

SERVICE & PARTS MANUAL

Wireless type

Models

INDOOR UNIT

MS09EW
MS12EN
MS15EN
MS09EW × 2

OUTDOOR UNIT

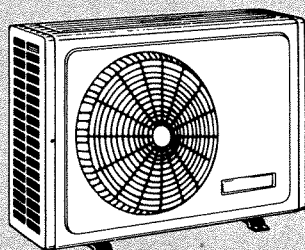
MU09EW
MU12EN
MU15EN
MUM18EW



MS12EN
INDOOR UNIT



LCD wireless
remote controller



MU12EN
OUTDOOR UNIT

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The Slim Line.
From Mitsubishi Electric.

Mr. SLIM

1

CHANGE POINTS

MS-09DW → MS09EW

1. Indoor unit model changed.
2. Compressor changed. KH-122WEV → KH-122WES
3. New model has Auto restart function.

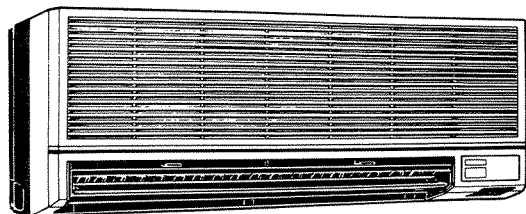
MS-12/15DN → MS12/15EN

1. Indoor front panel changed.
2. Suction line changes from 1/2 O.D. to 5/8 O.D.
3. Compressor of MS15EN changed. RH207NAB → RH-207NFL
4. New model has Auto restart function. Cut the jumper wire to work the function.

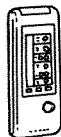
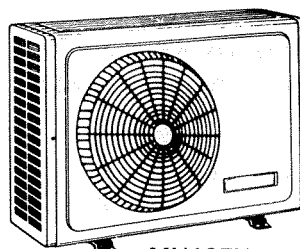
MSM18EW

1. Indoor unit model changed.
2. Compressor changed. KH-122WEV → KH-122WES
3. New model has Auto restart function. Cut the jumper wire to work the function.

- Model indication of wiring diagram and spec. name plate etc. changed.



MS12EN

LCD wireless
remote controller

MU12EN

Models	Cooling Capacity	SEER
MS09EW	8,800Btu/h	10.7
MS12EN	12,300/12,600Btu/h	10.6/10.6
MS15EN	14,300/14,600Btu/h	10.0/10.0
MSM18EW	8,400/8,400×2Btu/h	10.0/10.0×2

1. NEW "I FEEL CONTROL" IN OUR LCD WIRELESS REMOTE CONTROLLER

Mitsubishi Electric's new wireless remote controller incorporates a number of advanced features that provide even greater control and ease-of-use. It has a liquid crystal display which indicates such information as mode, fan speed and temperature selected as well as the timer setting and time remaining. It is also equipped with "I Feel Control", a unique Mitsubishi Electric feature that allows the user to adjust the temperature to exactly the level he or she wants simply by tapping the button that describes present conditions: "Too Cool" "Too Warm", or "Okay". The optimum temperature set this way is then memorized for immediate recall whenever the air conditioner is used again. And what's more, the new controller has been made more compact and easy to handle than even before.

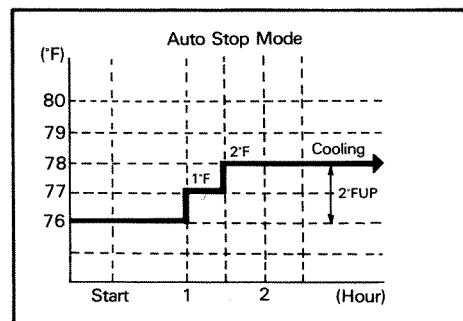
2. A VARIETY OF MICROPROCESSOR-CONTROLLED FUNCTION

Automatic ON/OFF Timer

Convenient timer function includes Auto Start, Auto Stop, both can be set 1~12 hours.

Auto Stop (Night Setback) Mode.

This mode raises the temperature setting by 1°F after one hour, and by another 1°F the next half hour. When 1-1/2 hours have passed, the air conditioner is running at a setting that is 2°F higher, thus preventing excessive cooling.



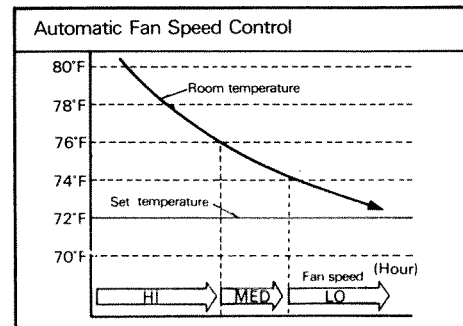
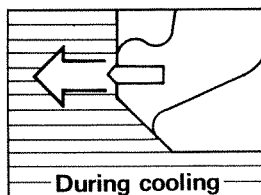
Automatic Fan Speed Control

When there's a large difference between the set temperature and existing room temperature, the fan speed automatically adjusts to HI. As the temperature differential decreases, the Fan speed shifts down automatically to MED and LO. Operation is almost whisper quiet.

Adjustable Change Vane System

Choose the air direction that suits your needs.

Keep it in a horizontal position to achieve uniform airflow.

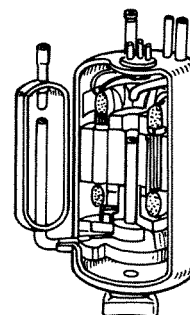


Restart Function

The restart function restarts the equipment when power is restored following an outage. Operation resumes in the mode in which the equipment was running immediately before the outage.

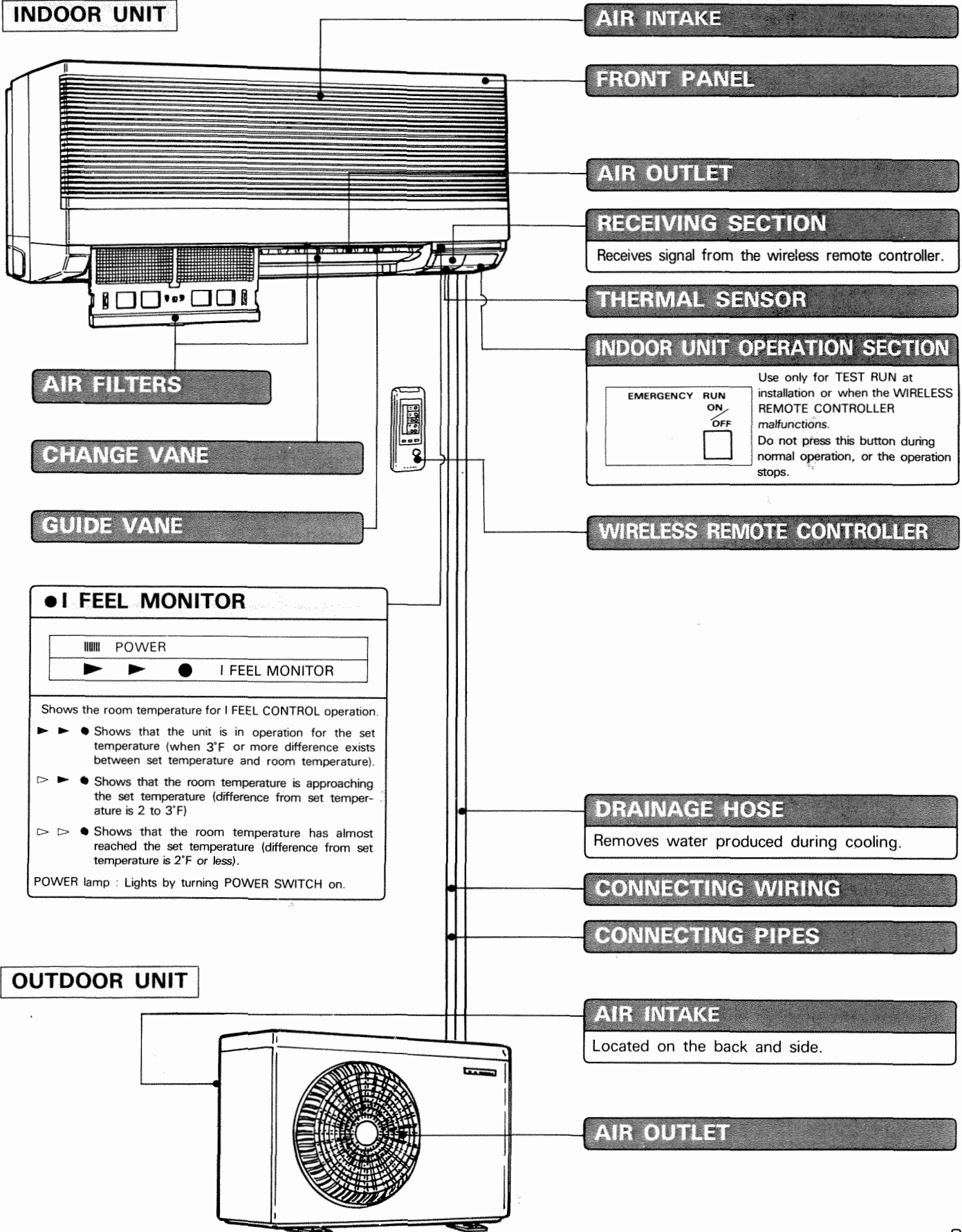
High Performance Rotary Compressor

The advanced design of Mitsubishi Electric's powerful and energy-efficient rotary compressor results in lower operating costs and longer service life.



MS09EW

INDOOR UNIT

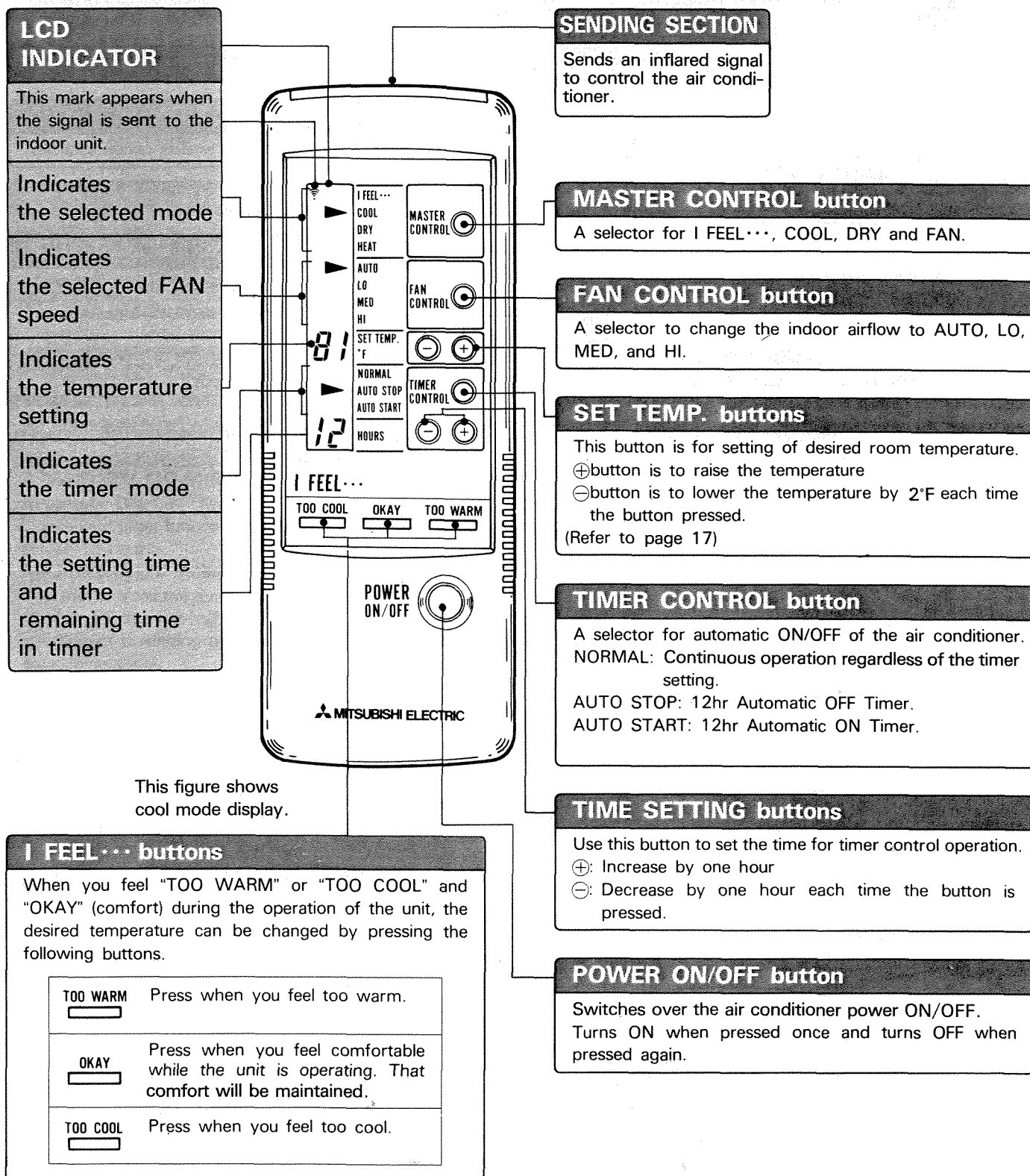


WIRELESS REMOTE CONTROLLER

MS-09/12/15

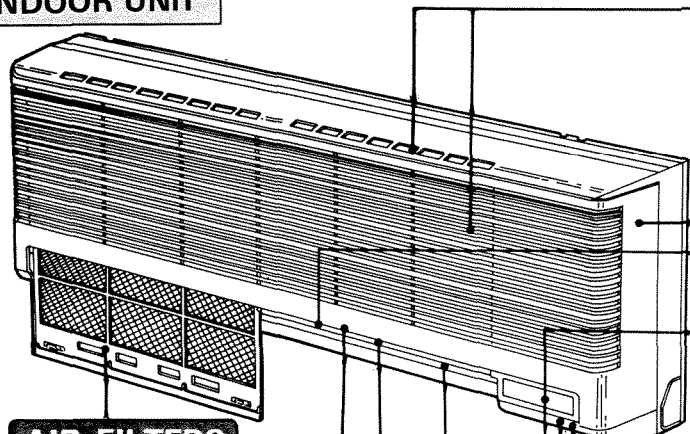
Once the controls are set, the same operation mode can be repeated by simply turning the POWER switch ON.

When batteries are replaced all of the controls memorized should be canceled, and 'I FEEL...' mode is automatically selected.



MS12/15EN

INDOOR UNIT



AIR INTAKE

Provided on the front and top.

FRONT PANEL

AIR OUTLET

INDOOR UNIT DISPLAY SECTION

THERMAL SENSOR

INDOOR UNIT OPERATION SECTION

AIR FILTERS

GUIDE VANE

AUTO VANE

● I FEEL MONITOR

— POWER
I FEEL MONITOR
▶▶●

Shows the room temperature for I FEEL CONTROL operation.

- ▶▶● Shows that the unit is in operation for the set temperature (when 3°F or more difference exists between set temperature and room temperature).
- ▷▶● Shows that the room temperature is approaching the set temperature (difference from set temperature is 2 to 3°F)
- ▷▷● Shows that the room temperature has almost reached the set temperature (difference from set temperature is 2°F or less).

● Indoor unit display section

— POWER

OPERATION lamp
Lights when POWER is turned ON.

EMERGENCY RUN

ON
OFF

Use only for TEST RUN at installation or when the WIRELESS REMOTE CONTROLLER malfunctions.
Do not press this button during normal operation, or the operation stops.

WIRELESS REMOTE CONTROLLER

DRAINAGE HOSE

Removes water produced during cooling.

CONNECTING WIRING

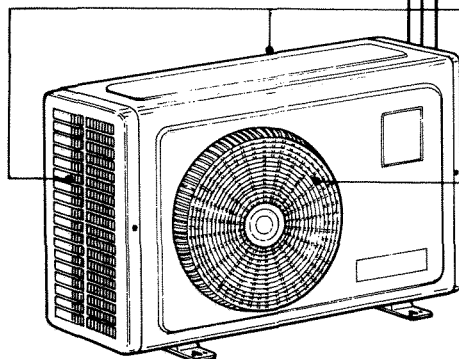
CONNECTING PIPES

AIR INTAKE

Located on the back and side.

AIR OUTLET

OUTDOOR UNIT



3

SPECIFICATIONS

MODELS			MS09EW	MSM18EW	
ITEM		SINGLE		DOUBLE	
Cooling capacity* ¹		Btu/h	8,800	8,400	8,400×2
Power consumption* ¹		W	830	850	1,700
EER(SEER)			10.6(10.7)	9.9(10.0)	9.9(10.0)
INDOOR UNIT			MS09EW	MS09EW×2	
External finish			White		
Power supply		V, Hz, ϕ	115, 60, 1		
Max. fuse size (time delay)		A	15		
Min. ampacity			0.4		
Fan motor		F.L.A	0.3		
Airflow Lo—Me—Hi	Dry	CFM	180—205—265		
	Wet	CFM	159—184—237		
Cond. drain conn. O.D.		in.	5/8		
Dimensions	W	in.	31-1/8		
	D	in.	5-3/8		
	H	in.	14-3/16		
Weight		lb	25		
OUTDOOR UNIT			MU09EW	MUM18EW	
External finish			Munsell 5Y6.5/1		
Power supply		V, Hz, ϕ	115, 60, 1	208/230, 60, 1	
Max. fuse size (time delay)		A	15	15×2	
Min. ampacity			14	14	14+13
Fan motor		F.L.A	0.6		
Compressor	Model		KH122WES	KH122WES×2	
	Winding resistance (at 68°F)Ω		C-R 0.98 C-S 2.21		
		R.L.A	10	10×2	
		L.R.A	37	37×2	
Refrigerant control			Capillary tube		
Dimensions	W	in.	29-15/16	33-1/2	
	D	in.	9-1/16	11-7/16(12-5/8)	
	H	in.	21-1/4	23-7/8	
Weight		lb	73	122	
REMOTE CONTROLLER			Wireless type		
Control voltage (by built-in transformer)			12V DC		
REFRIGERANT PIPING			Not supplied (optional parts)		
Pipe size	Liquid	in.	1/4		
	Gas	in.	3/8		
Connection method	Indoors		Flared		
	Outdoors		Flared		
Between the indoor & outdoor units	Height difference	ft	Max. 25		
	Piping length	ft	Max. 49		

Note*1. Rating conditions (cooling)—Indoor : 80°FDB, 67°FWB, Outdoor : 95°FDB, 75°FWB

Operating Range

		Indoor intake air temperature	Outdoor intake air temperature
Cooling	Maximum	90°FDB, 71°FWB	115°FDB
	Minimum	67°FDB, 57°FWB	67°FDB



ITEM		MODEL	MS12EN	MS15EN
Cooling capacity*1		Btu/h	12,300/12,600	14,300/14,600
Power consumption*1		W	1,170/1,200	1,460/1,490
EER*1(SEER)			10.5/10.5(10.6/10.6)	9.8/9.8(10.0/10.0)
INDOOR UNIT			MS12EN	MS15EN
External finish			White	White
Power supply		V, Hz, ϕ	115, 60, 1	
Max. fuse size (time delay)		A	15	
Min. ampacity		A	0.7	
Fan motor		F.L.A	0.5	
Airflow Lo—Me—Hi	Dry	CFM	279—374—427	
	Wet	CFM	265—357—406	
Cond. drain conn. O.D.		in.	5/8	
Dimensions	W	in.	39-3/8	
	D	in.	7	
	H	in.	14-3/16	
Weight		lb	35	
OUTDOOR UNIT			MU12EN	MU15EN
External finish			Munsell 5Y6.5/1	
Power supply		V, Hz, ϕ	208/230, 60, 1	
Max. fuse size (time delay)		A	15	20
Min. ampacity			11	14
Fan motor		F.L.A	0.5	
Compressor	Model		RH167NAB	RH207NFL
	Winding resistance (at 68°F) Ω		C-R 2.47 C-S 4.62	C-R 1.68 C-S 2.75
	R.L.A		8	10
	L.R.A		29	35
Refrigerant control			Capillary tube	
Dimensions	W	in.	33-1/2	
	D	in.	11-7/16(12-5/8)	
	H	in.	23-7/8	
Weight		lb	99	
REMOTE CONTROLLER			Wireless type	
Control voltage (by built-in transformer)			12V DC	
REFRIGERANT PIPING			Not supplied (optional parts)	
Pipe size	Liquid	in.	1/4	
	Gas	in.	5/8	
Connection method	Indoors		Flared	
	Outdoors		Flared	
Between the indoor & outdoor units	Height difference	ft	Max. 25	
	Piping length	ft	Max. 49	

Notes* 1. Rating conditions (cooling)—Indoor : 80°FDB, 67°FWB, Outdoor : 95°FDB, 75°FWB

Operating Range

		Indoor intake air temperature	Outdoor intake air temperature
Cooling	Maximum	90°FDB, 71°FWB	115°FDB
	Minimum	67°FDB, 57°FWB	67°FDB

1. PERFORMANCE CURVE

NOTE: A point on the curve shows the reference point.

