Changes for the Better

MITSUBISHI ELECTRIC

SPLIT-TYPE, AIR CONDITIONER

No. OB384

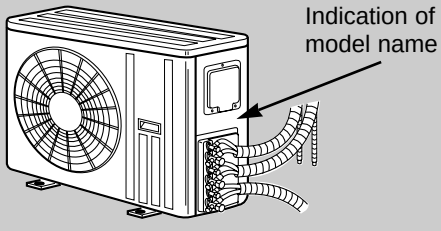
HFC utilized R410A

SERVICE MANUAL

Multi system type
Models

MUX-2A28VB -E1
MUX-2A59VB -E1
MUX-3A60VB -E1
MUX-3A63VB -E1
MUX-2A70VB -E1
MUX-4A73VB -E1

MUX-2A59VB -E1
MUX-3A60VB -E1
MUX-3A63VB -E1
MUX-2A70VB -E1



NOTE:
- As for indoor unit MSC-CA20VB -E1, MSC-CA25VB -E1 or MSC-CA35VB -E1, refer to the service manual OB393.
- This manual describes technical data of outdoor unit.
- As for indoor unit MSC-GA20VB -E1, MSC-GA25VB -E1 or MSC-GA35VB -E1, refer to the service manual OB385.

CONTENTS

CE

1 TECHNICAL CHANGES

MUX-A10WV-E1→MUX-2A28VB-E1
MUX-A20WV-E1→MUX-3A60VB-E1

1. Indication of capacity has been changed. (BTU→kW)

MUX-A19WV-E1→MUX-2A59VB-E1
MUX-A22WV-E1→MUX-3A63VB-E1
MUX-A25WV-E1→MUX-2A70VB-E1
MUX-A26WV-E1→MUX-4A73VB-E1

1. Indication of capacity has been changed. (BTU→kW)
2. Size of stop valve (Gas) has been changed. (ϕ12.7→ϕ9.52)

INFORMATION FOR THE AIR CONDITIONER WITH R410A REFRIGERANT

- This room air conditioner adopts HFC refrigerant (R410A) which never destroys the ozone layer.
- Pay particular attention to the following points, though the basic installation procedure is same as that for R22 conditioners.

① As R410A has working pressure approximate 1.6 times as high as that of R22, some special tools and piping parts/ materials are required. Refer to the table below.

② Take sufficient care not to allow water and other contaminations to enter the R410A refrigerant during storage and installation, since it is more susceptible to contaminations than R22.

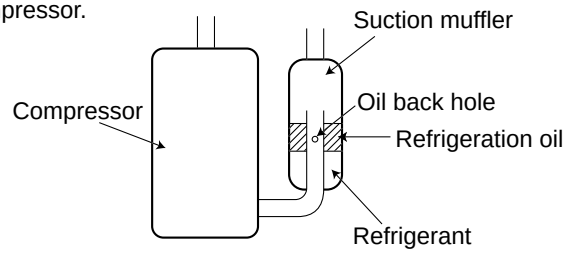
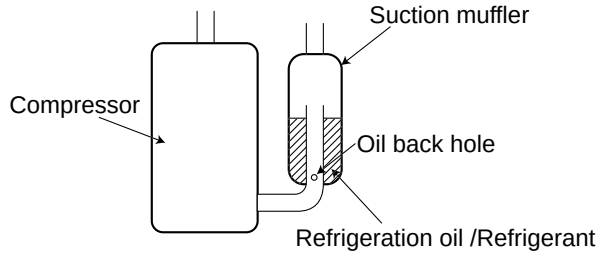
③ For refrigerant piping, use clean, pressure-proof parts/materials specifically designed for R410A. (Refer to 2. Refrigerant piping.)

④ Composition change may occur in R410A since it is a mixed refrigerant. When charging, charge liquid refrigerant to prevent composition change.

		New refrigerant	Previous refrigerant
Refrigerant	Refrigerant	R410A	R22
	Composition (Ratio)	HFC-32: HFC-125 (50%:50%)	R22 (100%)
	Refrigerant handling	Pseudo-azeotropic refrigerant	Single refrigerant
	Chlorine	Not included	Included
	Safety group (ASHRAE)	A1/A1	A1
	Molecular weight	72.6	86.5
	Boiling point (℃)	-51.4	-40.8
	Steam pressure [25℃](Mpa)	1.557	0.94
	Saturated steam density [25℃](Kg/m³)	64	44.4
	Combustibility	Non combustible	Non combustible
	ODP ※1	0	0.055
	GWP ※2	1730	1700
	Refrigerant charge method	From liquid phase in cylinder	Gas phase
	Additional charge on leakage	Possible	Possible
Refrigeration oil	Kind	Incompatible oil	Compatible oil
	Color	Non	Light yellow
	Smell	Non	Non

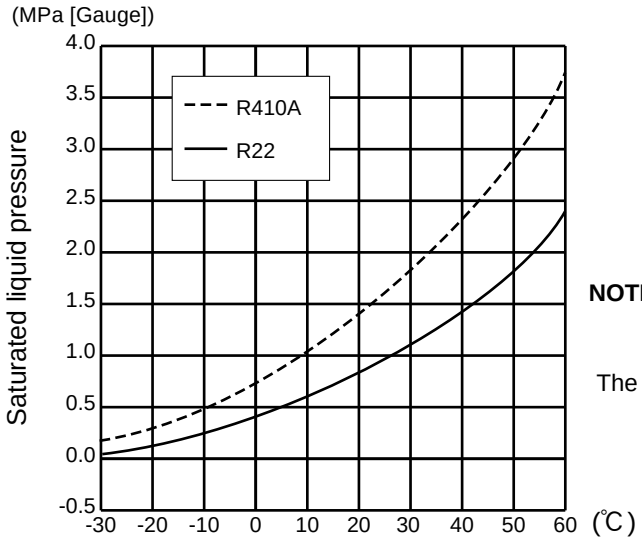
※1 :Ozone Destruction Parameter : based on CFC-11

※2 :Global Warmth Parameter : based on CO_2

	New Specification	Current Specification
Compressor	The incompatible refrigeration oil easily separates from refrigerant and is in the upper layer inside the suction muffler. Raising position of the oil back hole enables to back the refrigeration oil of the upper layer to flow back to the compressor. 	Since refrigerant and refrigeration oil are compatible each, refrigeration oil goes back to the compressor through the lower position oil back hole. 

