

(1) Poor cooling or poor heating



(2) Excessive cooling or heating

9. CHECKING ELECTRICAL COMPONENTS

9-1 Measurement of Insulation Resistance

● The insuration is in good condition if the resistance exceeds 1 MΩ.

(1) Power Supply Wires

Clamp the earthed wire of the power supply wires with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on either of the power wires. (Fig. 1)

Then measure the resistance between the earthed wire and the other power wires. (Fig. 1)

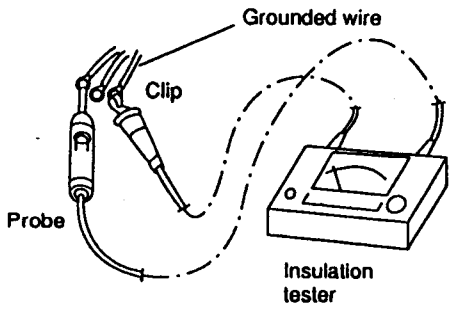


Fig. 1

(2) Indoor Unit

Clamp an aluminium plate fin or copper tube with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on ①, and then ② on the terminal plate. (Fig. 2)

(3) Outdoor Unit

Clamp a metallic part of the unit with the lead clip of the insulation resistance tester and measure the resistance by placing a probe on ① , and then ② on the terminal plate. (Fig. 2)

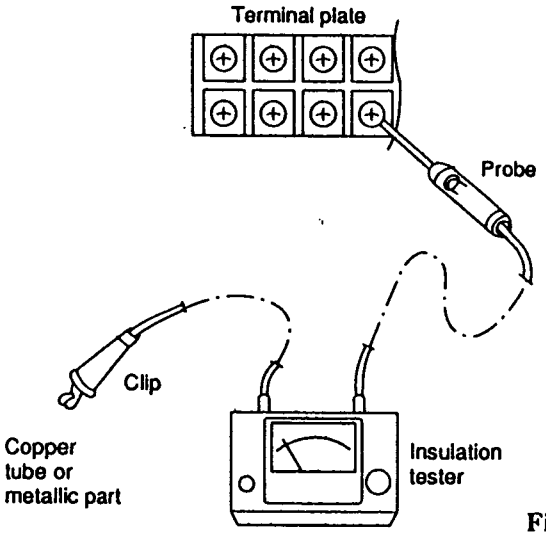


Fig. 2

(4) Measurement of Insulation Resistance for Electrical Parts

Disconnect the lead wires of the disired electric part from terminal plate, PCB Ass'y, capacitor, etc.
Similarly disconnect the connector. Then measure the insuration resistance. (Fig. 1 to 4)

Refer to Electric Wiring Diagram.

Note: If the probe cannot enter the poles because the hole is too narrow then use a probe with a thinner pin.

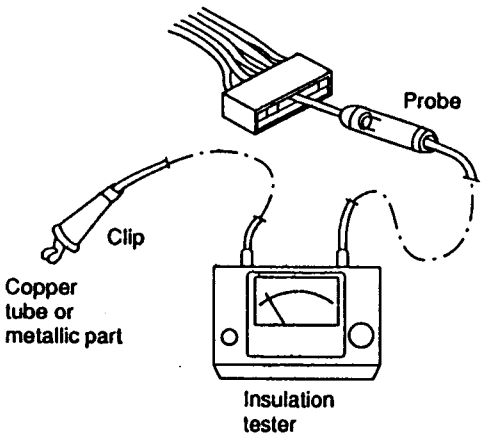


Fig. 3

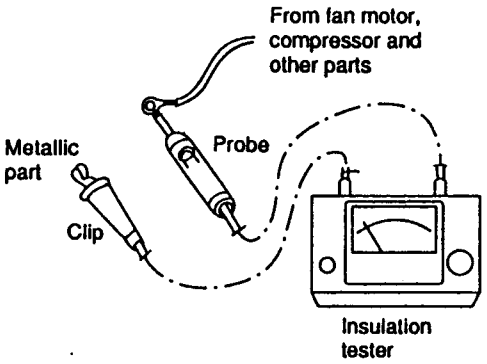


Fig. 4

9-2 Checking Continuity of Fuse on PCB Ass'y

● Check for continuity using a multimeter as shown in Fig. 5.

Note: Method Used to Replace Fuse on PCB Ass'y

1. Remove the PCB Ass'y from the electrical component box.

2. Pull out the fuse at the metal clasp using pliers while heating the soldered leads on the back side of the PCB Ass'y with a soldering iron(30W or 60W). (Fig. 6)

3. Remove the fuse ends one by one. For replacement, insert a fuse of the same rating and solder it. (Allow time to radiate heat during soldering so that the fuse does not melt.)

CAUTION: When replacing the fuse, be sure to not to brake down the varistor.