MS09EW

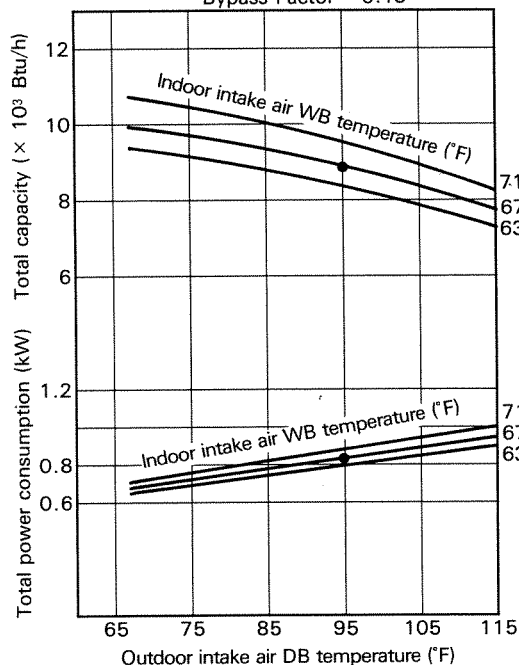
MU09EW

Cooling capacity

SHF at rating condition = 0.67

Airflow = 237CFM

Bypass Factor = 0.13



MS12EN

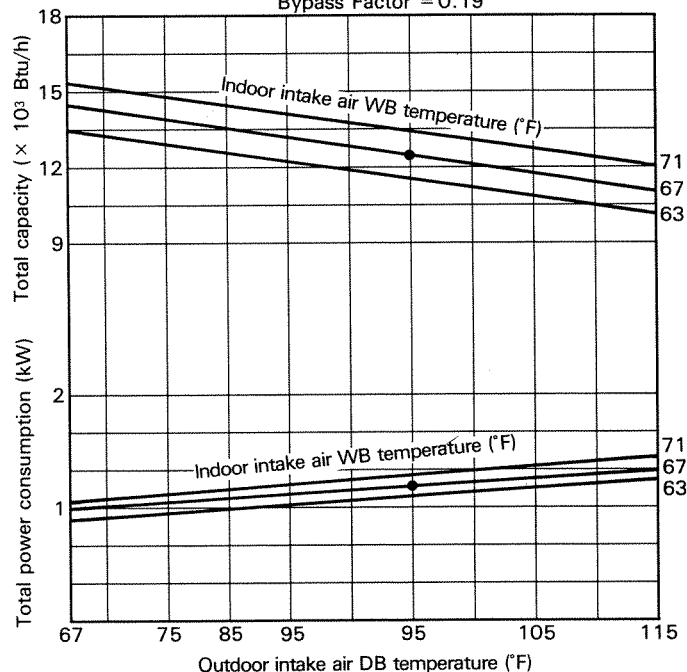
MU12EN

Cooling capacity

SHF at rating condition = 0.71

Airflow = 406CFM

Bypass Factor = 0.19



MS15EN

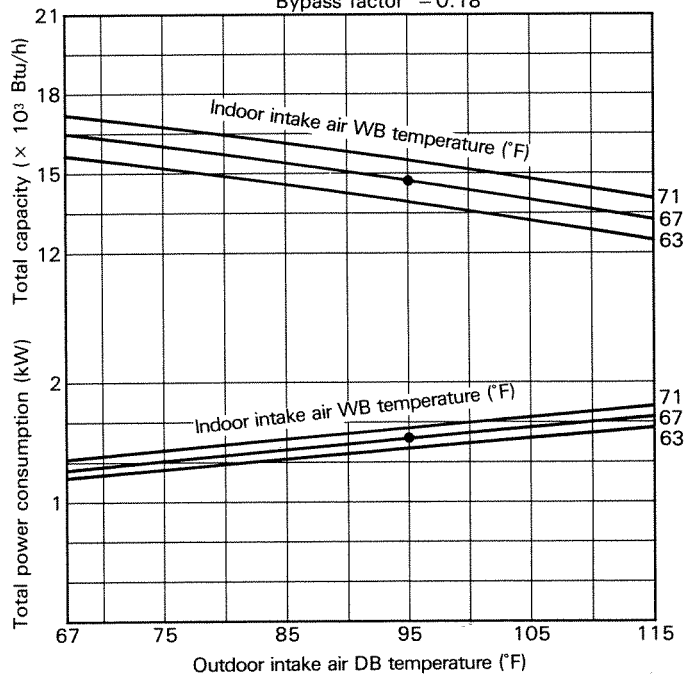
MU15EN

Cooling capacity

SHF at rating condition = 0.67

Airflow = 406CFM

Bypass factor = 0.18

MS09EW $\times$ 2

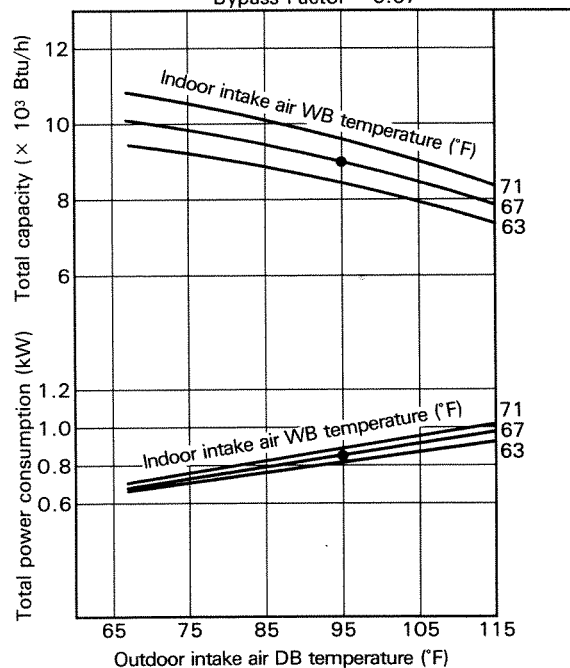
MUM18EW

Cooling capacity

SHF at rating condition = 0.7

Airflow = 237CFM

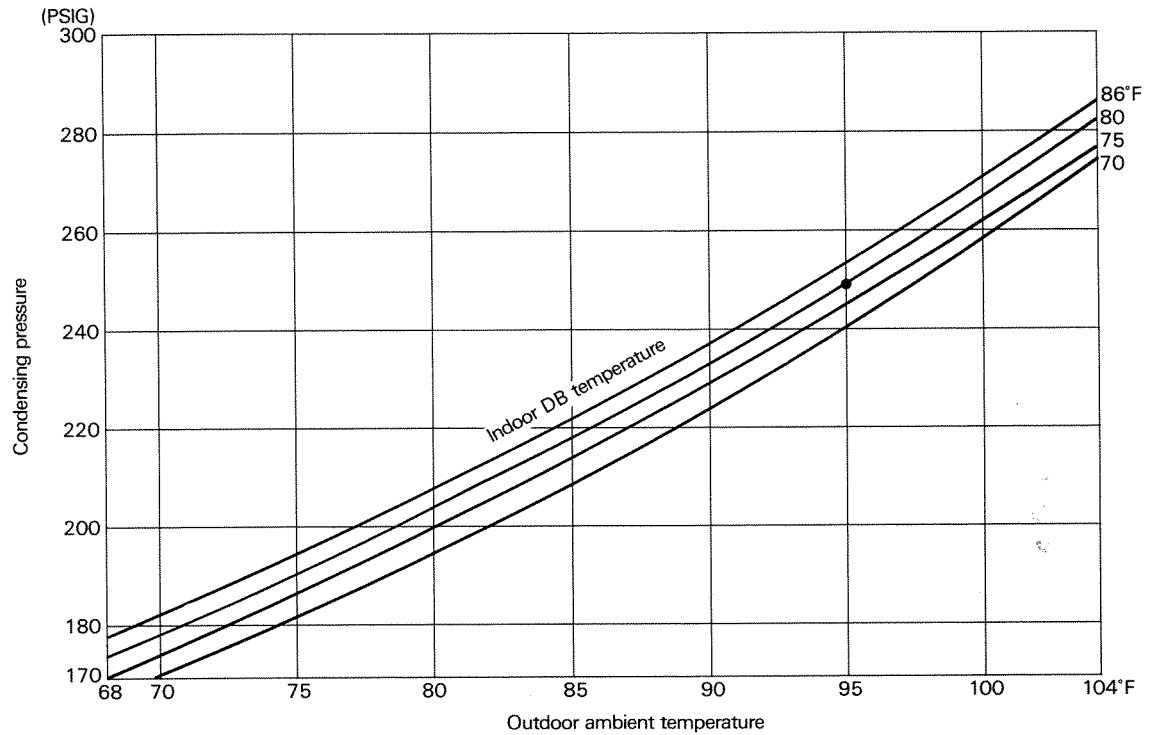
Bypass Factor = 0.07



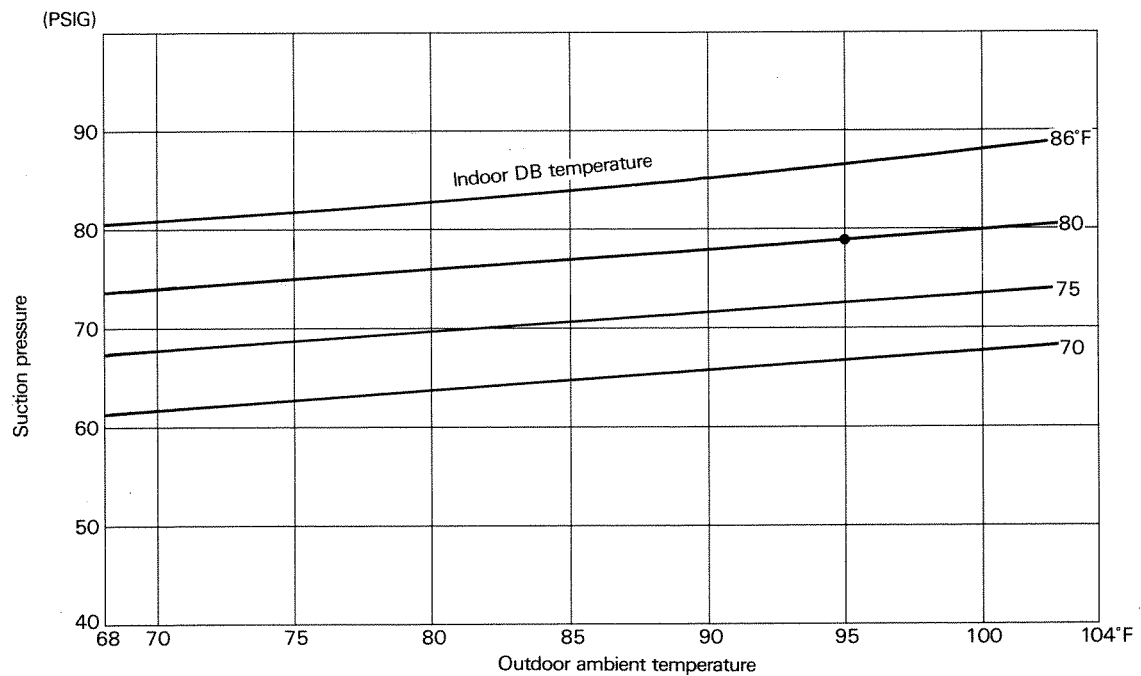
CONDENSING PRESSURE AND SUCTION PRESSURE

Data is based on the condition of indoor humidity 50%. Air flow should be set at HI. A point on the curve shows the reference point.

MU09EW

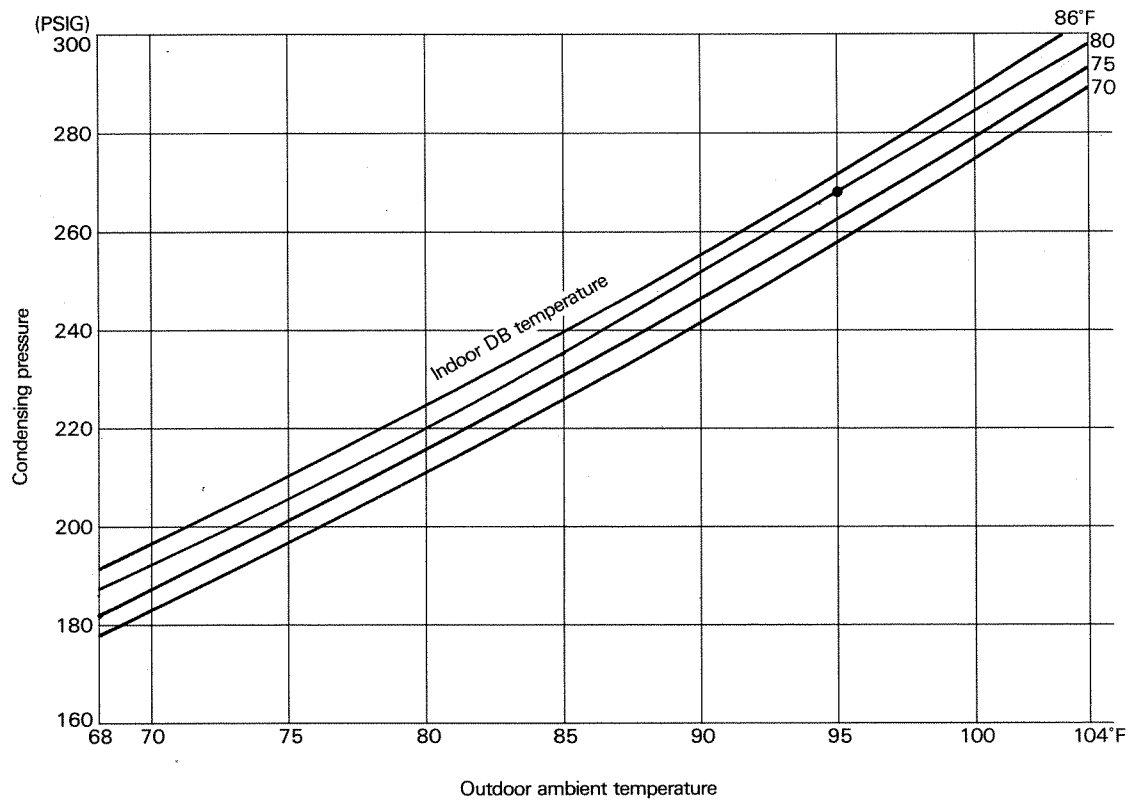


MU09EW

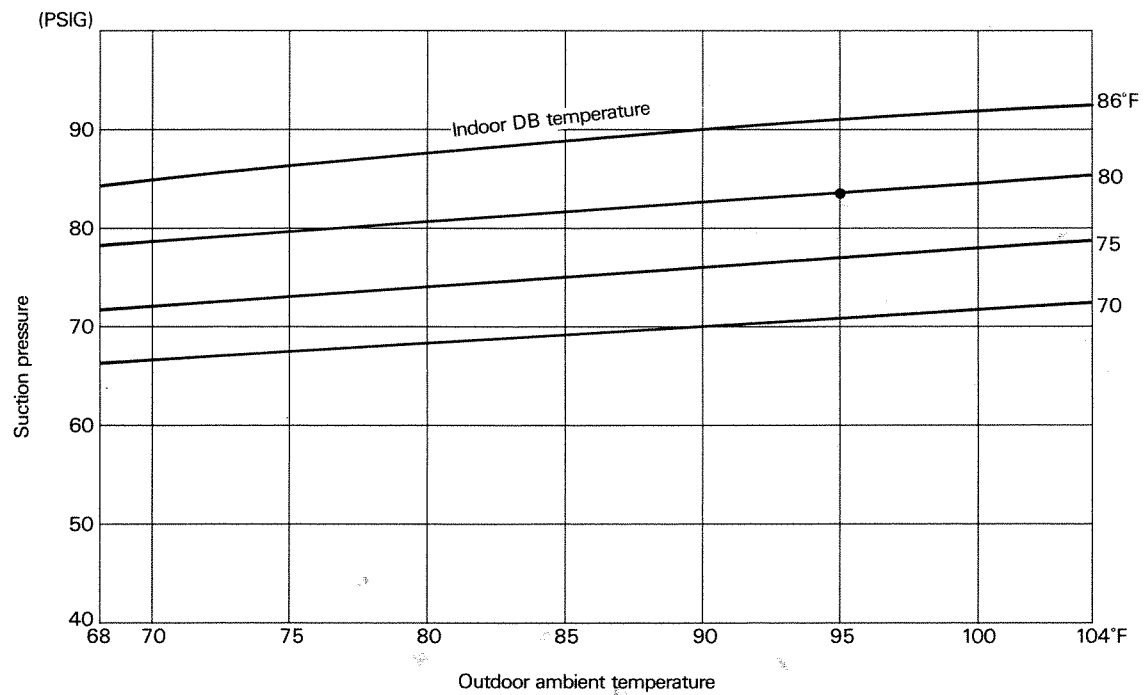


Data is based on the condition of indoor humidity 50%. Air flow should be set at HI. A point on the curve shows the reference point.

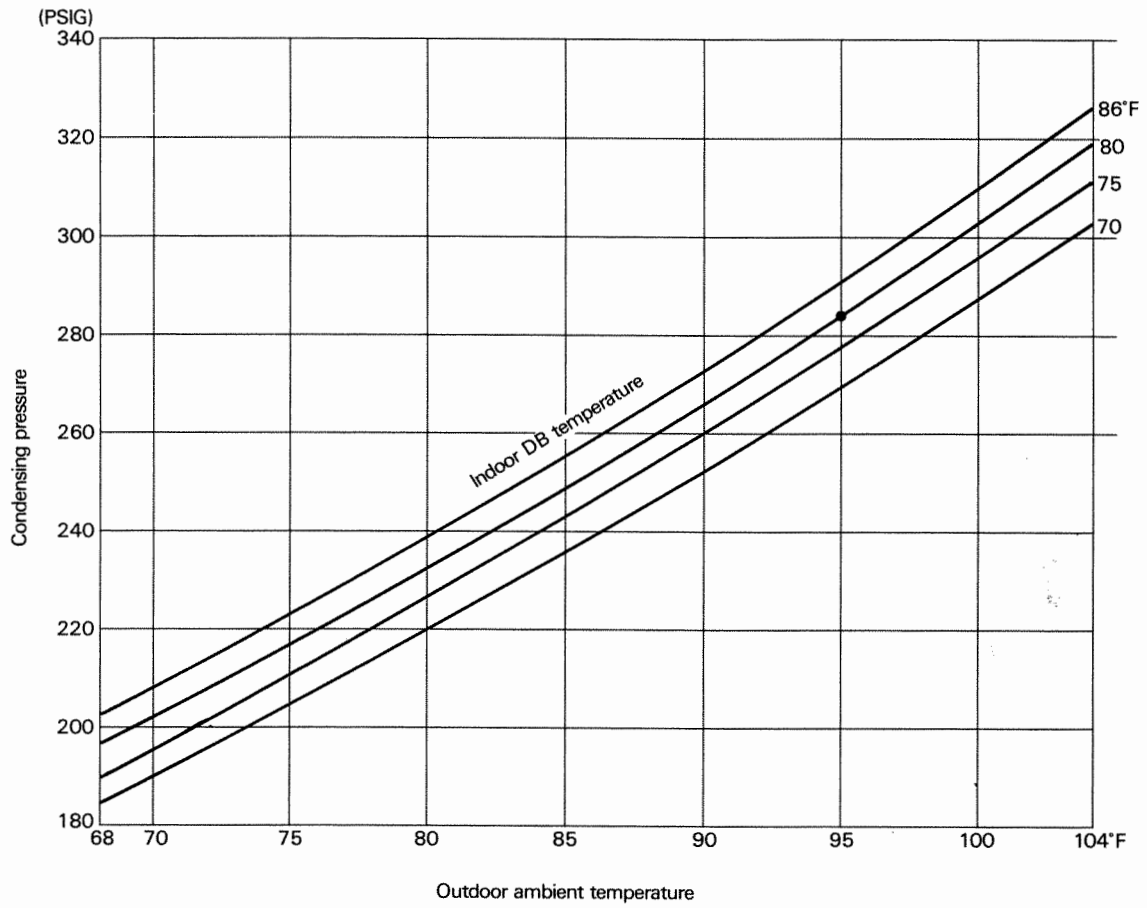
MU12EN



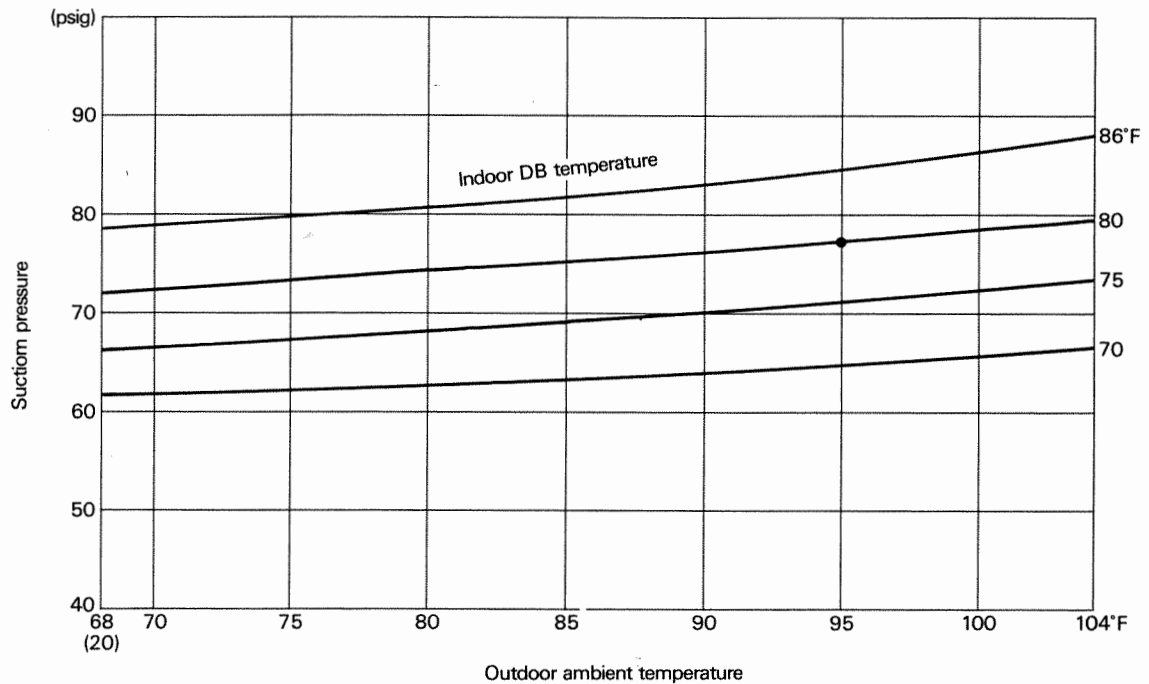
MU12EN



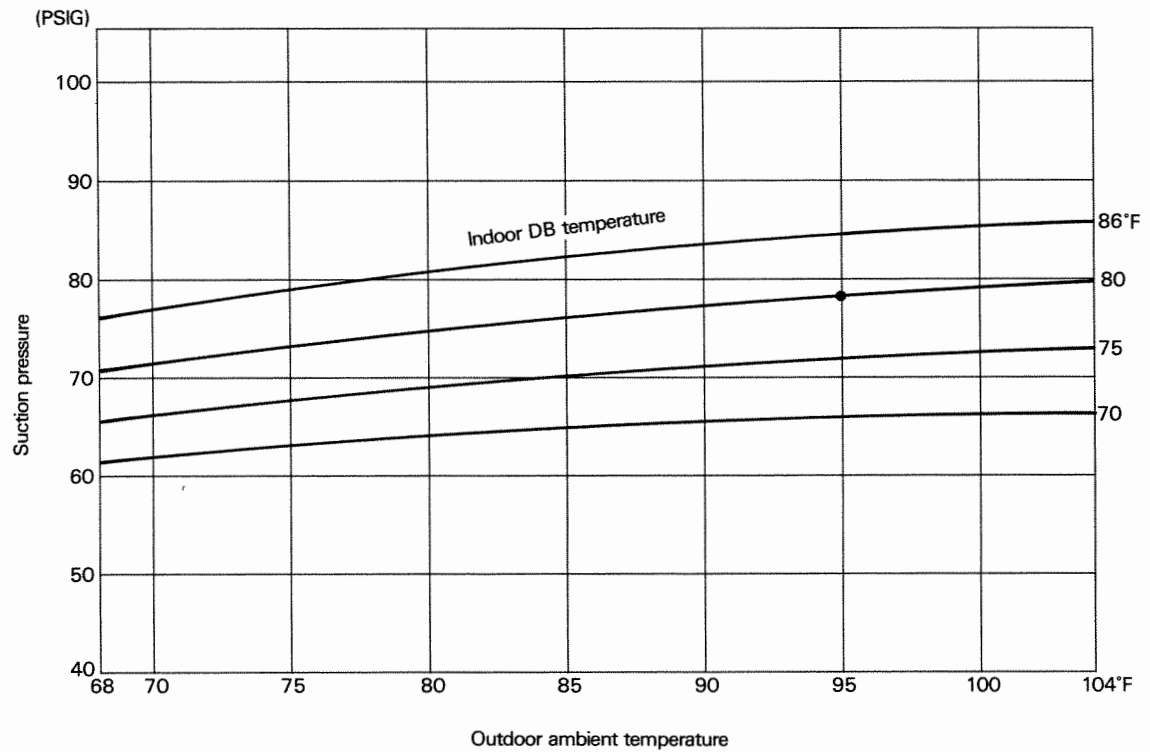
Data is based on the condition of indoor humidity 50%. Air flow should be set at HI. A point on the curve shows the reference point.
MU15EN