NOTE : The unit of pressure has been changed to MPa on the international system of units(SI unit system).
The conversion factor is: **1(MPa [Gauge]) =10.2(kgf/㎠ [Gauge])**

Conversion chart of refrigerant temperature and pressure



NOTE : The unit of pressure has been changed to MPa on the international system of units(SI unit system).

The conversion factor is: **1(MPa [Gauge]) =10.2(kgf/㎠ [Gauge])**

1.Tools dedicated for the air conditioner with R410A refrigerant

The following tools are required for R410A refrigerant. Some R22 tools can be substituted for R410A tools.
The diameter of the service port on the stop valve in outdoor unit has been changed to prevent any other refrigerant being charged into the unit. Cap size has been changed from 7/16 UNF with 20 threads to 1/2 UNF with 20 threads.

R410A tools	Can R22 tools be used?	Description
Gauge manifold	No	R410A has high pressures beyond the measurement range of existing gauges. Port diameters have been changed to prevent any other refrigerant from being charged into the unit.
Charge hose	No	Hose material and cap size have been changed to improve the pressure resistance.
Gas leak detector	No	Dedicated for HFC refrigerant.
Torque wrench	Yes	6.35 mm and 9.52 mm
Flare tool	Yes	Clamp bar hole has been enlarged to reinforce the spring strength in the tool.
Flare gauge	New	Provided for flaring work (to be used with R22 flare tool).
Vacuum pump adapter	New	Provided to prevent the back flow of oil. This adapter enables you to use vacuum pumps.
Electronic scale for refrigerant charging	New	It is difficult to measure R410A with a charging cylinder because the refrigerant bubbles due to high pressure and high-speed vaporization

No : Not Substitutable for R410A Yes : Substitutable for R410A

2.Refrigerant piping

① Specifications

Use the refrigerant pipes that meet the following specifications.

Pipe	Outside diameter mm	Wall thickness	Insulation material
For liquid	6.35	0.8 mm	Heat resisting foam plastic
For gas	9.52	0.8 mm	Specific gravity 0.045 Thickness 8 mm

• Use a copper pipe or a copper-alloy seamless pipe with a thickness of 0.8 mm. Never use any pipe with a thickness less than 0.8mm, as the pressure resistance is insufficient.

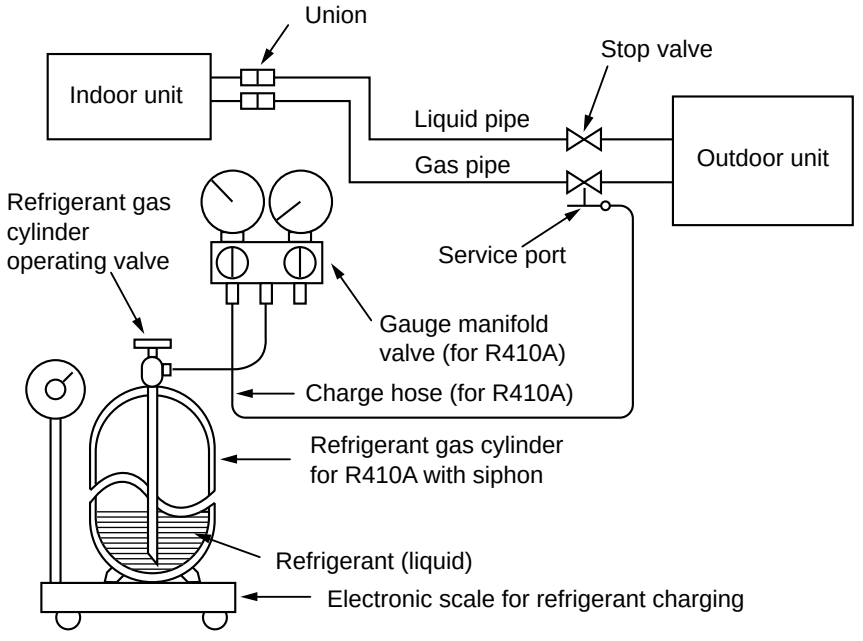
② Flaring work and flare nut
Flaring work for R410A pipe differs from that for R22 pipe.
For details of flaring work, refer to Installation manual “FLARING WORK”.

Pipe diameter	Dimension of flare nut	
mm	R410A	R22
6.35	17	17
9.52	22	22

3.Refrigerant oil
Apply the special refrigeration oil (accessories: packed with indoor unit) to the flare and the union seat surfaces.

4.Air purge
- Do not discharge the refrigerant into the atmosphere.
  Take care not to discharge refrigerant into the atmosphere during installation, reinstallation, or repairs to the refrigerant circuit.
- Use the vacuum pump for air purging for the purpose of environmental protection.