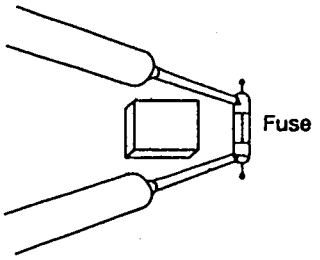


Fig. 5

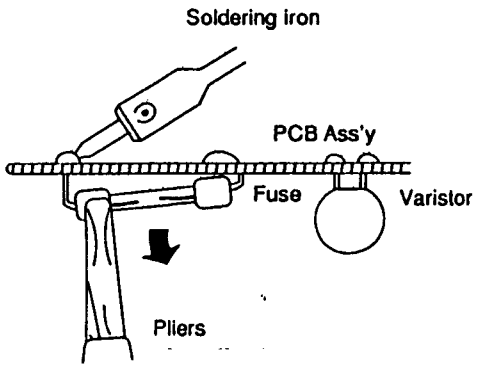


Fig. 6

9-3 Checking Motor Capacitor

Remove the lead wiers from the capacitor terminars, and then place a probe on the capacitor terminals as shown in Fig. 7. Observe the deflection of the pointer, setting the resistance measuring range of the multimeter to the maximum value.

The capacitor is "good" if the pointer bounces to a great extent and then gradually returns to its original position.

The range of deflection and deflection time deffer according to capacity of the capacitor.

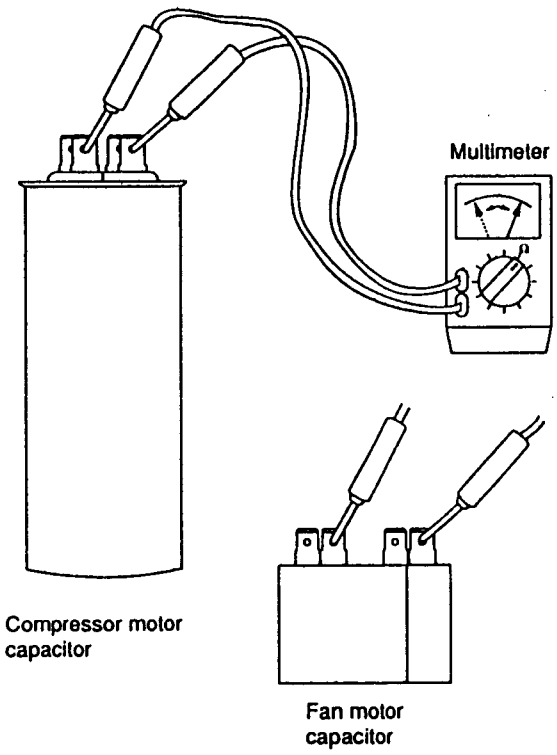


Fig. 7

9-4 Checking Remote Control Unit Proper

(Check each item, referring to the PCB Ass'y POW-AD18H.)

A. Caution: Use of the Service TEST RUN Switch
(RUN/TEST RUN)
"TEST RUN" shows the position to run the air conditioner for the test at the installment.

If this operation is continued for a long time, there would be a bad effect on the air conditioner because of over-cooling or over-heating.
Therefore, use this switch only for checking, and in any case, **DO NOT KEEP ON COOLING FOR 15 MINUTES UNDER TEST RUN MODE.**

When the checking over, **TURN THE SWITCH BACK TO ITS ORIGINAL POSITION (= RUN) WITHOUT FAIL.**

B. Checking of the Items of the Remote Control Unit

At first, pull out the connector (12P REMOCON-1) of the remote control unit from the P.C.B. Ass'y in the indoor unit.

(1) Checking the Operation

Checking Points	Position of the button	
	OFF	ON
9 — 4	NO	YES

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.9 hole.

(2) Checking the Operation Mode

Checking Points	Position of the selector	
	COOL	HEAT
9 — 11	NO	YES
9 — 12	YES	YES

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.9 hole.

(3) Checking the Selector

Checking Points	Position of the selector			
	NORMAL	ENERGY SAVER	TIMER	
			ON	OFF
9 — 3	NO	NO	YES	NO
9 — 1	NO	NO	YES	YES
9 — 2	NO	YES	NO	NO

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.9 hole.

(4) Checking the Fan Speed Selector

Checking Points	Position of the selector			
	AUTO	HIGH	MED.	LOW
10 — 3	NO	NO	YES	YES
10 — 4	NO	YES	YES	NO

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.10 hole.

(5) Checking the Timer

Checking Points	Position of the selector											
	1	2	3	4	5	6	7	8	9	10	11	12
8 — 4	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES
8 — 3	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
8 — 1	NO	NO	YES	YES	YES	YES	NO	NO	NO	NO	YES	YES
8 — 2	NO	YES	YES	NO	NO	YES	YES	NO	NO	YES	YES	NO

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.8 hole.

(6) Checking the Thermostat

Checking Points	Position of the selector										
	18	19	20	21	22	23	24	25	26	27	28
7 — 4	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
7 — 3	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
7 — 1	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES
7 — 2	NO	NO	YES	YES	NO	NO	YES	YES	NO	NO	YES

NOTE : YES : Continuity , NO : Discontinuity
Enter the positive(+) probe in No.7 hole.

CAUTION:

Do not disassemble the Remote Control Unit.

It is supplied as a complete assembly and is carefully adjusted in the factory by skillful workmanship.
Inexperienced disassembly will cause trouble and malfunction in the unit.

SANYO

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Osaka, Japan
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