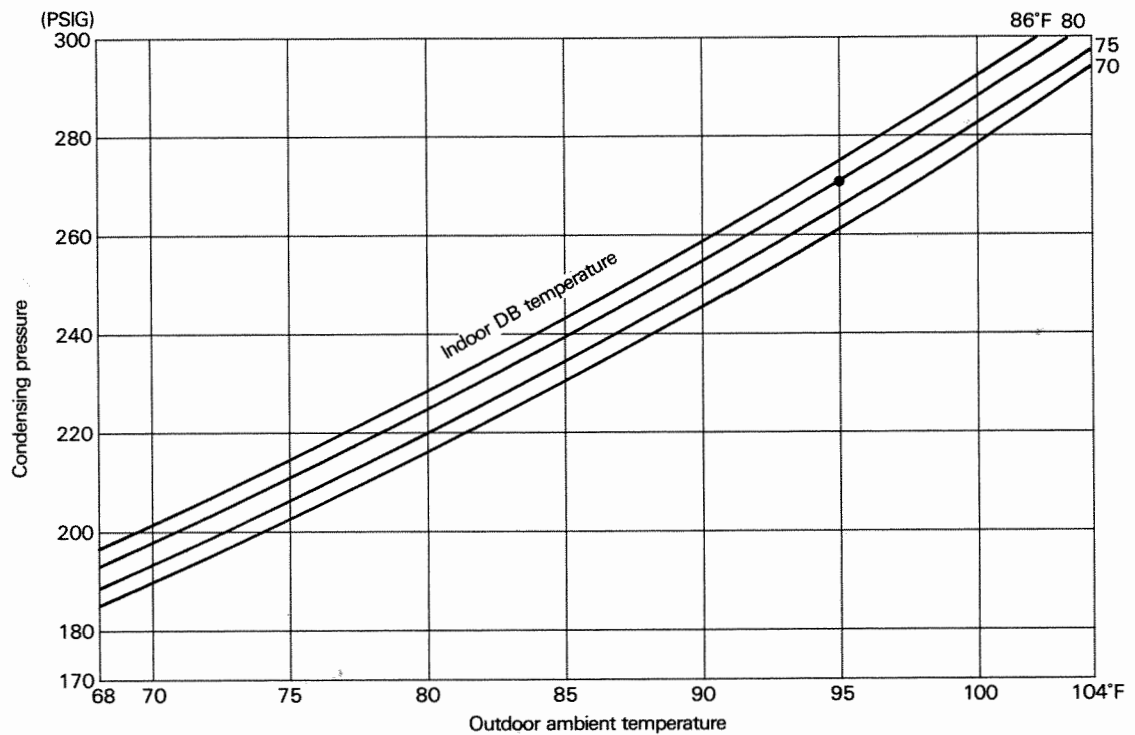
MU15EN



Data is based on the condition of indoor humidity 50%. Air flow should be set at HI. A point on the curve shows the reference point.
MUM18EW



MUM18EW



2. OPERATING RANGE

(1) POWER SUPPLY

	Models	Rating	Guaranteed Voltage
Indoor unit	MS09EW MS12EN MS15EN	115V 60Hz 1 ϕ	Min.103V—Max.127V
Outdoor unit	MU09EW		
	MU12EN MU15EN	208/230V 60Hz 1 ϕ	Min.198V 208V 230V Max.253V
	MUM18EW	208/230V 60Hz 1 ϕ (3 wires)	

(2) OPERATION

Function	Intake air temperature	Indoor		Outdoor	
	Condition	DB(°F)	WB(°F)	DB(°F)	WB(°F)
Cooling	Standard temperature	80	67	95	—
	Maximum temperature	95	71	115	—
	Minimum temperature	67	57	67	—
	Maximum humidity	78%		—	

3. OUTLET AIR SPEED AND COVERAGE RANGE

Model	Function	Airflow (CFM)	Air speed (ft./sec.)	Coverage range (ft)
MS09EW	Dry	265	12.4	18.8
	Wet	237	11.1	16.8
MS12EN	Dry	427	14.3	25.3
	Wet	406	13.6	24.1
MS15EN	Dry	427	14.3	25.3
	Wet	406	13.6	24.1

● The air coverage range is the value up to the position where the air speed is 1 ft/sec. when air is blown out horizontally from the unit properly at the High speed position.

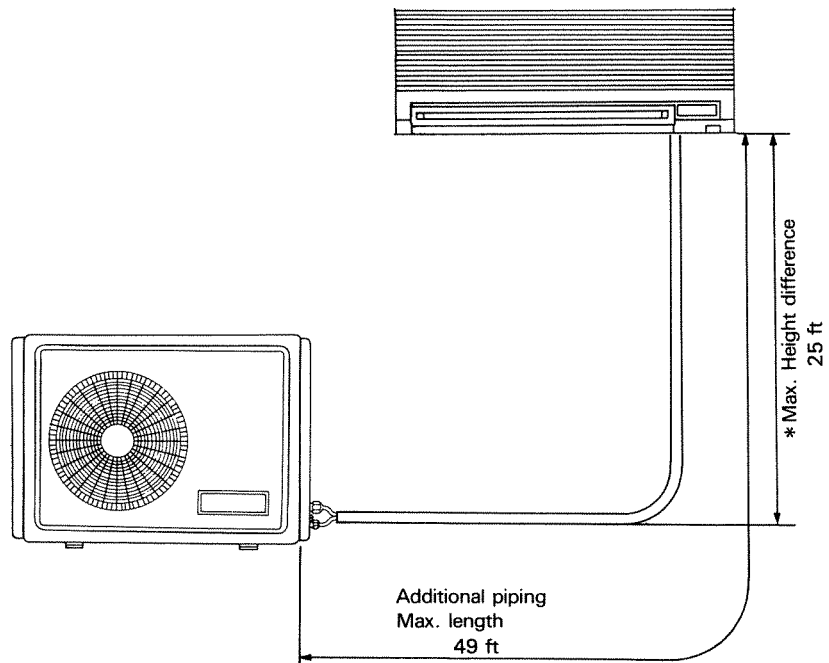
The coverage range should be used only as a general guideline since it varies according to the size of the room and furniture installed inside the room.

4. ADDITIONAL REFRIGERANT CHARGE (R-22(oz))

Model	Outdoor unit precharged (up to 25 ft)	Refrigerant piping length (one way)					
		25 ft	30 ft	33 ft	40 ft	45 ft	49 ft
MS09EW MU09EW	2 lbs 12 oz	0	1	1	2	2	3
MS12EN MU12EN	3 lbs 3 oz						
MS15EN MU15EN	3 lbs 7 oz						
MS09EW × 2 MUM18EW	2 lbs 2 oz × 2						

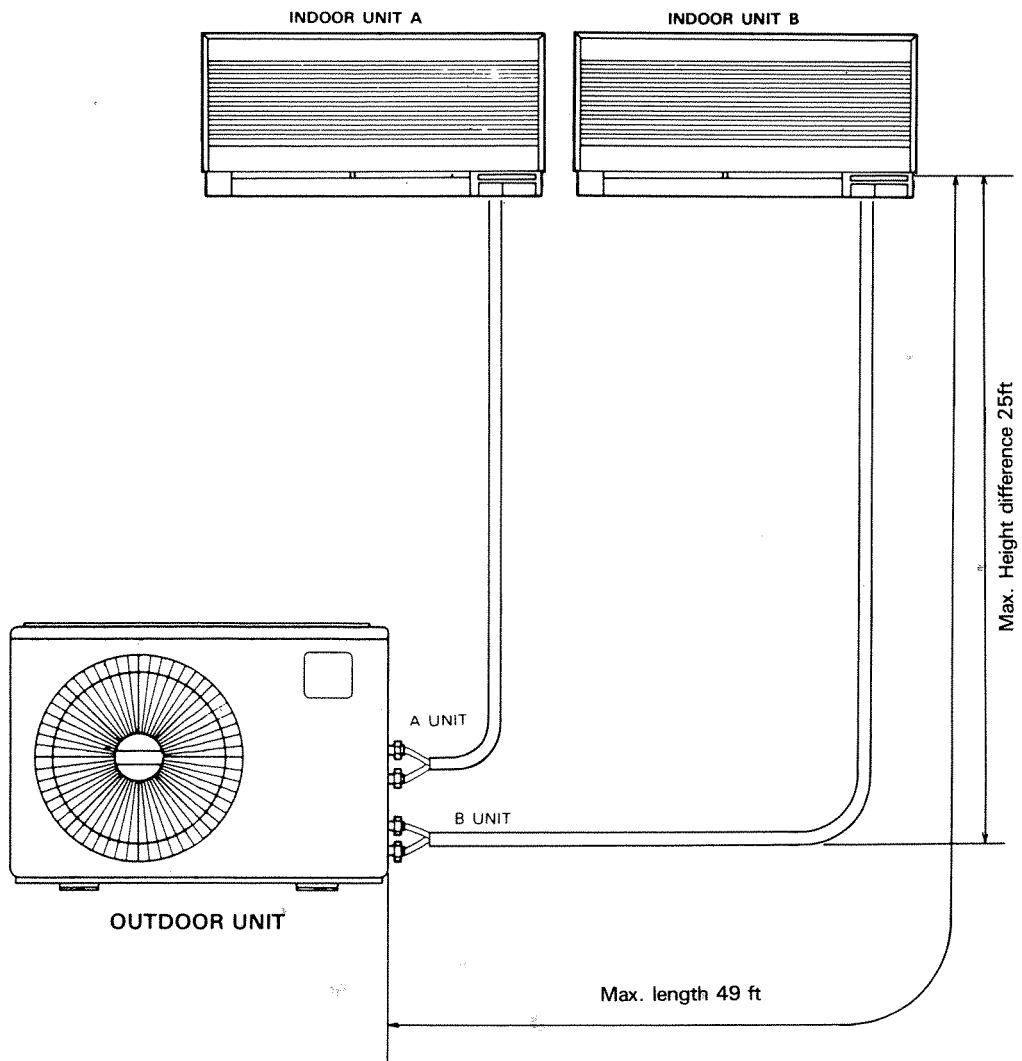
5. MAX. REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE

MS09EW
MS12/15EN



* It does not matter which of two units is higher.

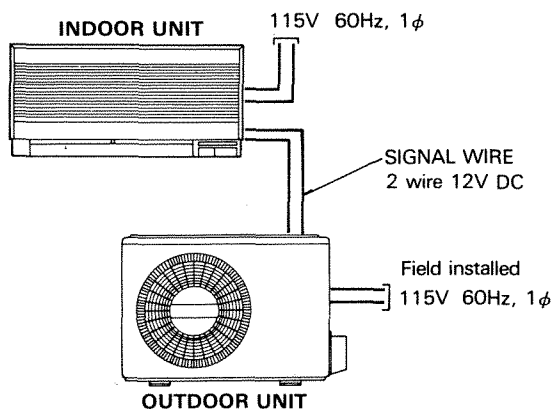
MSM18EW



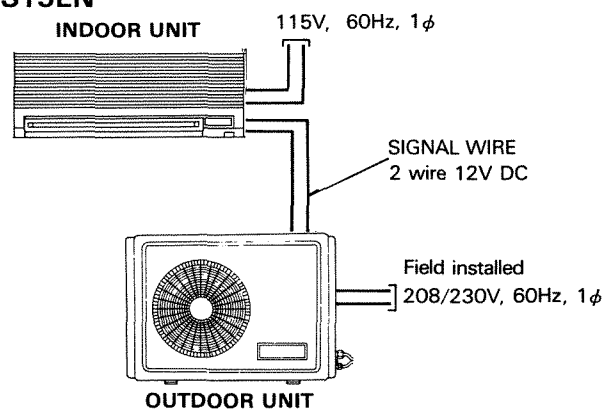
STANDARD OPERATION DATA

Model			MS09EW	MS12EN	MS15EN
	Item	Unit	Cooling	Cooling	Cooling
Total	Capacity	Btu/h	8,800	12,300/12,600	14,300/14,600
	SHF	—	0.67	0.71	0.67
	Input	kW	0.83	1.17/1.20	1.46/1.49
Electrical circuit	Indoor unit		MS09EW	MS12EN	MS15EN
	Power supply (V,Hz,φ)		115 · 60 · 1	115 · 60 · 1	115 · 60 · 1
	Input	kW	0.03	0.05	0.05
	Fan current	A	0.3	0.5	0.5
	Outdoor unit		MU09EW	MU12EN	MU15EN
	Power supply (V,Hz,φ)		115 · 60 · 1	208/230 · 60 · 1	208/230 · 60 · 1
	Input	kW	0.8	1.12/1.15	1.41/1.44
	Comp. current	A	6.6	5.0/4.7	6.5/6.1
	Fan current	A	0.6	0.5	0.5
Refrigerant circuit	Condensing pressure	psi·G	252	269	285
	Suction pressure	psi·G	79	84	77
	Discharge temperature	°F	176	188	182
	Condensing temperature	°F	111	114	120
	Suction temperature	°F	49	59	44
	Comp. shell bottom temp.	°F	159	172	173
	Ref. pipe length	ft	25	25	25
	Refrigerant charge	—	2lbs 12oz	3lbs 3oz	3lbs 7oz
Indoor side	Intake air temperature	DB	°F	80	80
		WB	°F	67	67
	Discharge air temperature	DB	°F	56	57
		WB	°F	55	55
	Fan speed	rpm	1,430	1,530	1,530
Outdoor side	Airflow (Hi)		CFM	237	406
	Intake air temperature	DB	°F	95	95
		WB	°F	—	—
	Fan speed	rpm	740	910	910
	Airflow	CFM	920	1,270	1,270

POWER SUPPLY MS09EW



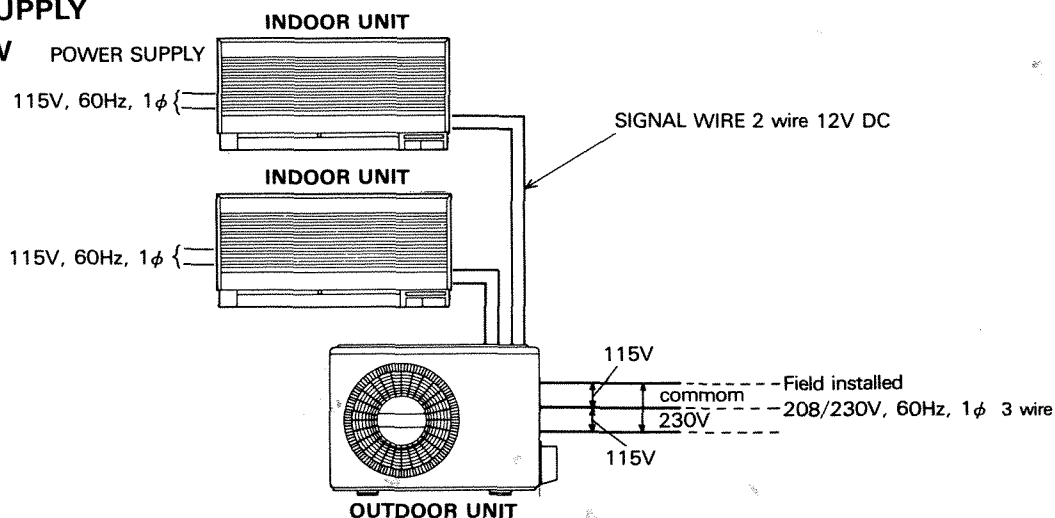
MS12EN MS15EN



Model			MSM18EW	
			Single	Double
Item		Unit	Cooling	
Total	Capacity	Btu/h	8,400	8,400×2
	SHF	—	0.7	0.7
	Input	kW	0.85	1.70
Electrical circuit	Indoor unit model		MS09EW	
	Power supply (V,Hz,φ)		115・60・1	
	Input	kW	0.03×2	
	Fan current	A	0.3×2	
	Outdoor unit model		MUM18EW	
	Power supply (V,Hz,φ)		208/230・60・1(3-wire)	
	Input	kW	0.82	1.64
	Comp. current	A	6.5	7.2×2
	Fan current	A	1.0	
Refrigerant circuit	Condensing pressure	psi・G	245	270
	Suction pressure	psi・G	76	79
	Discharge temperature	°F	188	184
	Condensing temperature	°F	109	119
	Suction temperature	°F	63	50
	Comp. shell bottom temp.	°F	166	
	Ref. pipe length	ft	25	
	Refrigerant charge	—	2lbs 2oz×2	
Indoor side	Intake air temperature	DB	°F	80
		WB	°F	67
	Discharge air temperature	DB	°F	56
		WB	°F	55
	Fan speed	rpm	1,430	
Outdoor side	Airflow (Hi)		CFM	
	Intake air temperature		DB	°F
			WB	°F
	Fan speed		rpm	900
	Airflow		CFM	1,150