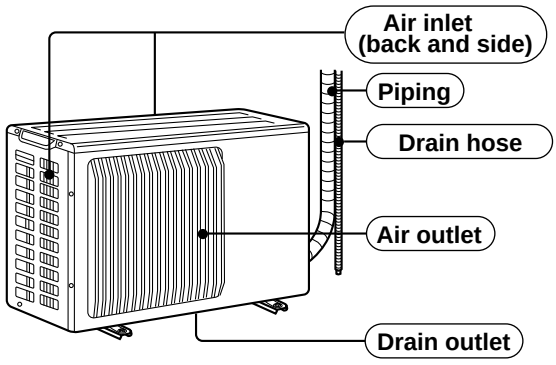
5.Additional charge
For additional charging, charge the refrigerant from liquid phase of the gas cylinder.
If the refrigerant is charged from the gas phase, composition change may occur in the refrigerant inside the cylinder and the outdoor unit. In this case, ability of the refrigeration cycle decreases or normal operation can be impossible. However, charging the liquid refrigerant all at once may cause the compressor to be locked. Thus, charge the refrigerant slowly.



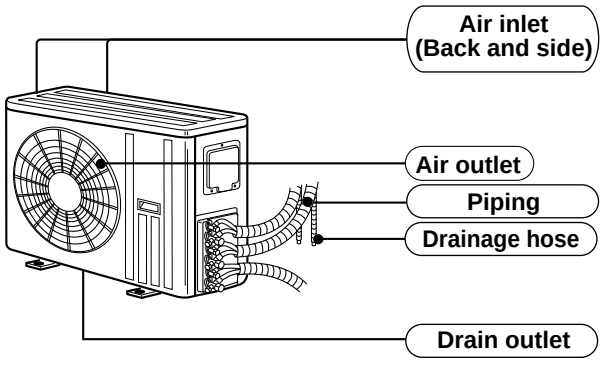
2 PART NAMES AND FUNCTIONS

OUTDOOR UNIT

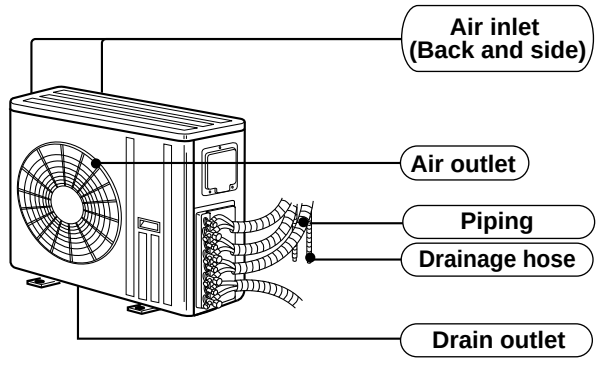
MUX-2A28VB-E1



MUX-2A59VB-E1 MUX-3A63VB-E1
MUX-3A60VB-E1 MUX-2A70VB-E1



MUX-4A73VB-E1



3 INDOOR / OUTDOOR CORRESPONDENCE TABLE

MUX-2A28VB -E1 MUX-2A59VB -E1 MUX-3A60VB -E1 MUX-3A63VB -E1
MUX-2A70VB -E1 MUX-4A73VB -E1

	OUTDOOR UNIT					
	MUX-2A28VB- E1	**MUX-2A59VB- E1**	**MUX-3A60VB- E1**	**MUX-3A63VB- E1**	**MUX-2A70VB- E1**	**MUX-4A73VB- E1**
Combination of the connectable indoor units	A: MSC-CA20VB- E1 or B: MSC-GA20VB- E1	A: MSC-CA35VB- E1 or MSC-GA35VB- E1 B: MSC-CA20VB- E1 or MSC-GA20VB- E1	A: MSC-CA25VB- E1 or B: C: MSC-GA25VB- E1	A: MSC-CA35VB- E1 or MSC-GA35VB- E1 B: MSC-CA20VB- E1 or C: MSC-GA20VB- E1	A: MSC-CA35VB- E1 or B: MSC-GA35VB- E1	A: MSC-CA35VB- E1 or B: MSC-GA35VB- E1 C: MSC-CA25VB- E1 or D: MSC-GA25VB- E1

4 SPECIFICATION

NOTE: As for specification of the indoor units, refer to service manual OB393 (MSC-CA20/25/35VA-E1) or OB385 (MSC-GA20/25/35VA-E1).

Outdoor model			**MUX-2A28VB -** E1		**MUX-2A59VB -** E1		
Function			Cooling		Cooling		
Outdoor unit power supply			Single phase 230V,50Hz		Single phase 230V,50Hz		
Indoor unit No.			Single A or B	Double A+B	Single A	Single B	Double A+B
Capacity	Capacity	kW	2.4	1.4×2	3.5	2.4	3.5+2.4
	Dehumidification	ℓ /h	0.9	0.2×2	1.4	0.9	1.4+0.9
	Outdoor air flow	m³ /h	1,914		2,460		
Electrical data	Power outlet	A	10		20		
	Running current	A	3.20	3.25	5.73	3.51	8.96
	Power input	W	725	730	1,280	785	2,005
	Auxiliary heater	A(kW)	—		—		
	Power factor	%	98.5	97.7	97.1	97.2	97.3
	Starting current	A	21		48		
	Compressor motor current	A	2.91	2.96	5.16	2.94	8.39
	Fan motor current	A	0.29		0.57		
Coefficient of performance (C.O.P)			3.16	3.50	2.65	2.93	2.84
Compressor	Model		RN092VHSHT		MC1 : RN145VHSHT, MC2 : RN092VHSHT		
	Output	W	600		MC1 : 1,000, MC2 : 600		
	Winding resistance (at 20℃)	Ω	C-R 3.87 C-S 6.14		MC1 : C-R 2.43 C-S 3.80 , MC2 : C-R 3.87 C-S 6.14		
Fan motor	Model		RA6V33-FC		RA6V60-GA		
	Winding resistance (at 20℃)	Ω	WHT-BLK 223 BLK-RED 221		WHT-BLK 90 BLK-RED 146		
	Dimensions W×H×D	mm	780×540×255		840×640×330		
	Weight	kg	35		66		
Special remarks	Sound level	dB	49		52		
	Fan speed	rpm	825		730		
	Fan speed regulator		1		1		
	Refrigerant filling capacity (R410A)	kg	0.90 (Room A+B)		1.00 (Room A) 0.80 (Room B)		
	Refrigeration oil (Model)	cc	350 (NEO22)		MC1 : 620 (NEO22), MC2 : 350 (NEO22)		

NOTE: Test conditions are based on ISO 5151.
Cooling : Indoor DB27°C WB19°C
Outdoor DB35°C WB24°C
Indoor-Outdoor piping length : 5m

NOTE: As for specification of the indoor units, refer to service manual OB393 (MSC-CA20/25/35VA-E1) or OB385 (MSC-GA20/25/35VA-E1).

Outdoor model			**MUX-3A60VB -** E1				
Function			Cooling				
Outdoor unit power supply			Single phase 230V,50Hz				
Indoor unit No.			Single A	Single B or C	Double A+B or A+C	Double B+C	Triple A+B+C
Capacity	Capacity	kW	2.6	2.9	2.6+2.8	1.75×2	2.5+1.75×2
	Dehumidification	ℓ /h	0.9	1.2	0.9+1.1	0.3×2	0.8+0.3×2
	Outdoor air flow	m³ /h	2,460				
Electrical data	Power outlet	A	20				
	Running current	A	3.64	4.86	8.18	4.86	8.41
	Power input	W	815	1,075	1,850	1,090	1,885
	Auxiliary heater	A(kW)	—				
	Power factor	%	97.3	96.2	98.3	97.5	97.5
	Starting current	A	47				
	Compressor motor current	A	3.07	4.29	7.61	4.29	7.84
	Fan motor current	A	0.57				
Coefficient of performance (C.O.P)			3.06	2.61	2.81	3.02	3.02
Compressor	Model		MC1 : RN099VHSHT, MC2 : RN125VHSHT				
	Output	W	MC1 : 650, MC2 : 800				
	Winding resistance (at 20℃)	Ω	MC1 : C-R 3.40, C-S 4.56 , MC2 : C-R 2.86, C-S 5.72				
Fan motor	Model		RA6V60-GA				
	Winding resistance (at 20℃)	Ω	WHT-BLK 90 BLK-RED 146				
Dimensions W×H×D		mm	840×640×330				
Weight		kg	65				
Special remarks	Sound level	dB	52				
	Fan speed	rpm	730				
	Fan speed regulator		1				
	Refrigerant filling capacity (R410A)	kg	0.80 (Room A) 1.00 (Room B+C)				
	Refrigeration oil (Model)	cc	MC1 : 350 (NEO22), MC2 : 350 (NEO22)				

NOTE: Test conditions are based on ISO 5151.
Cooling : Indoor DB27°C WB19°C
Outdoor DB35°C WB24°C
Indoor-Outdoor piping length : 5m

NOTE: As for specification of the indoor units, refer to service manual OB393 (MSC-CA20/25/35VA-E1) or OB385 (MSC-GA20/25/35VA-E1).

Outdoor model			**MUX-3A63VB -** E1				
Function			Cooling				
Outdoor unit power supply			Single phase 230V,50Hz				
Indoor unit No.			Single A	Single B or C	Double A+B or A+C	Double B+C	Triple A+B+C
Capacity	Capacity	kW	3.5	2.4	3.5+2.4	1.45×2	3.4+1.45×2
	Dehumidification	ℓ /h	1.4	0.9	1.4+0.9	0.4	1.4+0.4
	Outdoor air flow	m³ /h	2,460				
Electrical data	Power outlet	A	20				
	Running current	A	5.73	3.64	8.92	3.69	8.84
	Power input	W	1,280	815	1,975	830	1,980
	Auxiliary heater	A(kW)	—				
	Power factor	%	97.1	97.3	96.3	97.8	97.4
	Starting current	A	48				
	Compressor motor current	A	5.02	2.99	8.01	2.99	8.01
	Fan motor current	A	0.57				
Coefficient of performance (C.O.P)			2.65	2.82	2.88	3.22	3.01
Compressor	Model		MC1 : RN145VHSHT, MC2 : RN092VHSHT				
	Output	W	MC1 : 1,000, MC2 : 600				
	Winding resistance (at 20℃)	Ω	MC1 : C-R 2.43, C-S 3.80 , MC2 : C-R 3.87, C-S 0.14				
Fan motor	Model		RA6V60-GA				
	Winding resistance (at 20℃)	Ω	WHT-BLK 90 BLK-RED 146				
Dimensions W×H×D		mm	840×640×330				
Weight		kg	67				
Special remarks	Sound level	dB	52				
	Fan speed	rpm	730				
	Fan speed regulator		1				
	Refrigerant filling capacity (R410A)	kg	0.85 (Room A) 0.85 (Room B+C)				
	Refrigeration oil (Model)	cc	MC1 : 620 (NEO22), MC2 : 350 (NEO22)				

NOTE: Test conditions are based on ISO 5151.
Cooling : Indoor DB27°C WB19°C
Outdoor DB35°C WB24°C
Indoor-Outdoor piping length 5m

NOTE: As for specification of the indoor units, refer to service manual OB393 (MSC-CA20/25/35VA-E1) or OB385 (MSC-GA20/25/35VA-E1).