POWER SUPPLY

MSM18EW

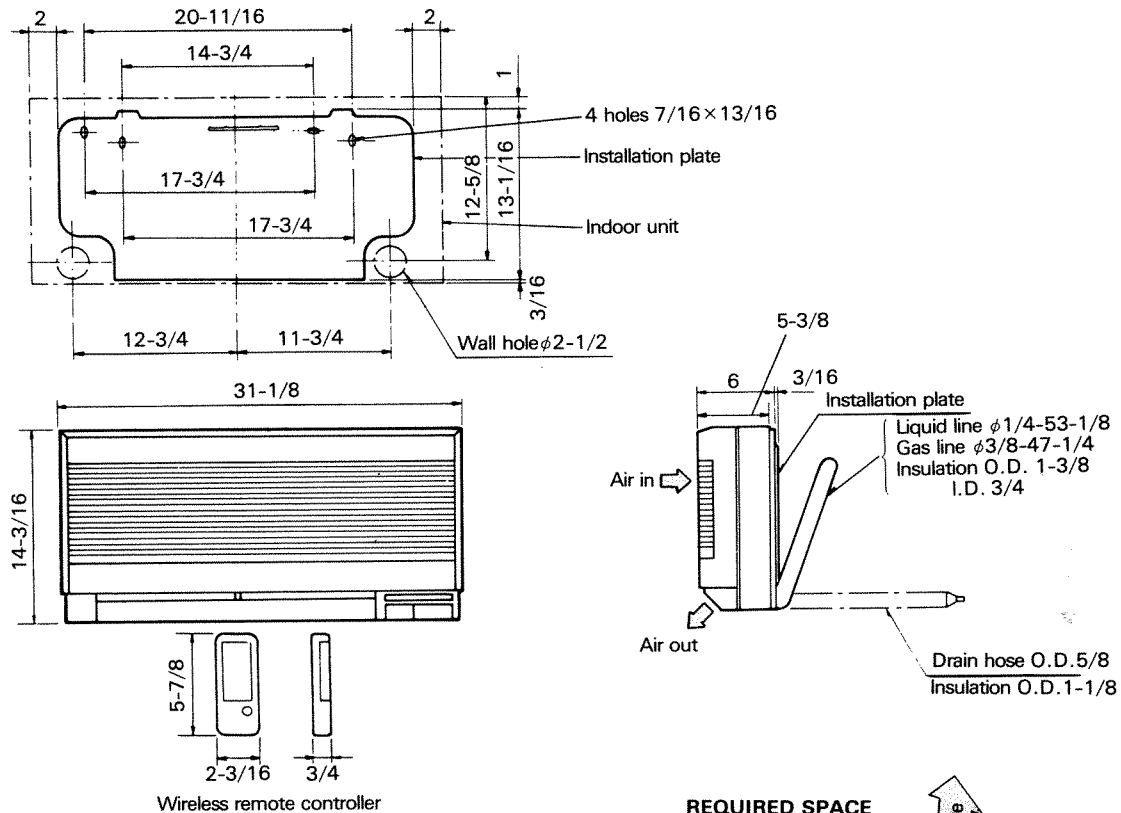


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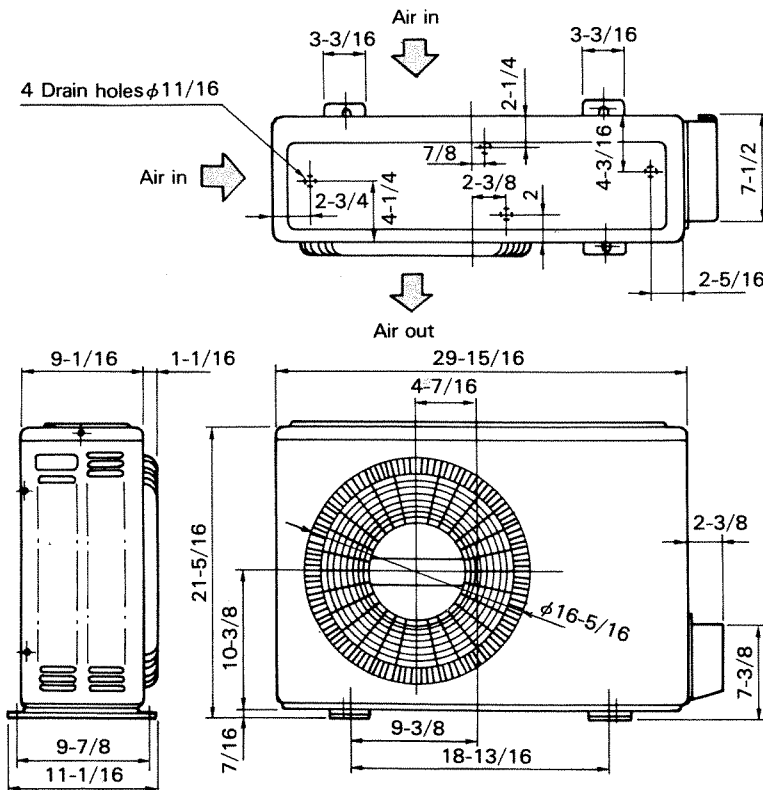
OUTLINES AND DIMENSIONS

MS09EW INDOOR UNIT

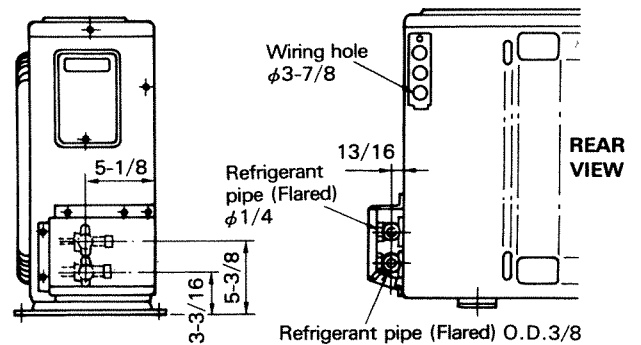
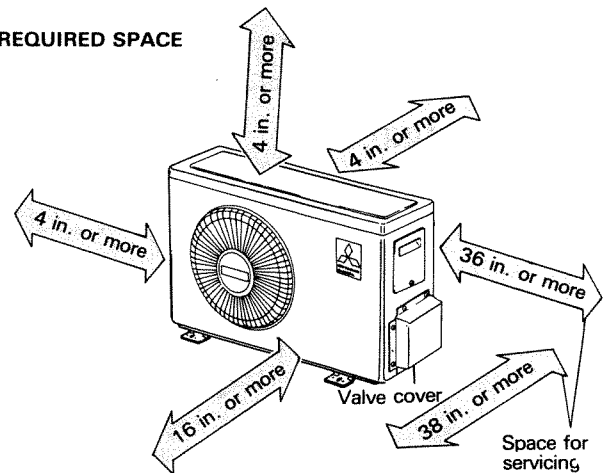
Unit : inch



OUTDOOR UNIT

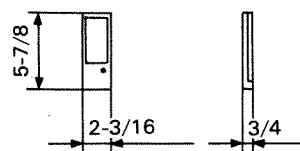
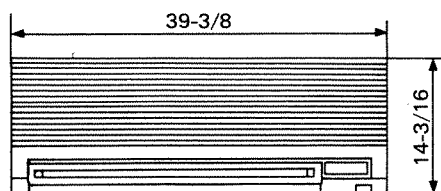


REQUIRED SPACE



Note : The symbol ϕ indicates diameter.

Unit : inch



OUTDOOR UNIT

Technical drawing of the outdoor unit showing front and side views with dimensions and labels.

Front View Dimensions:

- Top: 11-7/16, 1/4
- Left: 23-7/8, 11-1/2, 3/4
- Bottom: 12-7/32, 5/8
- Right: 1-3/16, 1-5/16, 1-1/4
- Center: 19-11/16
- Internal: 5-1/4

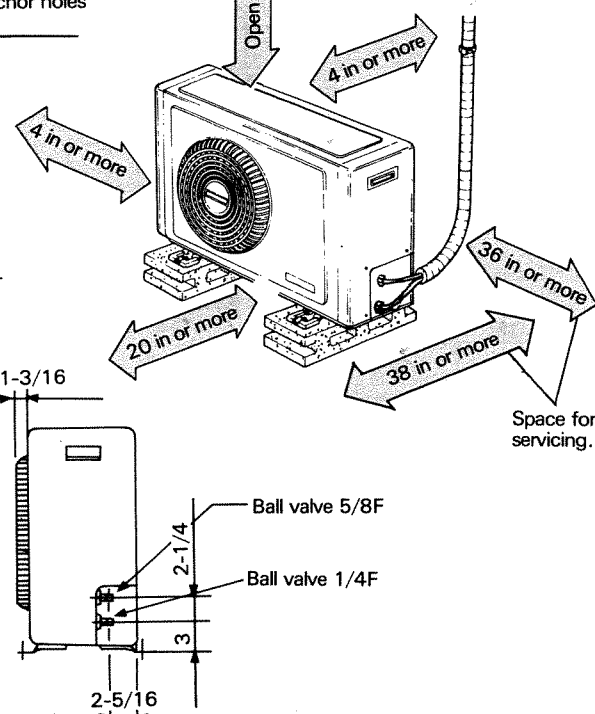
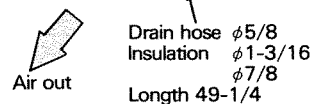
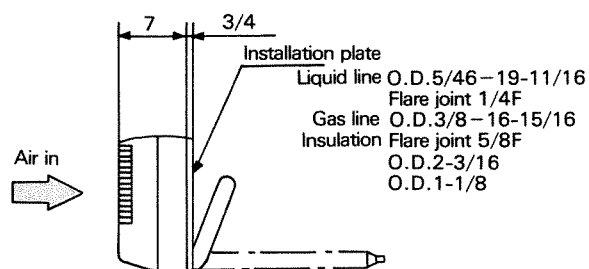
Side View Dimensions:

- Top: 2-1/4, 2, 1-3/8, 3-16/9, 2-1/8
- Left: 6-5/8, 4 Drain holes 5/8
- Right: 3-1/4, 33-1/2, 1-3/16
- Bottom: 3-1/4

Labels and Notes:

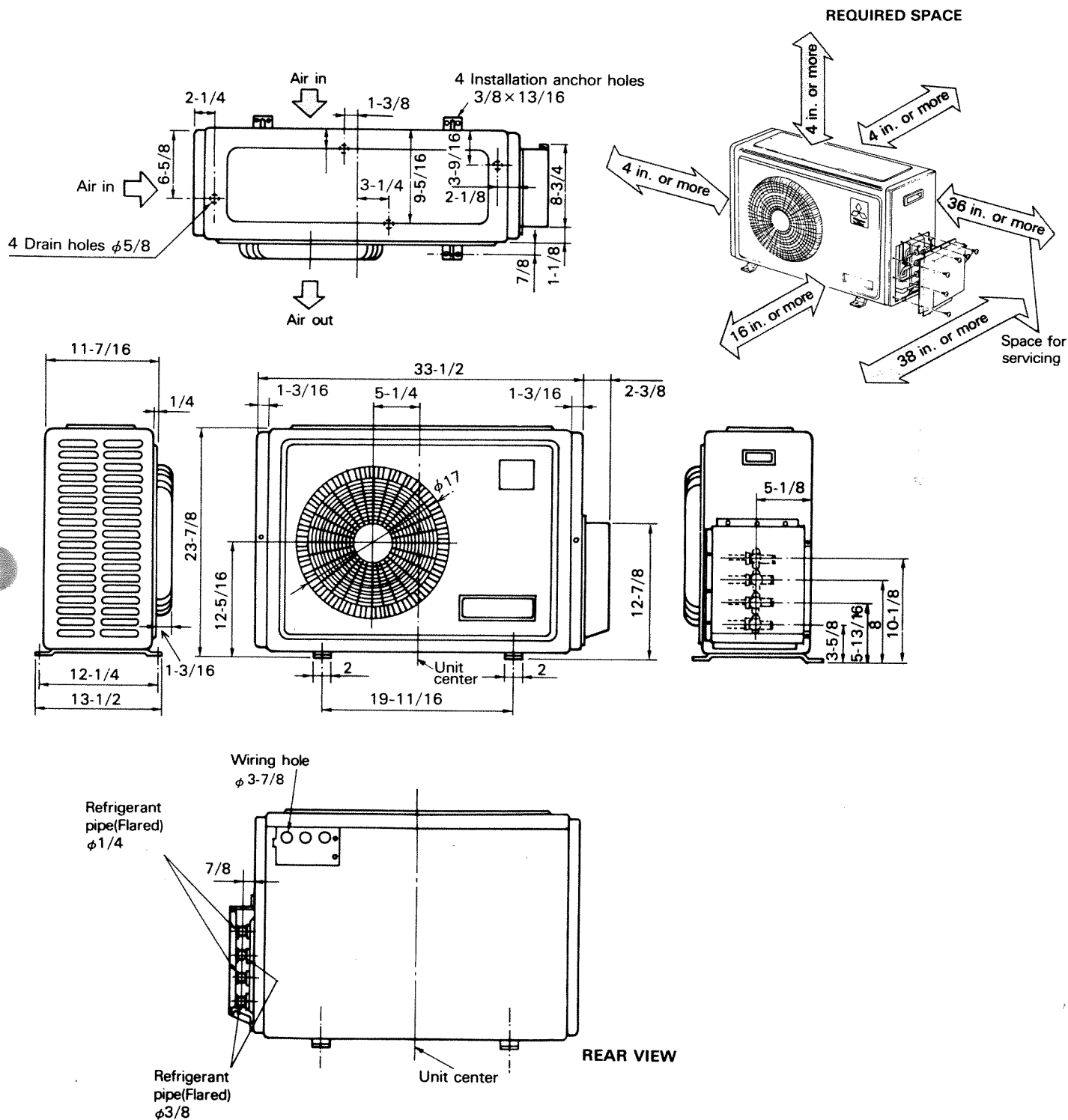
- Air in (top and left)
- Air out (bottom center)
- 4 Installation anchor holes 3/8 x 13/16
- Wiring hole $\phi 3-7/8$
- Unit center
- $\phi 17$ (fan diameter)
- 4 in or more (arrow pointing right)

Diagram of a rectangular box with dimensions: 4 in or more (width), 4-3/8 in or more (length), and 2 in or more (height).



MODEL:MUM-18EW
OUTDOOR UNIT

Unit : inch

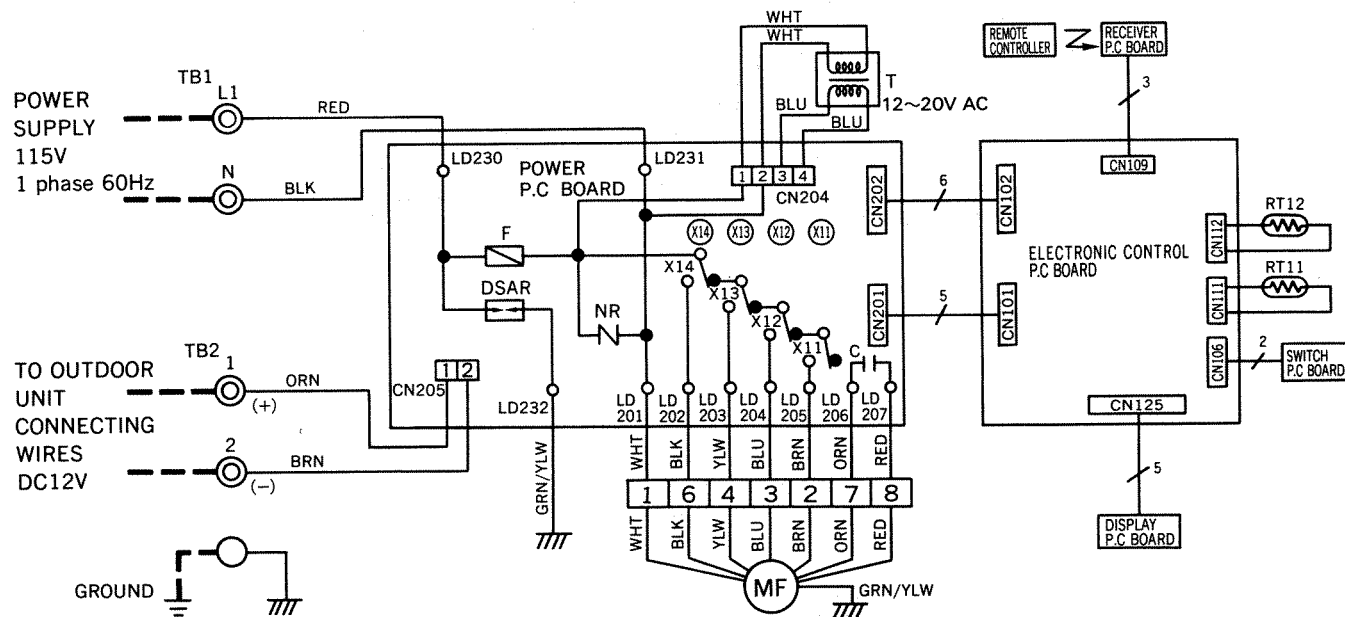


NOTE : The symbol ϕ indicates diameter.

WIRING DIAGRAM

INDOOR

MODEL MS09EW WIRING DIAGRAM



SYMBOL	NAME	SYMBOL	NAME
C	INDOOR FAN CAPACITOR	RT11	ROOM TEMPERATURE THERMISTOR
DSAR	SURGE ABSORBER	RT12	INDOOR COIL THERMISTOR
F	FUSE (2A)	T	TRANSFORMER
MF	INDOOR FAN MOTOR (INNER THERMOSTAT)	TB1,2	INDOOR TERMINAL BLOCK
NR	VARISTOR	X11~14	INDOOR FAN MOTOR RELAY

NOTES :

1. For outdoor electric wiring refer to the outdoor unit electric wiring diagram.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.

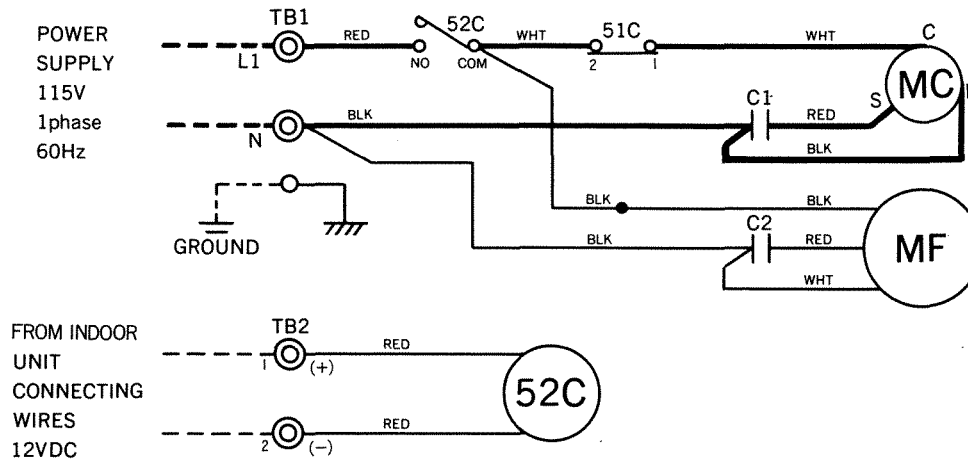
⊙ : Terminal block,

--	--	--

 : Connector.

OUTDOOR

MODEL MU09EW WIRING DIAGRAM

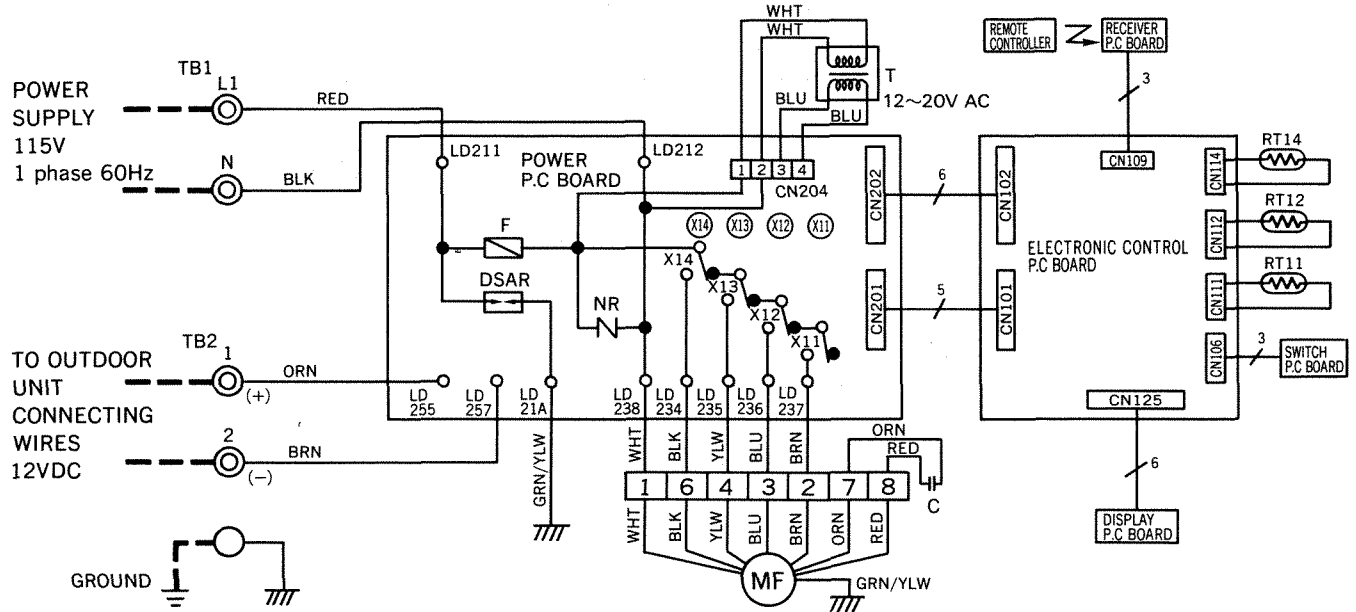


SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR	TB1,2	TERMINAL BLOCK
C2	OUTDOOR FAN MOTOR CAPACITOR	51C	OVERCURRENT RELAY
MC	COMPRESSOR	52C	CONTACTOR
MF	OUTDOOR FAN MOTOR (INNER THERMOSTAT)		

NOTE : Use copper conductors only (For field wiring).

INDOOR

MODELS MS12EN MS15EN WIRING DIAGRAM



SYMBOL	NAME	SYMBOL	NAME
C	INDOOR FAN CAPACITOR	RT11	ROOM TEMPERATURE THERMISTOR
DSAR	SURGE ABSORBER	RT12, 14	INDOOR COIL THERMISTOR
F	FUSE (2A)	T	TRANSFORMER
MF	INDOOR FAN MOTOR	TB1,2	INDOOR TERMINAL BLOCK
NR	VARISTOR	X11~14	INDOOR FAN MOTOR RELAY

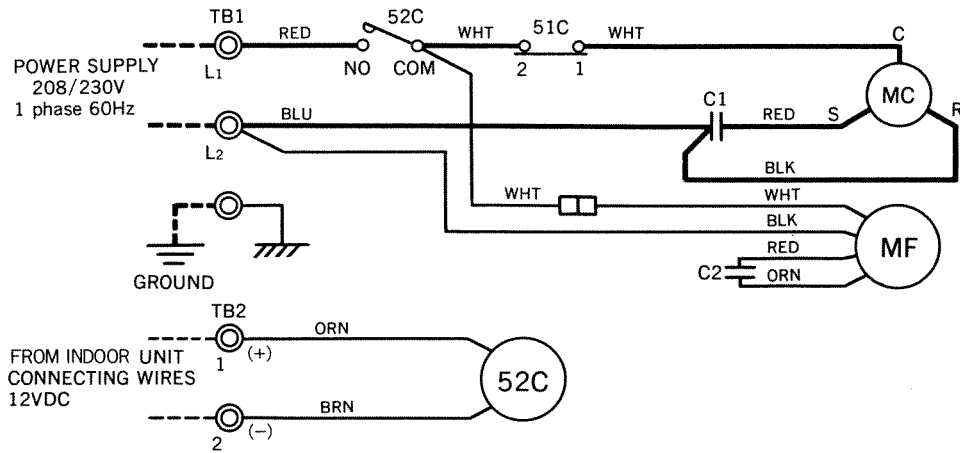
NOTES :

1. For outdoor electric wiring refer to the outdoor unit electric wiring diagram.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.