Outdoor model			**MUX-2A70VB -** E1	
Function			Cooling	
Outdoor unit power supply			Single phase 230V,50Hz	
Indoor unit No.			Single A or B	Double A+B
Capacity	Capacity	kW	3.5	3.5×2
	Dehumidification	ℓ /h	1.4	1.4×2
	Outdoor air flow	m³ /h	2,460	
Electrical data	Power outlet	A	20	
	Running current	A	5.88	11.49
	Power input	W	1,300	2,540
	Auxiliary heater	A(kW)	—	
	Power factor	%	96.1	96.1
	Starting current	A	54	
	Compressor motor current	A	5.31	10.92
	Fan motor current	A	0.57	
Coefficient of performance (C.O.P)			2.61	2.67
Compressor	Model		MC1 : RN145VHSHT, MC2 : RN145VHSHT	
	Output	W	MC1 : 1,000, MC2 : 1,000	
	Winding resistance (at 20℃)	Ω	MC1 : C-R 2.43, C-S 3.80 , MC2 : C-R 2.43, C-S 3.80	
Fan motor	Model		RA6V60-GA	
	Winding resistance (at 20℃)	Ω	WHT-BLK 90 BLK-RED 146	
Dimensions W×H×D		mm	840×640×330	
Weight		kg	68	
Special remarks	Sound level	dB	52	
	Fan speed	rpm	730	
	Fan speed regulator		1	
	Refrigerant filling capacity (R410A)	kg	0.95 (Room A) 0.95 (Room B)	
	Refrigeration oil (Model)	cc	MC1 : 620 (NEO22), MC2 : 620 (NEO22)	

NOTE: Test conditions are based on ISO 5151.
Cooling : Indoor DB27°C WB19°C
Outdoor DB35°C WB24°C
Indoor-Outdoor piping length : 5m

NOTE: As for specification of the indoor units, refer to service manual OB393 (MSC-CA20/25/35VA-E1) or OB385 (MSC-GA20/25/35VA-E1).

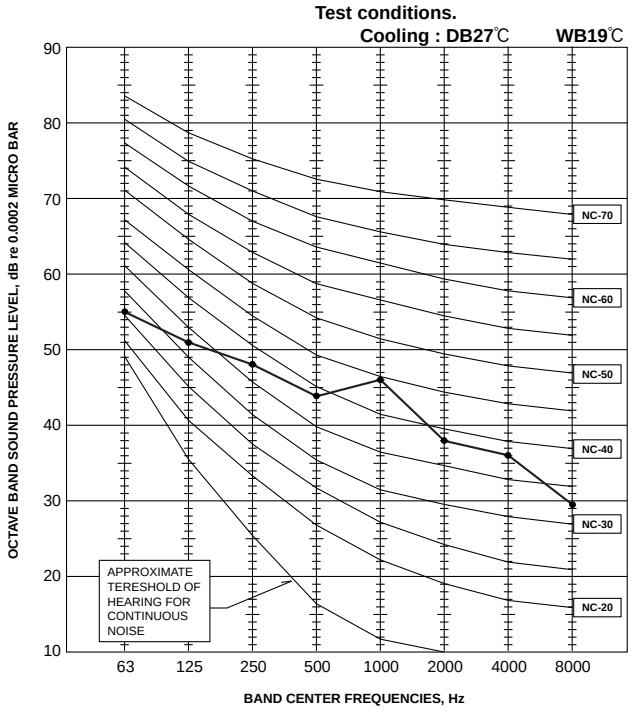
Outdoor model			**MUX-4A73VB -** E1							
Function			Cooling							
Outdoor unit power supply			Single phase 230V,50Hz							
Indoor unit No.			Single A or B	Single C or D	Double A+B	Double A+C or A+D or B+C or B+D	Double C+D	Triple A+B+C or A+B+D	Triple A+C+D or B+C+D	Four A+B+C+D
Capacity	Capacity	kW	3.4	2.75	1.95×2	3.4+2.7	1.7×2	1.95×2+2.8	3.4+1.7×2	1.95×2+1.7×2
	Dehumidification	ℓ /h	1.2	1.1	0.2×2	1.2+1.1	0.3×2	0.2×2+1.1	1.2+0.3×2	0.2×2+0.3×2
	Outdoor air flow	m³ /h	2,760							
Electrical data	Power outlet	A	20							
	Running current	A	5.28	4.54	5.46	9.57	4.78	9.61	9.66	9.75
	Power input	W	1,180	1,015	1,210	2,095	1,060	2,105	2,140	2,210
	Auxiliary heater	A(kW)	—							
	Power factor	%	97.2	97.2	96.4	95.2	96.4	95.2	96.3	98.6
	Starting current	A	52							
	Compressor motor current	A	4.75	4.01	4.93	9.04	4.25	9.08	9.13	9.22
	Fan motor current	A	0.53							
Coefficient of performance (C.O.P)			2.79	2.62	3.02	2.81	3.01	3.02	3.02	3.09
Compressor	Model		MC1 : RN145VHSHT, MC2 : RN125VHSHT							
	Output	W	MC1 : 1,000, MC2 : 800							
	Winding resistance (at 20℃)	Ω	MC1 : C-R 2.43, C-S 3.80 , MC2 : C-R 2.86, C-S 5.72							
Fan motor	Model		RA6V60-FA							
	Winding resistance (at 20℃)	Ω	WHT-BLK 79 BLK-RED 80							
Dimensions W×H×D		mm	840×850×330							
Weight		kg	76							
Special remarks	Sound level	dB	52							
	Fan speed	rpm	730							
	Fan speed regulator		1							
	Refrigerant filling capacity (R410A)	kg	1.05 (Room A+B) 1.05 (Room C+D)							
	Refrigeration oil (Model)	cc	MC1 : 620 (NEO22), MC2 : 350 (NEO22)							

NOTE: Test conditions are based on ISO 5151.
Cooling : Indoor DB27°C WB19°C
Outdoor DB35°C WB24°C
Indoor-Outdoor piping length : 5m

5 NOISE CRITERIA CURVES

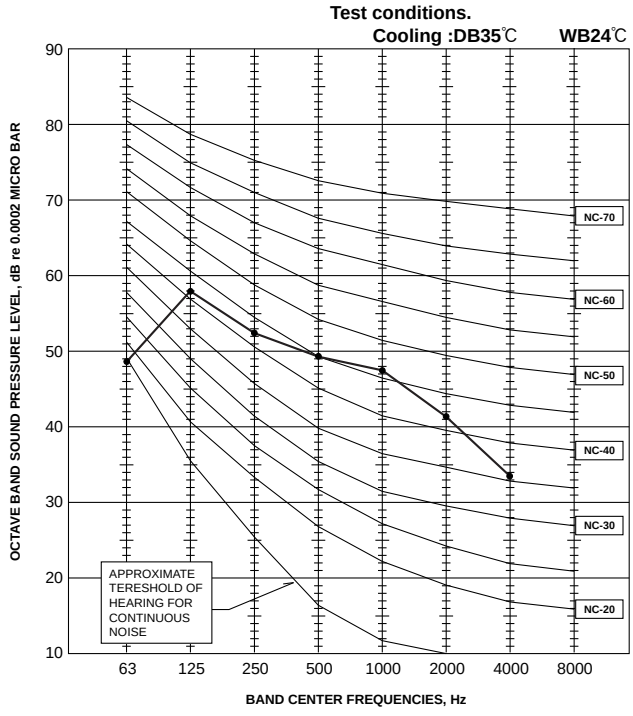
MUX-2A28VB- E1

FUNCTION	SPL(dB(A))	LINE
COOL	49	●—●



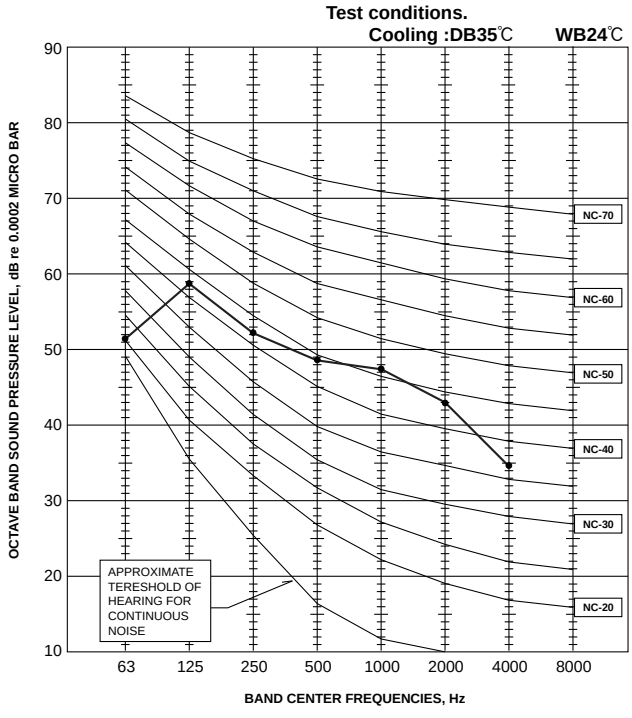
MUX-2A59VB - E1
MUX-3A60VB - E1
MUX-3A63VB - E1
MUX-2A70VB - E1