◎ : Terminal block, □ : Connector.

OUTDOOR

MODEL MU12EN WIRING DIAGRAM

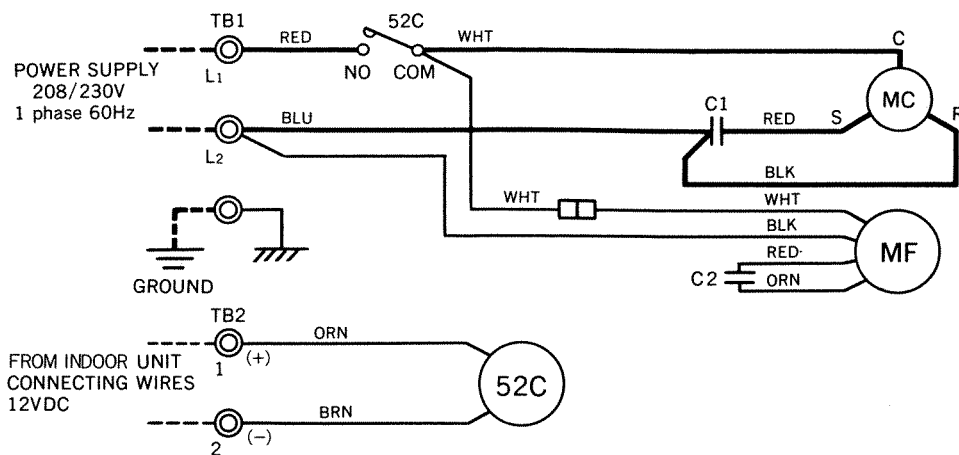


SYMBOL	NAME	SYMBOL	NAME
C61	COMPRESSOR CAPACITOR	TB1,2	OUTDOOR TERMINAL BLOCK
C65	OUTDOOR FAN CAPACITOR	51C	OVERCURRENT RELAY
MC	COMPRESSOR	52C	CONTACTOR
MF	OUTDOOR FAN MOTOR (INNER THERMOSTAT)		

NOTE : Use copper conductors only (For field wiring).

OUTDOOR

MODEL MU15EN WIRING DIAGRAM

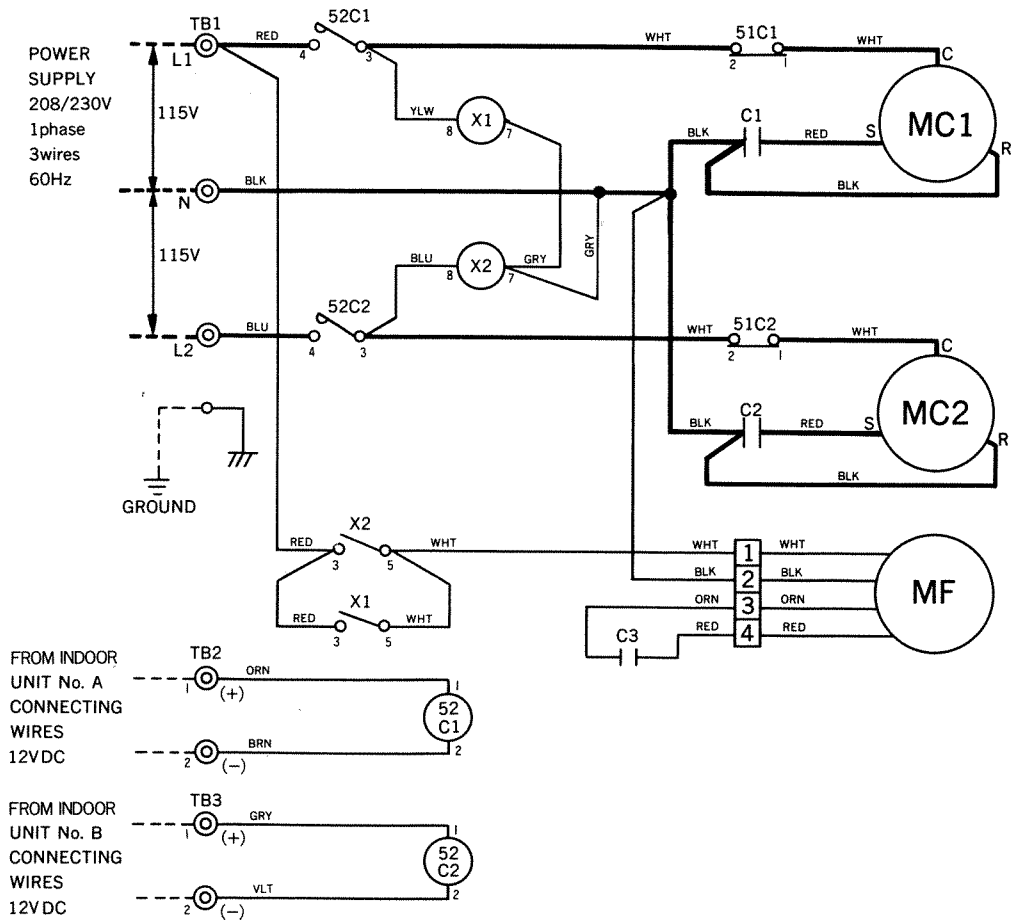


SYMBOL	NAME	SYMBOL	NAME
C61	COMPRESSOR CAPACITOR	MF	OUTDOOR FAN MOTOR (INNER THERMOSTAT)
C65	OUTDOOR FAN CAPACITOR	TB1,2	OUTDOOR TERMINAL BLOCK
MC	COMPRESSOR (INNER THERMOSTAT)	52C	CONTACTOR

NOTE : Use copper conductors only (For field wiring).

OUTDOOR

MODEL MUM18EW WIRING DIAGRAM



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1,2	COMPRESSOR CAPACITOR	MF	OUTDOOR FAN MOTOR (INNER THERMOSTAT)	51C1,2	OVERCURRENT RELAY
C3	OUTDOOR FAN MOTOR CAPACITOR	TB1~3	TERMINAL BLOCK	52C1,2	CONTACTOR
MC1,2	COMPRESSOR	X1,2	OUTDOOR FAN RELAY		

NOTES :

1. Use copper conductors only. (For field wiring)

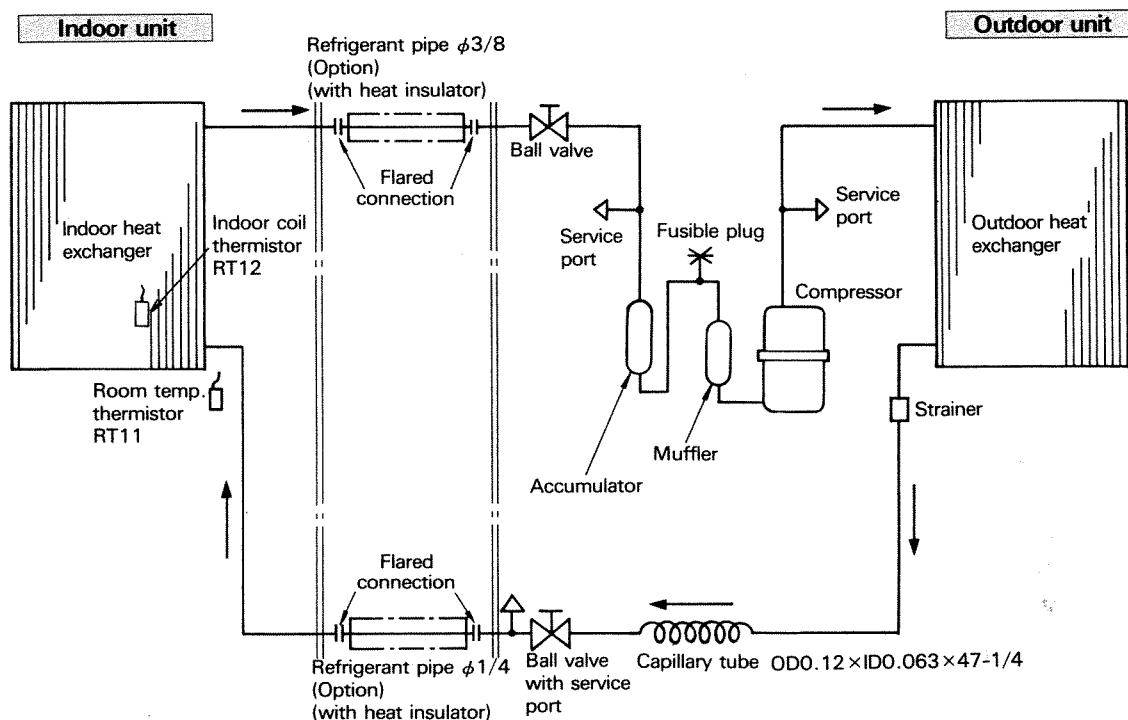
2. Symbols below indicate.

⊙ : Terminal block, □ : Connector.

7 REFRIGERANT SYSTEM DIAGRAM

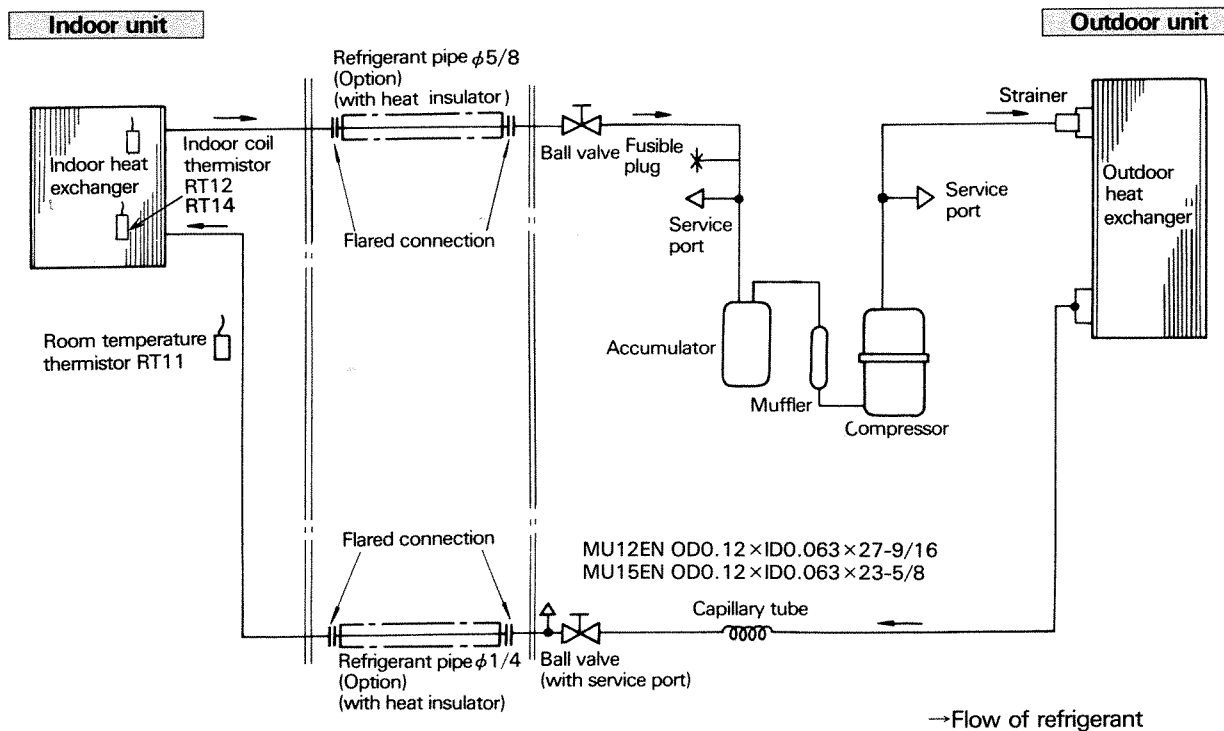
MS09EW/MU09EW

Unit: inch



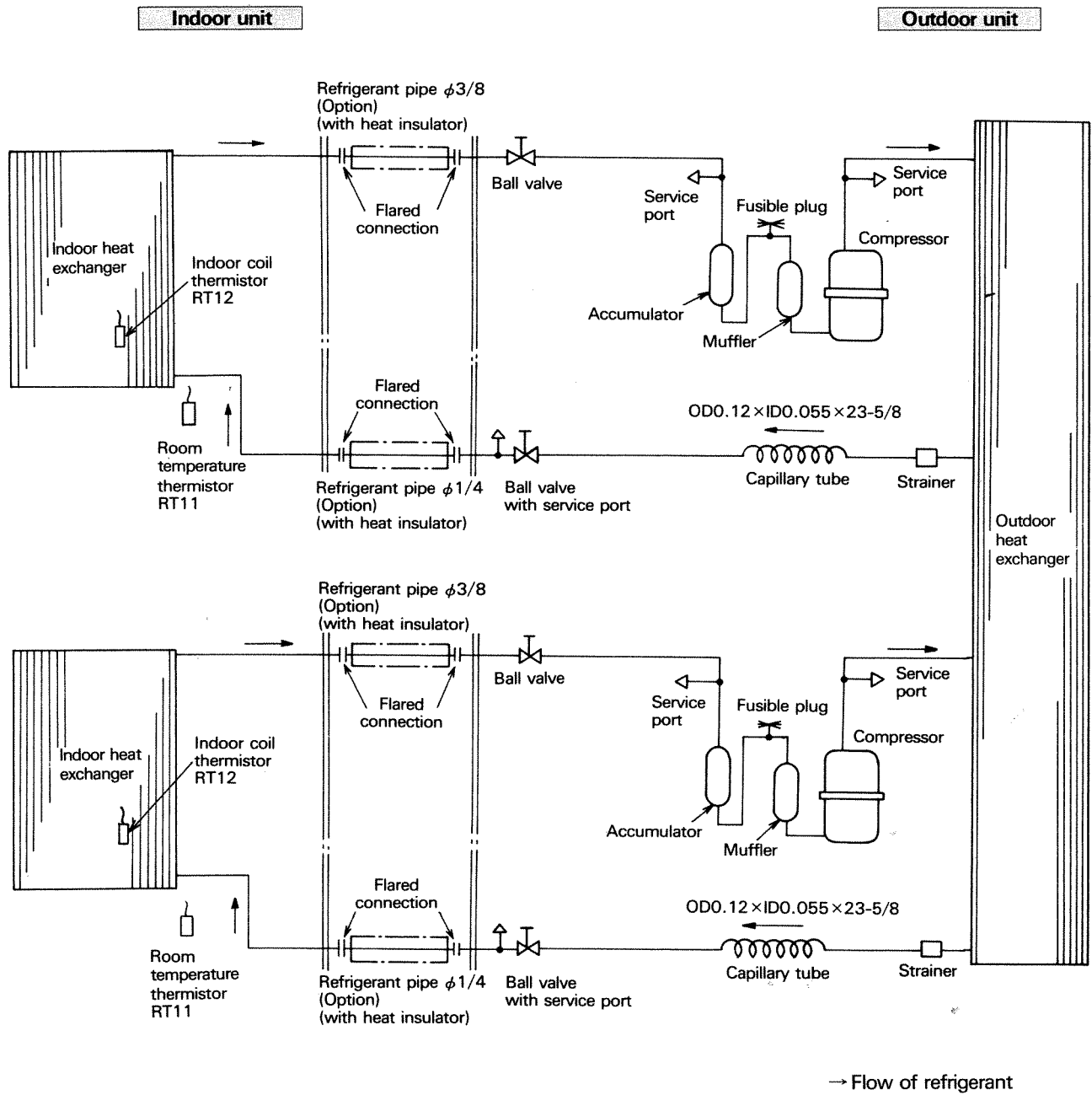
MS12EN- U1/MU12EN- U1

MS15EN- U1/MU15EN- U1

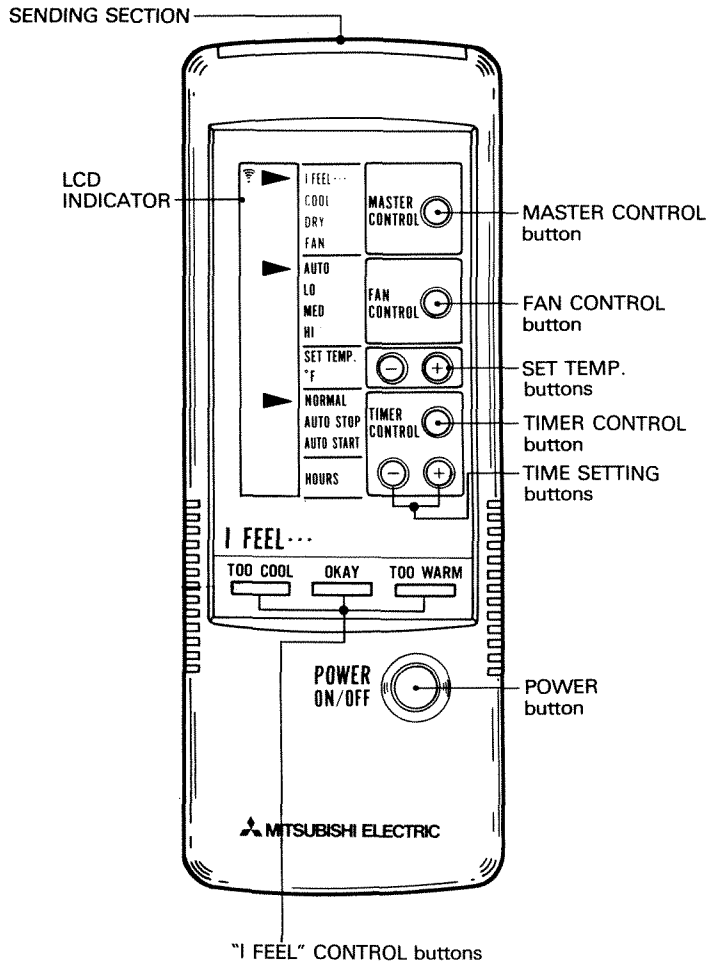


→Flow of refrigerant

NOTE: The symbol ϕ indicates diameter.

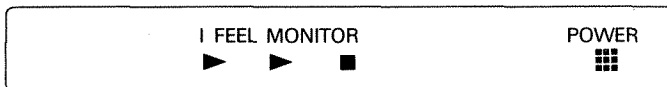


Wireless Remote Controller



This figure shows
I FEEL CONTROL mode display.

INDOOR UNIT DISPLAY SECTION



Once the controls are set, the same operation mode can be repeated by simply turning the POWER switch ON. Indoor unit receives the signal with a beep tone. When the system turns off, "3 min. time-delay function" will operate to protect system from over load and compressor will not restart for 3 minutes.

1. "I FEEL CONTROL" operation

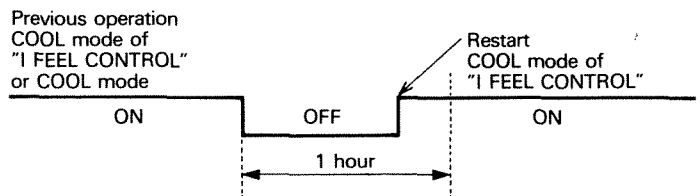
- (1) Press POWER button on the remote controller. Power lamp of the indoor unit will turn on with a beep tone.
- (2) Press the MASTER CONTROL button to set "I FEEL ...". And I FEEL MONITOR lamp lights with a beep tone.
- (3) The operation mode is decided by the initial room temp. at starting up the operation.

Initial Room Temp.	Mode
more than 76°F	COOL mode of "I FEEL CONTROL"
55°F to 76°F	DRY mode of "I FEEL CONTROL"

- Once the mode is fixed, the mode will not change by room temp. afterwards.
- Under the AUTO START timer operation, the mode is determined according to the room temperature 1 hour before the set time.
- When the system is stopped with the POWER button on the remote controller, and restarted within 1 hour in "I FEEL CONTROL" mode, the system operates in previous mode automatically regardless of the room temp.

When the system is restarted after 1 hour, the operation mode is decided by the initial room temperature at start-up of the operation.

Example



(4) The initial set temperature is decided by the initial room temperature for the first 2 min. after the system starts.

Model	Initial room temperature	Initial set temperature	
COOL mode of "I FEEL CONTROL"	More than 88°F	81°F	※ 1
	84°F to 88°F	79°F	
	81°F to 84°F	77°F	
	76°F to 81°F	75°F	
DRY mode of "I FEEL CONTROL"	Less than 76°F	Initial room temperature minus 2 deg(°F)	

※ 1 After the system restarts by the remote controller, the system operates with the previous set temperature regardless of the initial set temperature.

(5) I FEEL CONTROL buttons

In "I FEEL CONTROL" mode, set temperature is decided by the microprocessor based on the room temperature. In addition, set temperature is controlled by I FEEL buttons when you feel too cool or too warm, and when you feel comfortable the **OKAY** button fixes the comfortable temperature.

When the I FEEL button is pressed, I FEEL MONITOR lamp on the indoor unit flickers for a second with beeps.

● Variable control

When the **TOO COOL** or **TOO WARM** button is pressed, the set temperature is changed based on the room temperature. As the set temperature range is variable, this is called "Variable control". The variable control operates only in "I FEEL CONTROL" mode.

In DRY mode of "I FEEL CONTROL". the set temperature range is fixed ± 2 deg (°F).

TOO COOL  ...To raise the set temperature by 2 deg. ~ 3 deg.(°F)

OKAY  ...To fix and memorize the comfortable present temperature

TOO WARM  ...To lower the set temperature 2 deg. ~ 3 deg.(°F)

— I FEEL MONITOR lamp on the indoor unit —

When I FEEL CONTROL button is pressed, I FEEL MONITOR lamp on the indoor unit flickers with beeps and shows the temperature control condition.

I FEEL MONITOR lamp

 Shows difference between set temperature and room temperature is more than 3 deg. (°F)

During this condition, I FEEL button is not available.

Wait for about 15 min.

 Shows difference between set temperature and room temperature is 2 deg. ~3 deg. (°F)

The buttons are available.