FUNCTION	SPL(dB(A))	LINE
COOL	52	●—●



MUX-4A73VB - E1

FUNCTION	SPL(dB(A))	LINE
COOL	52	●—●

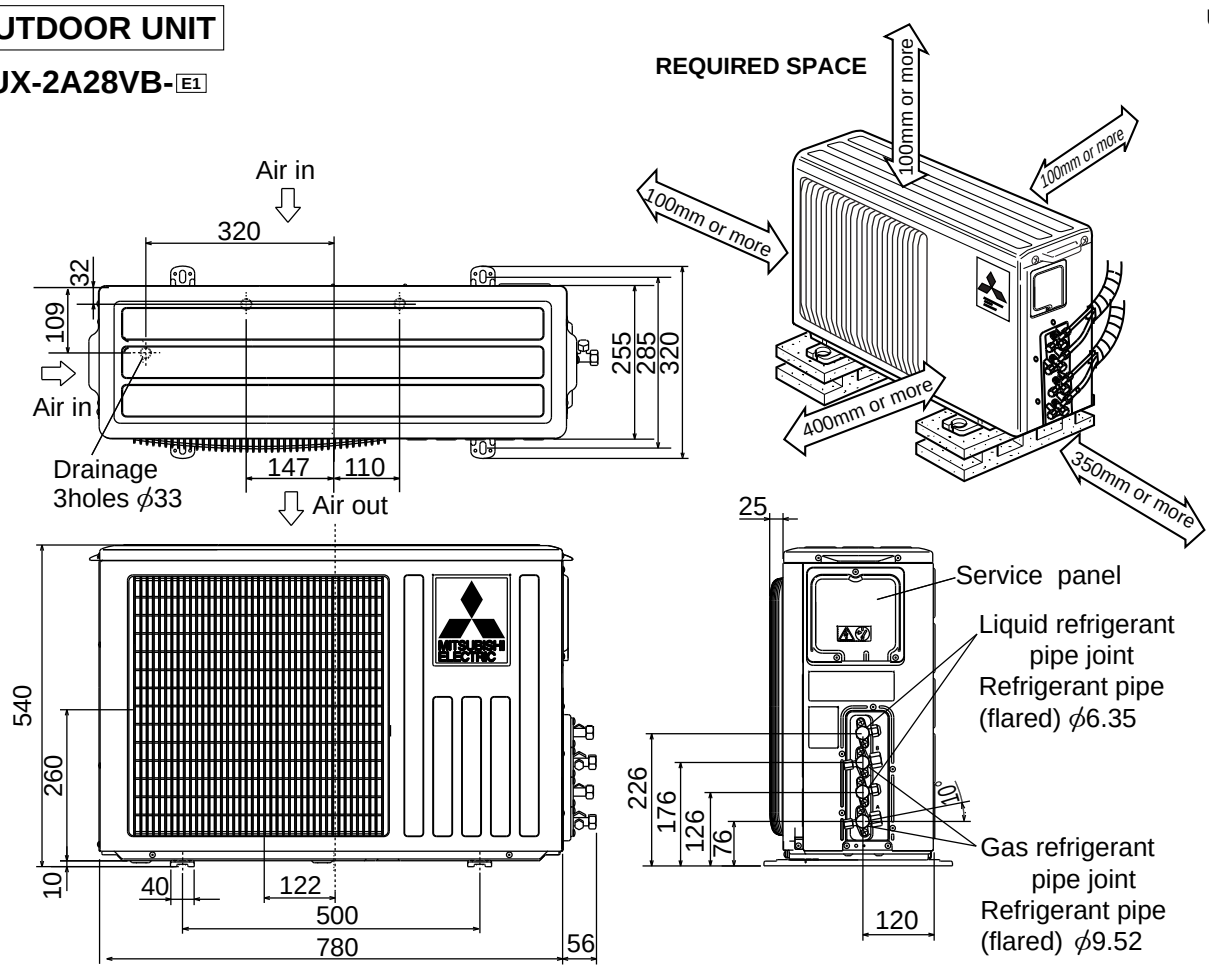


6 OUTLINES AND DIMENSIONS

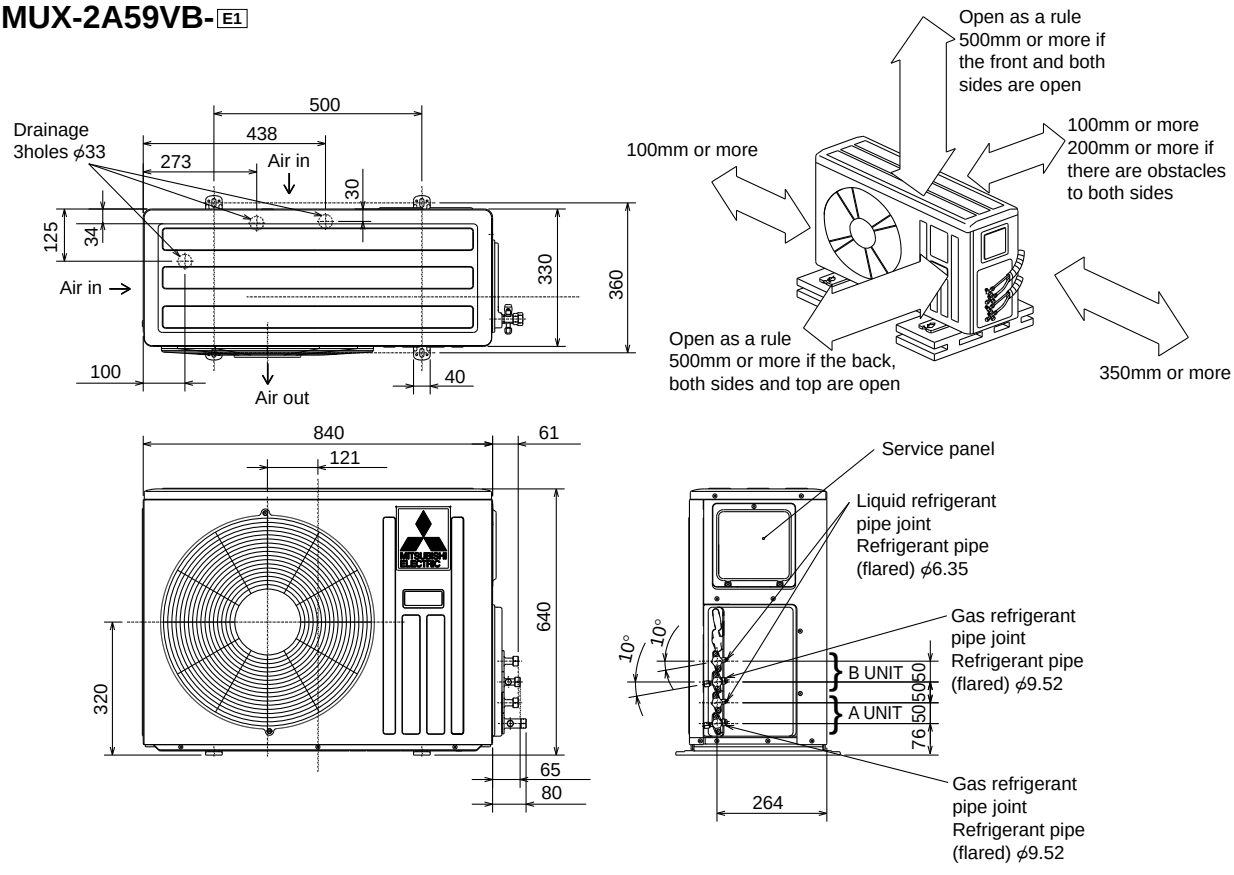
OUTDOOR UNIT

Unit: mm

MUX-2A28VB-E1



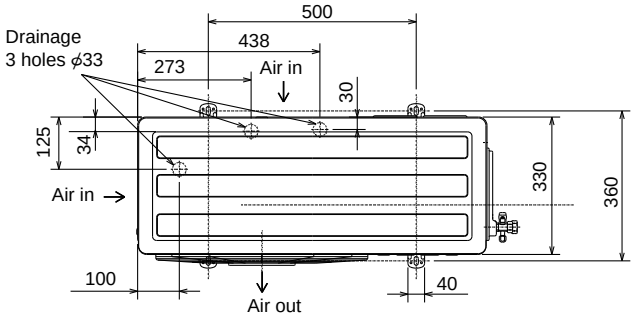
MUX-2A59VB-E1

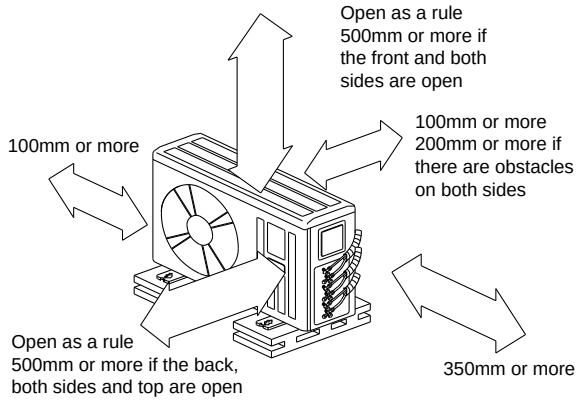