 Shows room temperature has almost reached set temperature. The difference is less than 2°F.

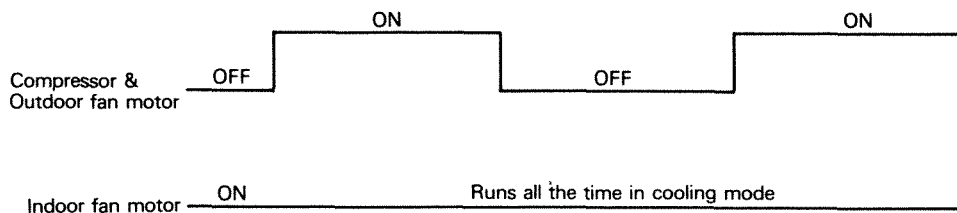
The buttons are available.

NOTE ● During "I FEEL CONTROL" operation, thermostat (SET TEMP.) is not available. Use "I FEEL CONTROL" buttons to set temperature

● Once the set temperature is set, the microprocessor memorizes the temperature and the system restarts at the same set temperature.

● The set temperature range is 61 to 88°F in COOL • DRY mode of "I FEEL CONTROL".

● When the main power is turned off, the settings are canceled. Initial set temperature will be decided as shown in the above table.



NOTE ●Coil frost prevention during COOL mode of "I FEEL CONTROL".

There are two types of controls in coil frost prevention.

① Temperature control

<MS09>

When the indoor coil thermistor RT12 reads 47°F or below for 5 min., the coil frost prevention starts. The compressor stops and the indoor fan operates at set speed or AUTO speed for 5 min. After that if RT12 still reads 47°F or below, this function is prolonged until RT12 reads over 47°F.

<MS12/15>

MS12/15 have two indoor coil thermistors RT12 and RT14. When RT12 (or RT14) reads 50°F or below for 5 min., the coil frost prevention starts. The compressor stops and the indoor fan operates at set speed or AUTO speed for 5 min. After that, if RT12 (or RT14) still read(s) 50°F or below, this function is prolonged until RT12 (or RT14) read(s) over 50°F.

② Time control

When the three conditions below have been satisfied for 1 hour and 45 minutes, the compressor stops for 3 minutes and the coil frost prevention mode starts.

- (a) The compressor is on continuously.
(b) The indoor fan speed is LO or MED.
(c) The room temperature is below 79°F.

If the compressor turns off half way, the accumulated time is cancelled.

Time counting starts from the beginning when the above three conditions are satisfied again.

If the indoor fan speed becomes HI or the room temperature exceeds 79°F, time counting stops temporarily. Time counting restarts from the stop point when the above three conditions are satisfied again.

The indoor fan operates at the set speed.

- Indoor fan operates at the set speed by FAN CONTROL switch.

Followings are the fan speed in AUTO.

Room temperature minus set temperature : 4 to 7 deg.(°F) or over HI -----
 Room temperature minus set temperature : 2 to 7 deg.(°F) MED -----
 Room temperature minus set temperature : 2 to 3 deg.(°F) or below LO -----

— DRY mode of "I FEEL CONTROL" —

The system uses the same refrigerant circuit as the cooling circuit for dry operation.

The compressor and the indoor fan are controlled by both temperature and the microprocessor.

By such controls, indoor flow amounts will be reduced in order to lower humidity without much room temperature decrease.

The operation of the comp. and indoor fan is as follows on the next page.

1. When the room temperature is 73°F or over

Compressor operates by temperature control and time control.

For the first 2 min. the system is FAN mode and the indoor fan operates at very low speed.

Then 2 min. later, the room temperature is read as the initial temperature.

- ① Set temperature is controlled to fall by 2°F as initial set temperature.

- ②When the thermostat is ON, the compressor repeats 8 min. ON/3 min. OFF cycle operation.
 When the thermostat is OFF, the compressor repeats 4 min. OFF/1 min. ON cycle operation.
 Indoor and outdoor fans operate in the same cycle with compressor.
 Indoor fan speed is very low.

2. When the room temperature is under 73°F.

Compressor works in 2 min. ON/3 min. OFF cycle while the thermostat is on.

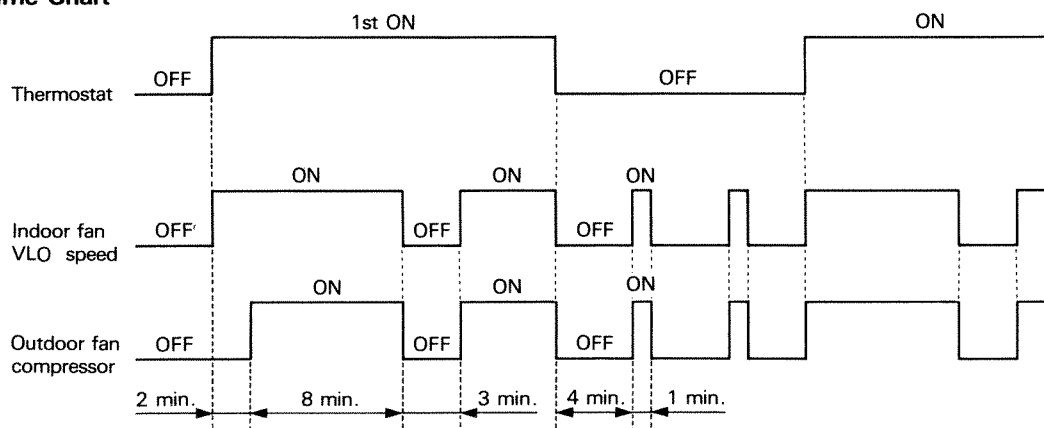
When the thermostat is OFF, the compressor repeats 4 min. OFF/1 min. ON cycle operation.

Indoor and outdoor fans operate in the same cycle with compressor.

Indoor fan speed is Very low

Operation Time Chart

Example



NOTE • Coil frost prevention during DRY mode of "I FEEL CONTROL"

The operation is same as coil frost prevention during COOL mode of "I FEEL CONTROL" except the indoor fan speed is VLo.

• In DRY mode of "I FEEL CONTROL", FAN CONTROL switch is not available.

2. COOL operation

- (1) Press POWER button.

Power lamp of the indoor unit turns on with a beep tone.

Indoor fan continues to operate regardless of thermostat's OFF-ON.

Coil frost prevention is the same as COOL mode of "I FEEL CONTROL".

- (2) Select COOL mode.

- (3) Set the SET TEMP. button.

The setting range is 61 to 88°F.

*"I FEEL CONTROL" buttons are not available.

- (4) The indoor fan runs continuously to provide ventilation and prevent air stratification.

3. DRY operation

- (1) Press POWER ON/OFF button.

Power lamp of the indoor unit turns on with a beep tone.

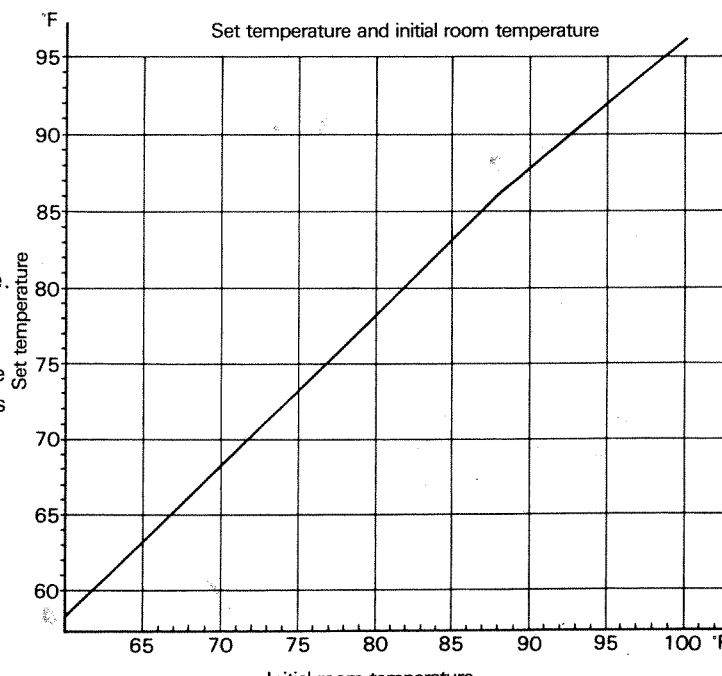
- (2) Select DRY mode.

- (3) Indoor fan operates at VLO speed.

- (4) After 2 min. the microprocessor reads the room temperature and decides the set temperature. Set temperature will be as shown on the chart.

Thermostat (SET TEMP.) is not available.

The other operations are same as DRY mode of "I FEEL CONTROL".



4. FAN operation

(1) Press POWER ON/OFF button.

(2) Select FAN mode.

(3) Press SET TEMP. button to select the desired temperature.

The indoor fan stops when room temperature is lower than the set temperature

(4) Select the desired fan speed.

Followings are the fan speed in AUTO.

Room temperature minus set temperature : 4 to 7 deg.(°F) or over HI
Room temperature minus set temperature : 2 to 7 deg.(°F) MED
Room temperature minus set temperature : -2 to 3 deg.(°F) LO
Room temperature minus set temperature : -2 to 0 deg.(°F) or below STOP

Only indoor fan operates.

Outdoor unit does not operate.

5. TIMER

1. AUTO STOP operation

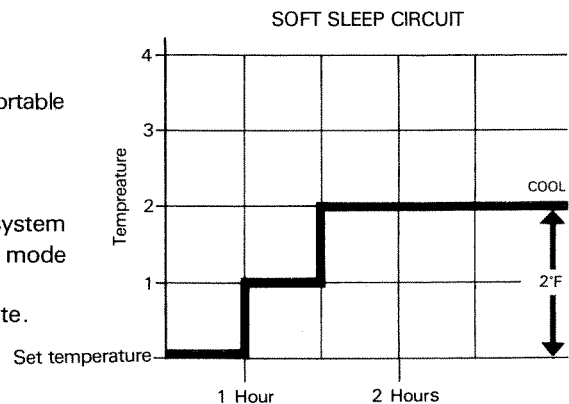
AUTO STOP mode has "SOFT SLEEP" circuit which provides comfortable temperature control for sleeping.

(1) Set the TIMER CONTROL to AUTO STOP.

(2) Set the time. Time setting is in 1 hour units for up to 12 hours.

(3) "SOFT SLEEP" circuit operates in COOL mode. By this circuit, system operates at the set temperature for the first 1 hour. Then, in COOL mode the set temperature rises by 1 deg. half-hourly to 2 deg. range.

In "I FEEL CONTROL" and DRY mode, the circuit does not operate.



2. AUTO START operation

(1) Set the TIMER CONTROL button to AUTO START.

(2) Set the time. Time setting is in 1 hour units for up to 12 hours.

NOTE TIMER setting will be canceled by power failure or breaker functioning.

6. EMERGENCY-TEST operation

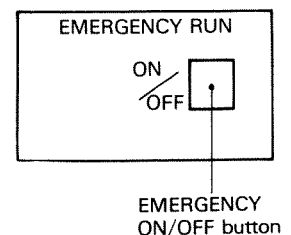
When the remote controller is missing, has failed or the batteries run down, press the emergency run on/off switch on the front of the indoor unit. The unit will start and the operation lamp will light.

The first 30 min. of operation will be the test run operation. This operation is for servicing. The indoor fan runs at high speed and the system is in continuous operation. The thermostat does not operate and the timer is reset to normal.

After 30 min. of test run operation the system shifts to emergency run operation with a set temperature of 75°F in cooling. The fan shifts to MED speed.

This operation continues until the emergency run on/off button is pressed or a button on the remote control is pressed, then normal operation will start.

The coil frost prevention circuit operates in this mode.



1. AUTO RESTART FUNCTION

When the indoor unit is controlled by the remote controller; the operation mode, set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. After power failure, the unit operates automatically when power is restored. In case of unit operated in "I FEEL CONTROL" mode before power failure, the operation is not memorized. In "I FEEL CONTROL" mode, the operation is decided by the initial temperature. Refer to page 28.

How to set AUTO RESTART FUNCTION

Cut the jumper wire JR84

Operation

- If main power (AC115V) is cut, the operation settings remain.
- When power is restored, the unit restarts in previous mode 3 minutes later without remote controller.
- Even if power is cut for about 0.5 seconds, auto restart works.

Note

- If main power is cut while AUTO START/STOP timer is set, the timer setting is cancelled when auto restart function works.
- If the unit was off by the remote controller before power failure, auto restart function does not work as the power button of the remote controller is off.

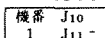
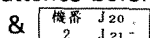
2. How to reconstruct for individual operation

A maximum of 4 units with wireless remote controllers can be used in a room. In this case, reconstruction of P.C. boards is needed to operate each unit individually by each remote controller.

The transmission code is changed by the reconstruction.

1. Reconstruction of the remote controller P.C. board.

Remove batteries before reconstruction.

 &  are printed on the board.

Originally, chip parts are fitted on J10/J20 side and there is no chip parts on the other side.

Remove the chip parts of J10/J20 side and connect Jumper wire to J11/J21 side according to the number of the individual control.

Either J10 or J11/J20 or J21 should be attached for normal operation.

Standard reconstruction table

	1 unit operation	2 units operation	3 units operation	4 units operation
No.1 unit	No construction	Same as left	Same as left	Same as left
No.2 unit	—	Remove J20 Connect to J21	Same as left	Same as left
No.3 unit	—	—	Remove J10 Connect to J11	Same as left
No.4 unit	—	—	—	Remove J10, J20 Connect to J11, J21

2. Reconstruction of the indoor electronic control P.C. board.

 is printed on the board. Refer to TEST POINT VOLTAGE in the manual for the print point.

Jumper wire are fitted to JR05 and JR06.

Reconstruct JR05 and JR06 to correspond to the remote controller board.

	1 unit operation	2 units operation	3 units operation	4 units operation
No.1 unit	No construction	Same as left	Same as left	Same as left
No.2 unit	—	Remove JR05	Same as left	Same as left
No.3 unit	—	—	Remove JR06	Same as left
No.4 unit	—	—	—	Remove JR05, JR06

Self check function

This function is to show defective point by lighting or flashing of the indoor unit power lamp, or "I FEEL" monitor lamp (monitor LED). If trouble written in the below table occurs during operation, the self check result is indicated. The abnormal cation indication is reset by pressing the power on/off button of the remote controller and when the unit is on.

* Before taking measures make sure that the symptom reappears, for accurate troubleshooting.

Self Check Table

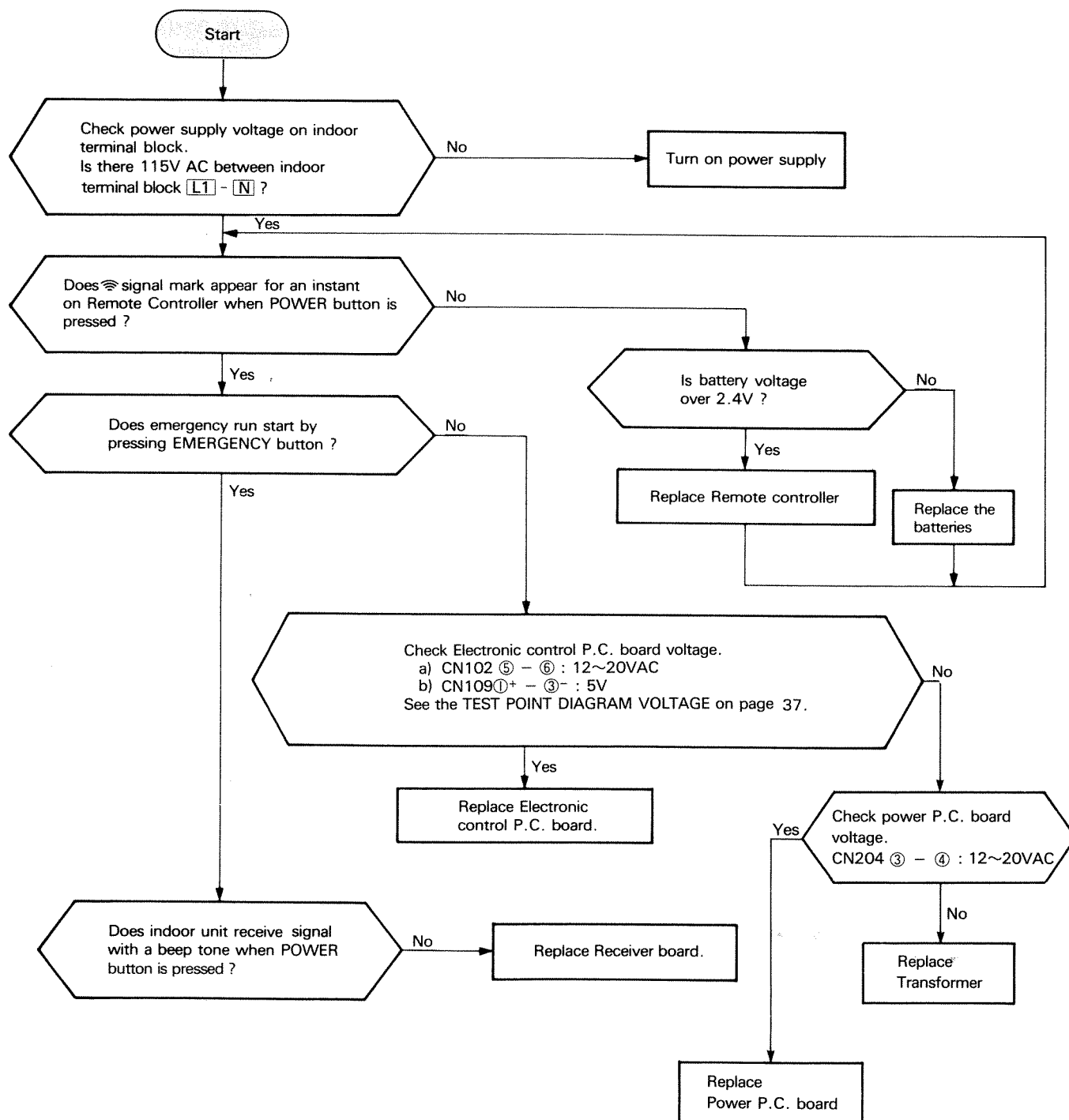
 Flash ☐ OFF

Abnormal point	Indoor coil thermistor
Indication	 POWER  I FEEL MONITOR
Symptom	Indoor unit power turns off.
Detect method	Detects Indoor coil thermistor short or open circuit every 2 sec. during operation.
Cause	● Thermistor defect ● Connector disconnecting ● Connector misconnecting ● Indoor control P.C. board defect
Repair	● Check thermistor calibration. ● Reconnect connector. ● Check indoor board.

(1) Operation does not start

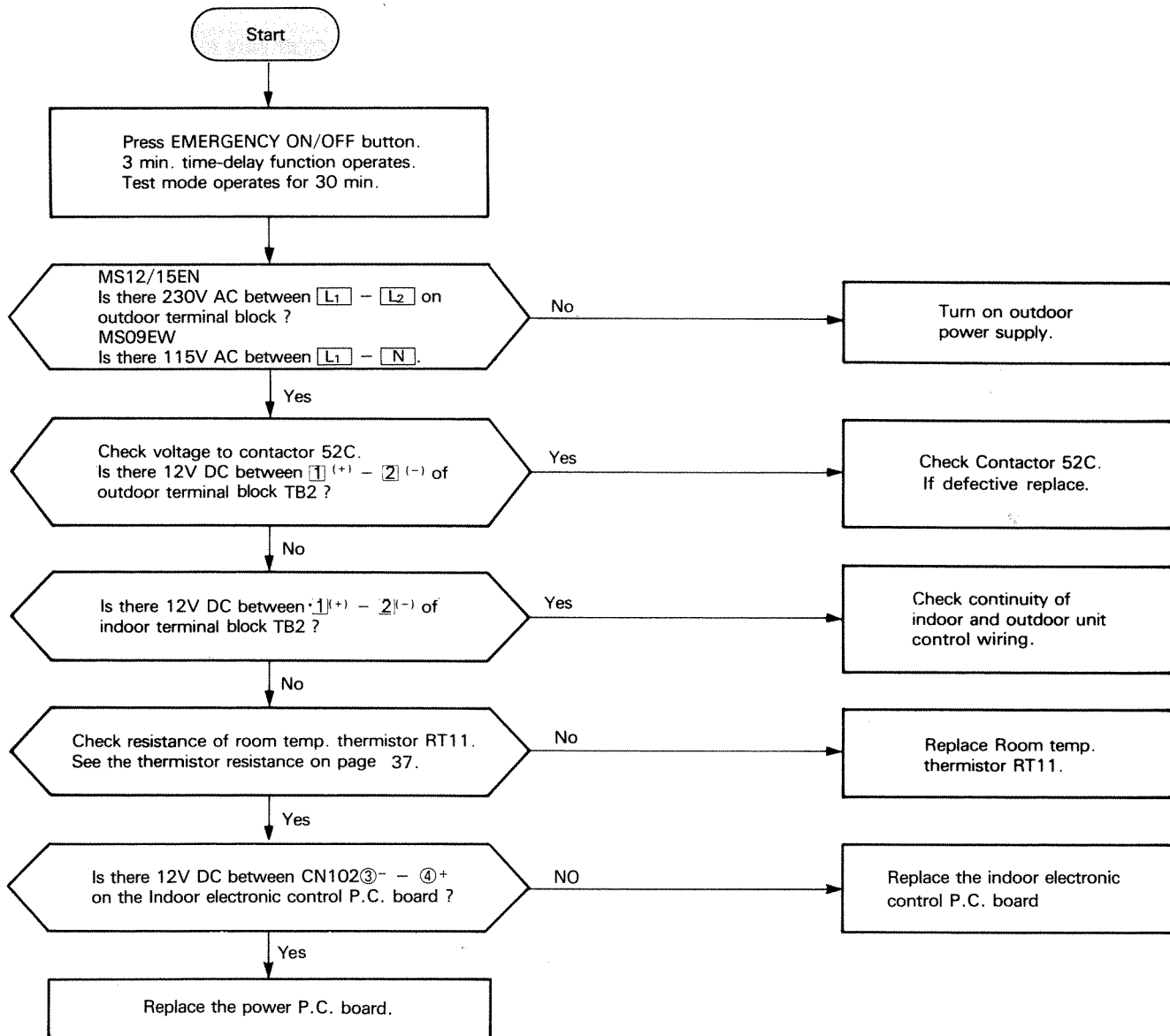
MS09EW

MS12/15EN



(2) Compressor and outdoor fan do not operate (Only indoor fan operates)

MS09EW
MS12/15EN



RELAY OPERATION

MS09EW MS12EN
MS15EN

MODE	THERMOSTAT	52C CONTACTOR	INDOOR FAN RELAY
COOL & COOL mode of I FEEL CONTROL	ON	ON	AUTO or set speed
	OFF	OFF	
DRY & DRY mode of I FEEL CON- TROL	ON	Delays compressor start for 2 min. at initial stat to determine set temp.	Very low speed.
		Repeats 8 min. ON 3 min. OFF operation or 2 min. ON 3 min. OFF operation	Very low links with 52C contactor.
	OFF	Repeats 4 min. OFF 1 min. ON operation	
FAN	ON	OFF	AUTO or set speed
	OFF		OFF

NOTE : When the compressor is OFF, "3 min. time-delay circuit" operates.

COIL FROST PREVENTION mode are as follows

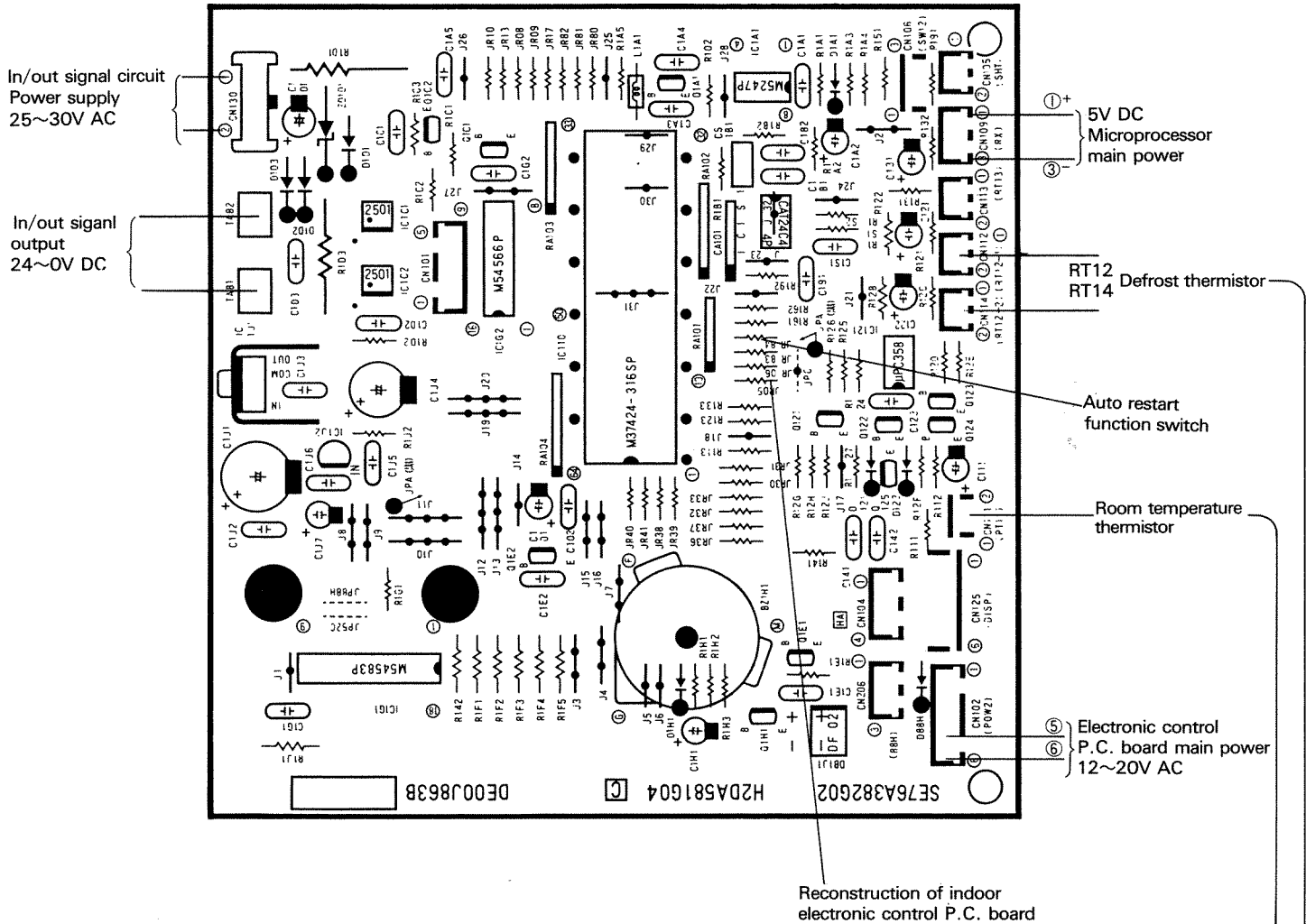
MODE	THERMOSTAT	52C CONTACTOR	INDOOR FAN RELAY
COOL & COOL mode of I FEEL CONTROL	ON	OFF for 5 min. After that, OFF is prolonged until indoor coil thermistor reads termination temp.	Auto or set speed
DRY & DRY mode of I FEEL CONTROL			Very low speed

Indoor fan relay mode

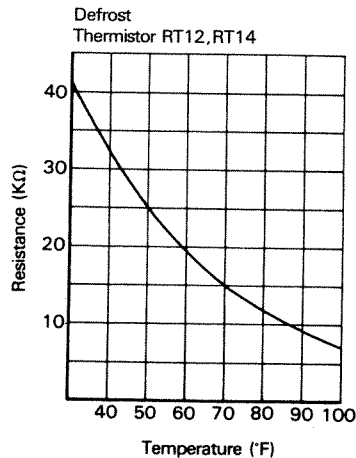
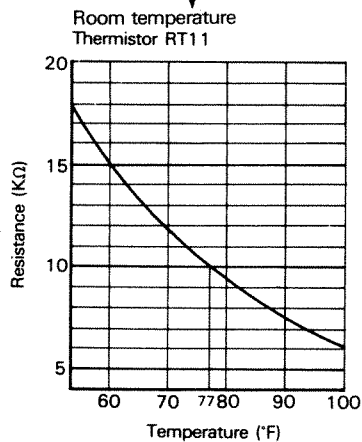
Indoor fan speed	Relay turning ON
HI	X14
MED	X13
LO	X12
VLO	X11
OFF	All fan relays are off

TEST POINT DIAGRAM AND VOLTAGE MS09EN MS12/15EN

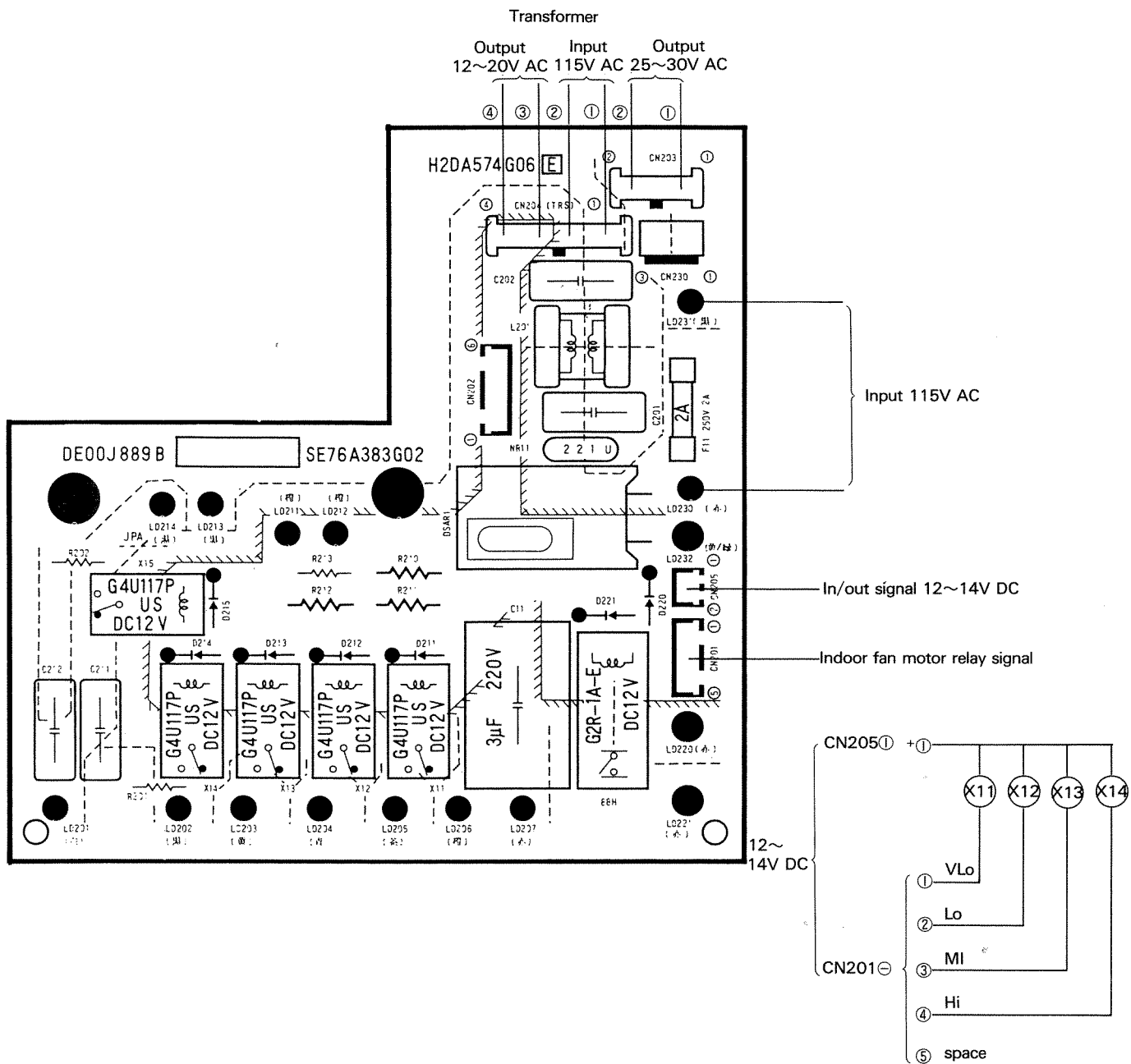
Indoor electronic control P.C. board



Reconstruction of indoor electronic control P.C. board



MS09EW Power P.C. board

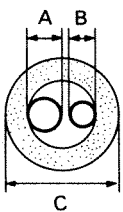
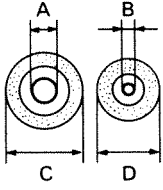




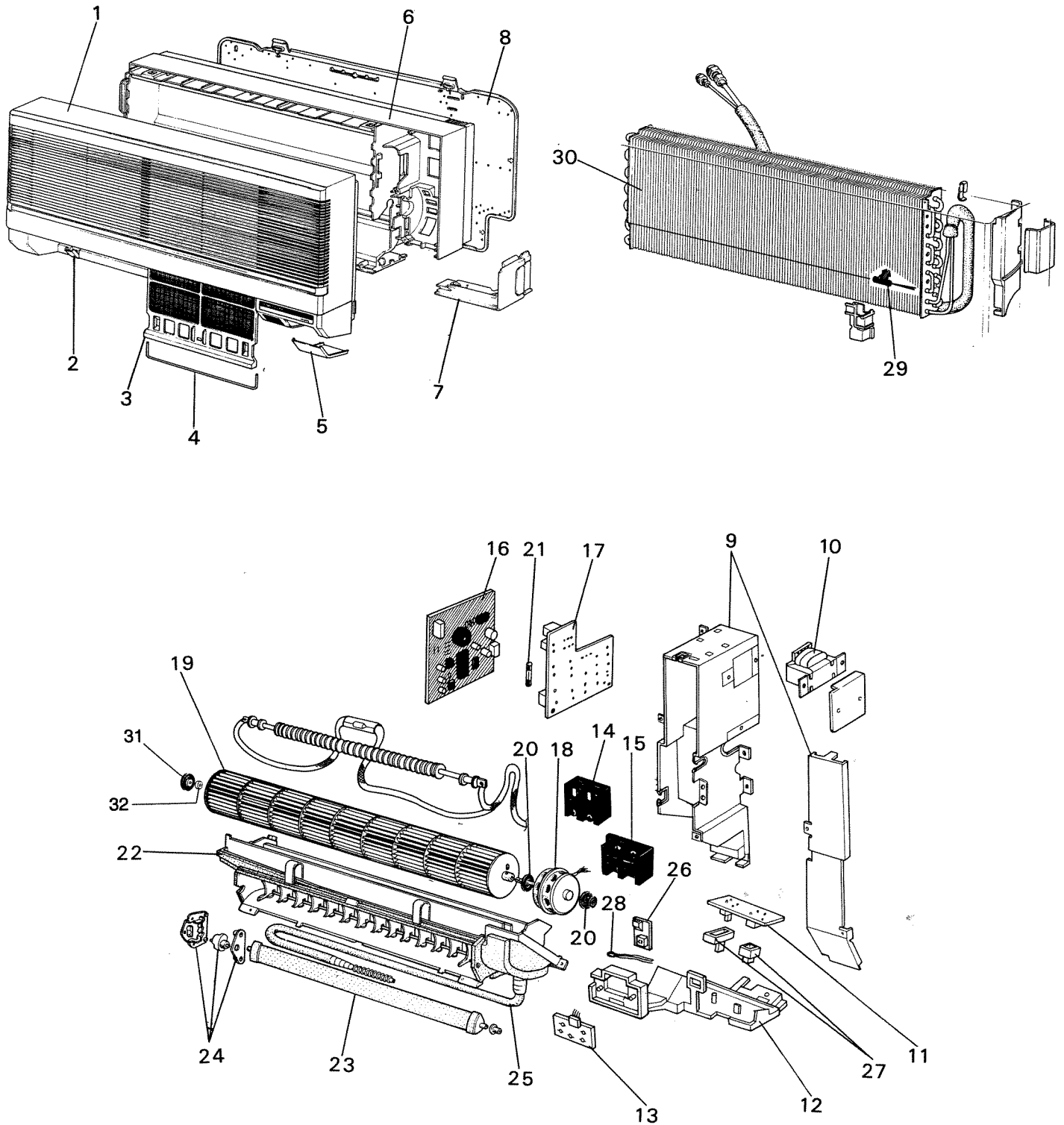
1. REFRIGERANT PIPES

The air conditioner has flared connections on its indoor and outdoor sides.

Please use the optional extension pipe as follows.

Applicable models	Parts No.	Pipe length	Pipe Size O.D				Additional refrigerant charge R-22 (OZ)
			Cross-section	A.Gas (in.)	B.Liquid (in.)	Insulation (in.)	
MS09EW MSM18EN	MAC645PI	10 ft		3/8	1/4	C 1-3/8	0
	MAC646PI	16 ft					1
	MAC647PI	23 ft					3
	MAC648PI	33 ft					
	MAC649PI	49 ft					
MS12EN MS15EN	MAC725PI	10ft		5/8		C 1-7/32 D 1-1/16	0
	MAC726PI	16ft					1
	MAC727PI	23ft					3
	MAC728PI	33ft					
	MAC729PI	49ft					

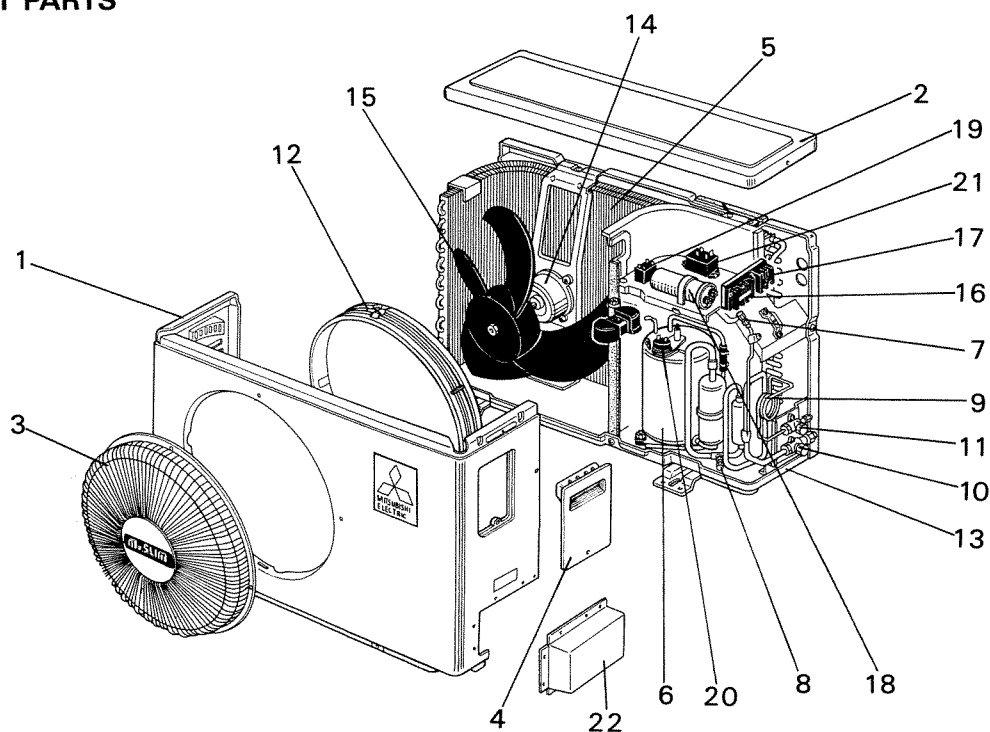
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INDOOR UNIT PARTS
MS09EW



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MS09EW	
1	T2W 901 000	FRONT PANEL ASSEMBLY		1	Air filter wire is included
2	T2W 901 067	SCREW CAP		2	
3	T2W 901 100	AIR FILTER		2	
4	M21 K17 022	AIR FILTER WIRE		2	
5	T2W 901 004	SWITCH DOOR		1	
6	T2W 901 234	BOX ASSEMBLY		1	
7	T2W 901 975	CORNER BOX		1	
8	M21 B00 970	INSTALLATION PLATE		1	
9	T2W 901 081	ELECTRICAL BOX		1	
10	T2W 901 339	TRANSFORMER	T	1	
11	T2W 901 443	SWITCH P.C. BOARD		1	
12	T2W 712 781	LAMP HOLDER		1	
13	T2W 901 329	DISPLAY P.C. BOARD		1	
14	M21 534 375	INDOOR TERMINAL BLOCK	TB1	1	
15	T2W 901 375	INDOOR TERMINAL BLOCK	TB2	1	
16	T2W 901 450	ELECTRONIC CONTROL P.C. BOARD		1	
17	T2W 901 440	POWER P.C. BOARD		1	
18	T2W 901 300	INDOOR FAN MOTOR	MF	1	RA4W11-AA
19	M21 B00 302	LINE FLOW FAN		1	
20	M21 453 505	RUBBER MOUNT		2	
21	T2W 416 382	FUSE (2A)	F	1	
22	T2W 901 235	NOZZLE ASSEMBLY		1	
23	T2W 901 040	VANE		1	
24	M21 B00 041	VANE HOLDER		1	
25	M21 B03 703	DRAIN HOSE		1	
26	M21 N00 468	RECEIVER P.C. BOARD		1	
27	T2W 901 320	SLIDE KNOB		1	
28	T2W 723 307	ROOM TEMPERATURE THERMISTOR	RT11	1	
29	T2W A04 308	INDOOR COIL THERMISTOR	RT12	1	
30	T2W 676 620	INDOOR HEAT EXCHANGER		1	
31	M21 B00 509	BEARING MOUNT		1	
32	M21 B00 504	SLEEVE BEARING		1	

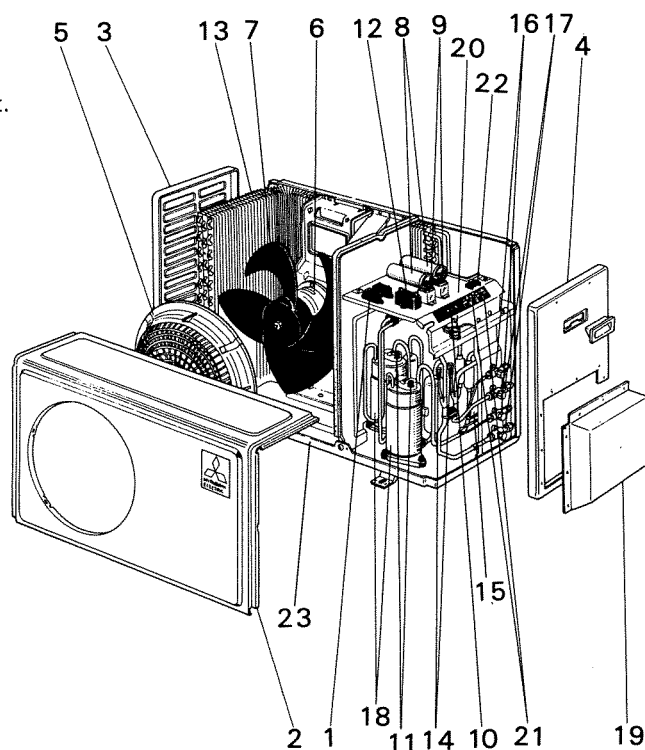
OUTDOOR UNIT PARTS **MU09EW**



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MU09EW	
1	T2W 464 232	CABINET ASSEMBLY		1	
2	M21 478 297	TOP PANEL		1	
3	T2W 416 521	FAN GUARD		1	
4	M21 A00 245	SERVICE PANEL		1	
5	T2W 416 630	OUTDOOR HEAT EXCHANGER		1	
6	T92 513 200	COMPRESSOR	MC	1	KH-122WES
7	T2W 457 641	CHARGE PLUG		2	
8	T2W 416 642	FUSIBLE PLUG		1	
9	M21 987 936	CAPILLARY TUBE		1	$\phi 0.12 \times \phi 0.063 \times 126$
10	T2W 460 661	VALVE (GAS)		1	
11	T2W 460 662	VALVE (LIQUID)		1	
12	T2W 416 509	OUTER NOZZLE		1	
13	T2W 464 290	BASE ASSEMBLY		1	
14	T2W 679 301	OUTDOOR FAN MOTOR	MF	1	SGW-26C-CB
15	M21 601 501	PROPELLER		1	
16	T2W 811 375	OUTDOOR TERMINAL BLOCK	TB1	1	
17	M21 534 375	OUTDOOR TERMINAL BLOCK	TB2	1	
18	T2W 903 353	COMPRESSOR CAPACITOR	C1	1	55 μ F 220V
19	T2W 679 350	OUTDOOR FAN MOTOR CAPACITOR	C2	1	5 μ F 250V
20	T2W 464 340	OVERCURRENT RELAY ²	51C	1	
21	T2W 382 342	CONTACTOR	52C	1	
22	T2W 460 246	VALVE COVER		1	

OUTDOOR UNIT PARTS MUM18EW

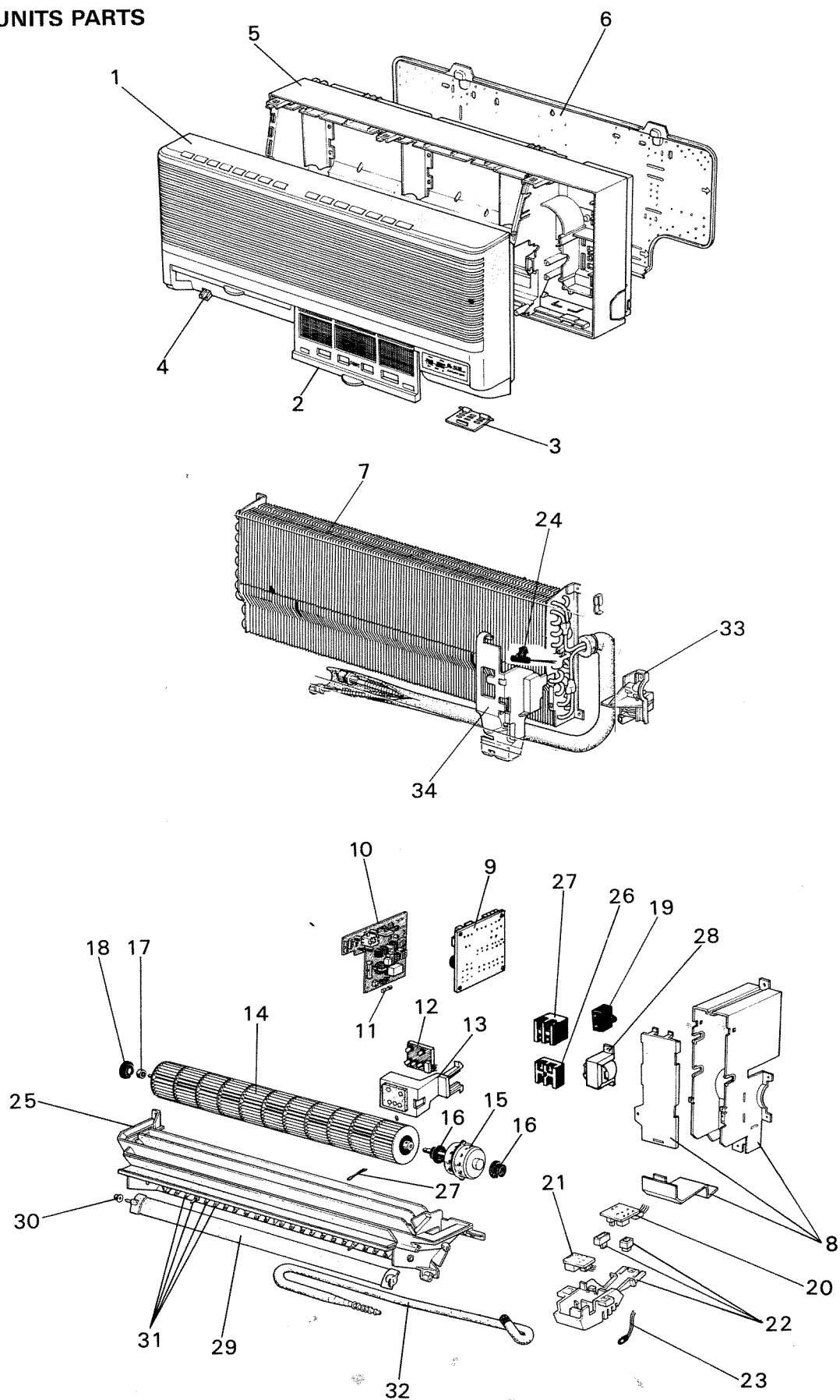
Refer to MS09EW for indoor unit.



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MUM18EW	
1	T2W 382 342	CONTACTOR	52C1, 52C2	2	
2	T2W 462 232	CABINET		1	
3	T2W 667 249	SIDE PANEL		1	
4	T2W 739 245	SERVICE PANEL		1	
5	T2W 466 509	OUTER NOZZLE		1	
6	T2W 466 301	OUTDOOR FAN MOTOR	MF	1	SGW-60F-AC
7	R01 093 115	PROPELLER		1	
8	T2W 903 353	COMPRESSOR CAPACITOR	C1, C2	2	55 μ F 220V
9	T2W 466 342	OUTDOOR FAN RELAY	X1, X2	2	
10	T2W 800 375	OUTDOOR TERMINAL BLOCK	TB1	1	
11	T2W 464 340	OVERCURRENT RELAY	51C1, 51C2	2	
12	T2W 466 350	OUTDOOR FAN CAPACITOR	C3	1	8 μ F 220V
13	T2W 466 630	OUTDOOR HEAT EXCHANGER		1	
14	T2W 457 641	CHARGE PLUG		4	
15	T2W 416 642	FUSIBLE PLUG		1	
16	T2W 460 661	VALVE (LIQUID)		2	
17	T2W 460 662	VALVE (GAS)		2	
18	T92 513 200	COMPRESSOR	MC1, MC2	2	KH-122WES
19	T2W 739 246	VALVE COVER		1	
20	T2W 233 936	CAPILLARY TUBE		2	ϕ 0.12 $\times$ ϕ 0.055 $\times$ 43-5/16
21	M21 534 375	TERMINAL BLOCK	TB2,3	2	
22	T2W 359 378	TERMINAL BLOCK		1	
23	T2W 739 290	BASE ASSEMBLY		1	

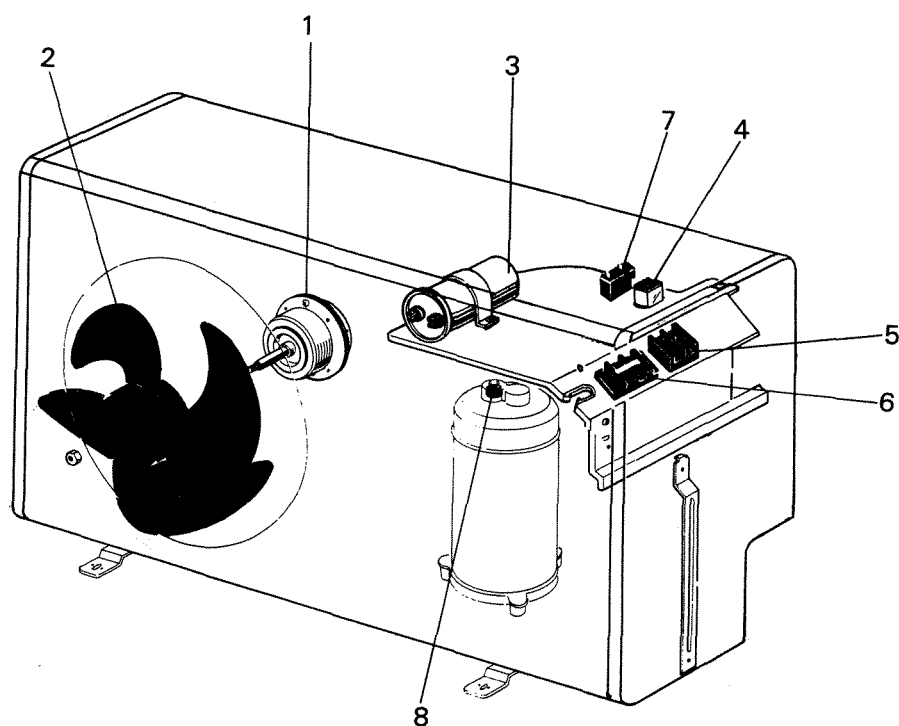
When servicing, cut the tube to the proper length as shown in the REFRIGERANT SYSTEM DIAGRAM in MANUAL OB-099.

INDOOR UNITS PARTS
MS12EN
MS15EN



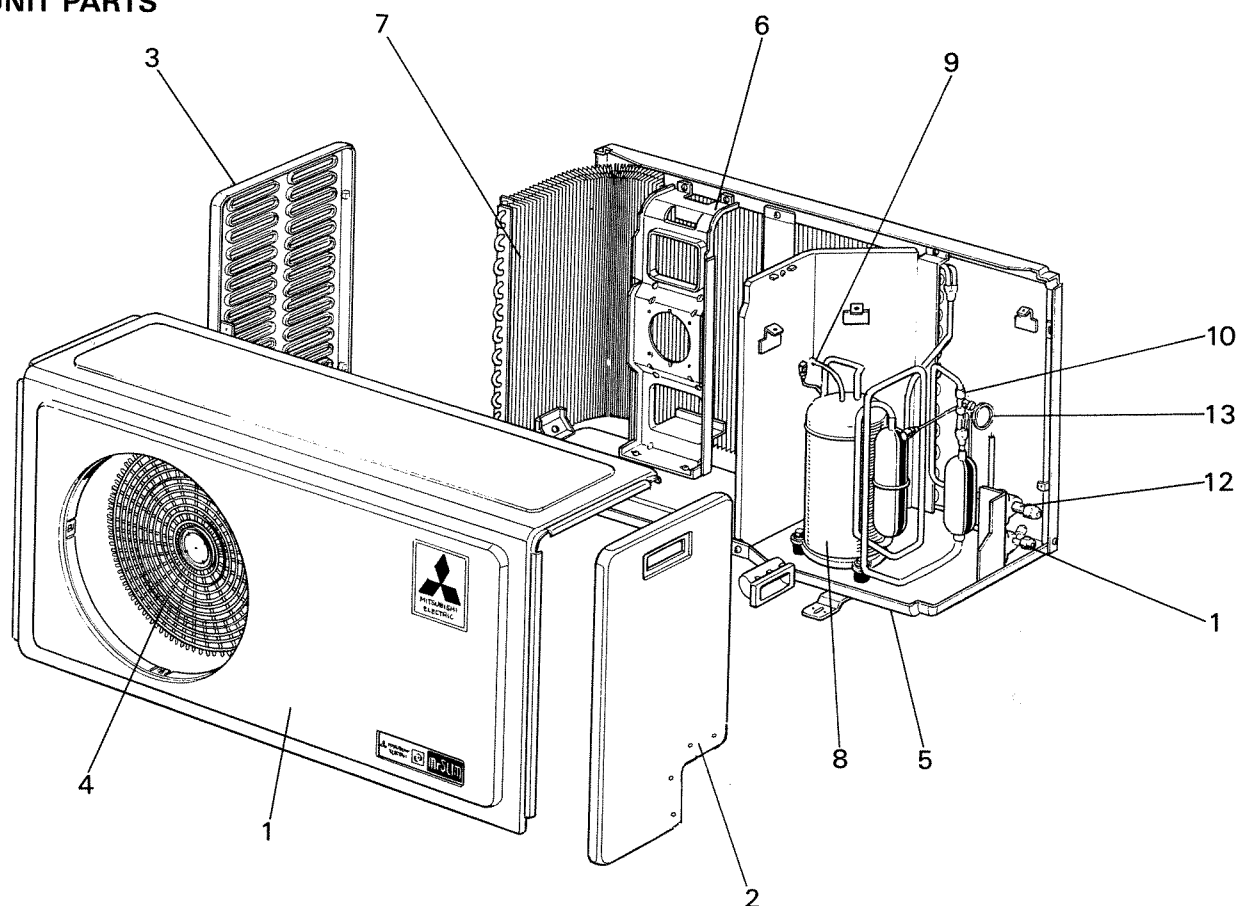
No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit		Remarks
				MS12EN	MS15EN	
1	T2W 911 000	FRONT PANEL ASSEMBLY		1	1	
2	T2W 911 100	AIR FILTER		2	2	
3	T2W 911 004	SWITCH DOOR		1	1	
4	T2W 911 067	SCREW CAP		3	3	
5	T2W 911 234	BOX ASSEMBLY		1	1	
6	T2W 516 970	INSTALLATION PLATE		1	1	
7	T2W 911 620	INDOOR HEAT EXCHANGER		1	1	
8	T2W 911 081	ELECTRICAL BOX		1	1	
9	T2W 911 450	ELECTRONIC CONTROL P.C. BOARD		1	1	
10	T2W 911 440	POWER P.C. BOARD		1	1	
11	T2W 416 382	FUSE	F	1	1	2A
12	T2W 911 329	DISPLAY P.C. BOARD		1	1	
13	T2W 911 327	LAMP HOLDER		1	1	
14	T2W 516 302	LINE FLOW FAN		1	1	
15	T2W 661 300	INDOOR FAN MOTOR	MF	1	1	S4W-23B-AA
16	M21 453 505	RUBBER MOUNT		2	2	
17	M21 B00 504	SLEEVE BEARING		1	1	
18	M21 B00 509	BEARING MOUNT		1	1	
19	T2W 635 350	INDOOR FAN CAPACITOR	C	1	1	4 μ F 220V
20	T2W 911 443	SWITCH P.C. BOARD		1	1	
21	M21 N00 468	RECEIVER P.C. BOARD		1	1	
22	T2W 911 782	SWITCH HOLDER (KNOB SET)		1	1	
23	T2W 911 307	ROOM TEMPERATURE THERMISTOR	RT11	1	1	
24	T2W 911 308	INDOOR COIL THERMISTOR	RT12,14	2	2	
25	T2W 911 235	NOZZLE ASSEMBLY		1	1	
26	M21 534 375	INDOOR TERMINAL BLOCK	TB2	1	1	
27	T2W 901 375	INDOOR TERMINAL BLOCK	TB1	1	1	
28	T2W 901 339	TRANSFORMER	T	1	1	
29	T2W 911 040	VANE		1	1	
30	T2W 911 041	VANE SUPPORT SLEEVE SET		1	1	
31	T2W 911 042	GUIDE VANE SET		16	16	
32	T2W 521 703	DRAIN HOSE		1	1	
33	T2W 521 911	PIPE SUPPORT		1	1	
34	M21 B19 750	WATER SHIELD		1	1	

OUTDOOR UNIT PARTS
MU12EN
MU15EN



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit		Remarks
				MU12EN	MU15EN	
1	T2W 708 301	OUTDOOR FAN MOTOR	MF	1	1	S6N-50F-EC
2	R01 093 115	PROPELLER		1	1	
3	T7W 966 723	COMPRESSOR CAPACITOR	C61	1		25µF 370V
	T2W 913 353	COMPRESSOR CAPACITOR	C61		1	30µF 380V
4	T2W 359 340	CONTACTOR	52C	1	1	
5	M21 534 375	OUTDOOR TERMINAL BLOCK	TB1	1	1	
6	T2W 659 375	OUTDOOR TERMINAL BLOCK	TB2	1	1	
7	T2W 708 350	OUTDOOR FAN CAPACITOR	C65	1	1	3µF 440V
8	T2W 394 330	OVERCURRENT RELAY	51C	1		

OUTDOOR UNIT PARTS **MU12EN** **MU15EN**



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit		Remarks
				MU12EN	MU15EN	
1	T2W 510 232	CABINET ASSEMBLY		1	1	
2	T2W 521 245	SERVICE PANEL		1	1	
3	T2W 521 249	SIDE PANEL ASSEMBLY		1	1	
4	T2W 521 509	OUTER NOZZLE		1	1	
5	T2W 708 290	BASE ASSEMBLY		1	1	
6	T2W 911 515	MOTOR SUPPORT		1	1	
7	T2W 774 630	OUTDOOR HEAT EXCHANGER		1	1	
8	T92 650 452	COMPRESSOR	MC	1		RH-167NAB
	T92 667 600	COMPRESSOR	MC		1	RH-207NFL
9	T2W 457 641	CHARGE PLUG		2	2	
10	T2W 416 642	FUSIBLE PLUG		1	1	
11	T2W 460 662	BALL VALVE (LIQUID)		1	1	
12	R01 951 411	BALL VALVE (GAS)		1	1	
13	M21 987 936	CAPILLARY TUBE		1	1	$\phi 0.12 \times \phi 0.063 \times 126$

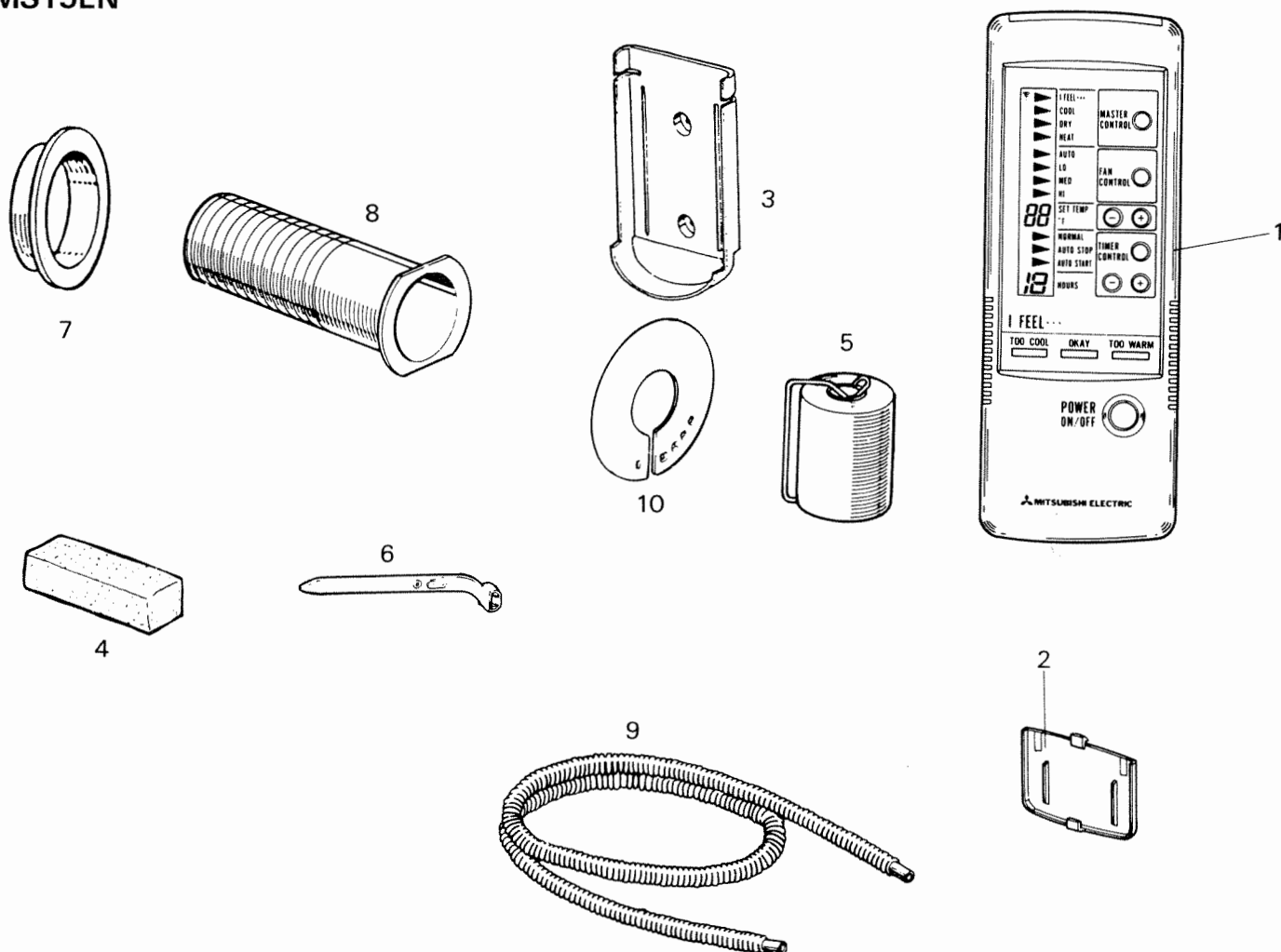
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ACCESSORY & REMOTE CONTROLLER PARTS

MS09EN

MS12EN

MS15EN



No.	Parts No.	Parts Name	Symbol in Wiring Diagram	Q'ty/unit		Remarks
				MS09EW	MS12EN MS15EN	
1	T2W 679 426	REMOTE CONTROLLER		1	1	
2	M21 N28 017	BATTERY COVER		1	1	
3	M21 N28 083	REMOTE CONTROLLER HOLDER		1	1	
4	M21 478 919	PUTTY		1	1	
5	M21 478 917	PIPING TAPE		1	1	
6	M21 480 708	PIPE FIXING BAND		3	3	
7	M21 480 973	PIPE HOLE COVER		1		
8	M21 480 977	WALL HOLE SLEEVE		1		
	M21 K50 977	WALL HOLE SLEEVE			1	
9	M21 480 703	DRAIN HOSE		1	1	
10	M21 B00 973	WALL HOLE COVER			1	



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