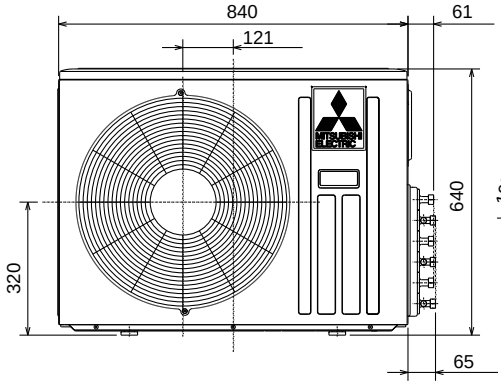
OUTDOOR UNIT

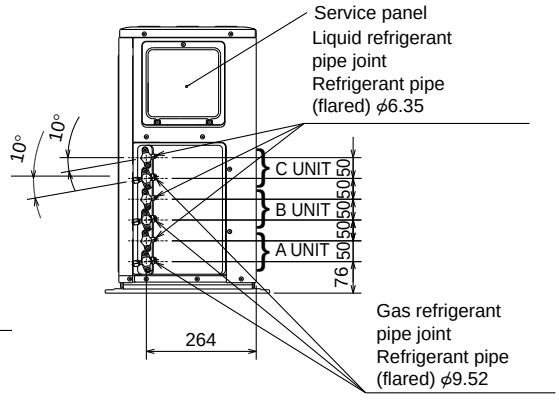
Unit: mm

MUX-3A60VB-E1
MUX-3A63VB-E1

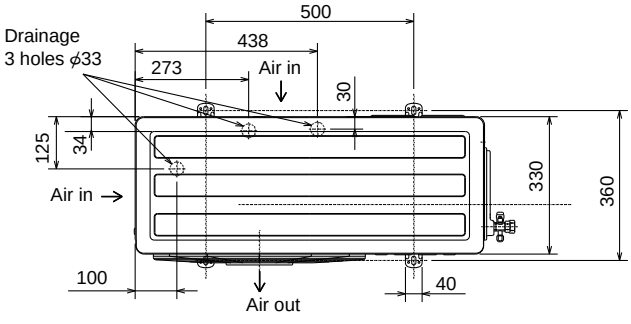


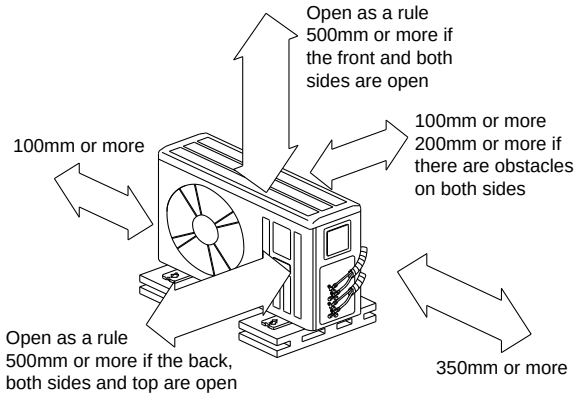


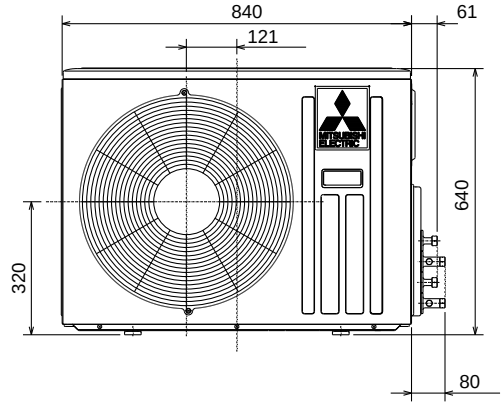


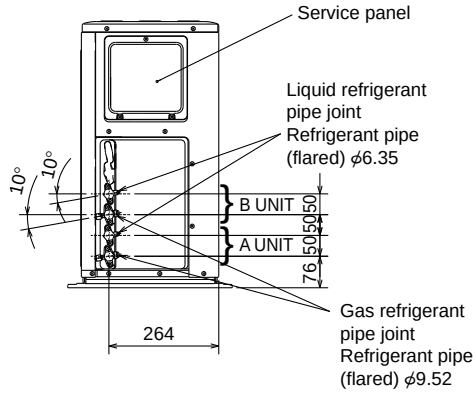


MUX-2A70VB-E1





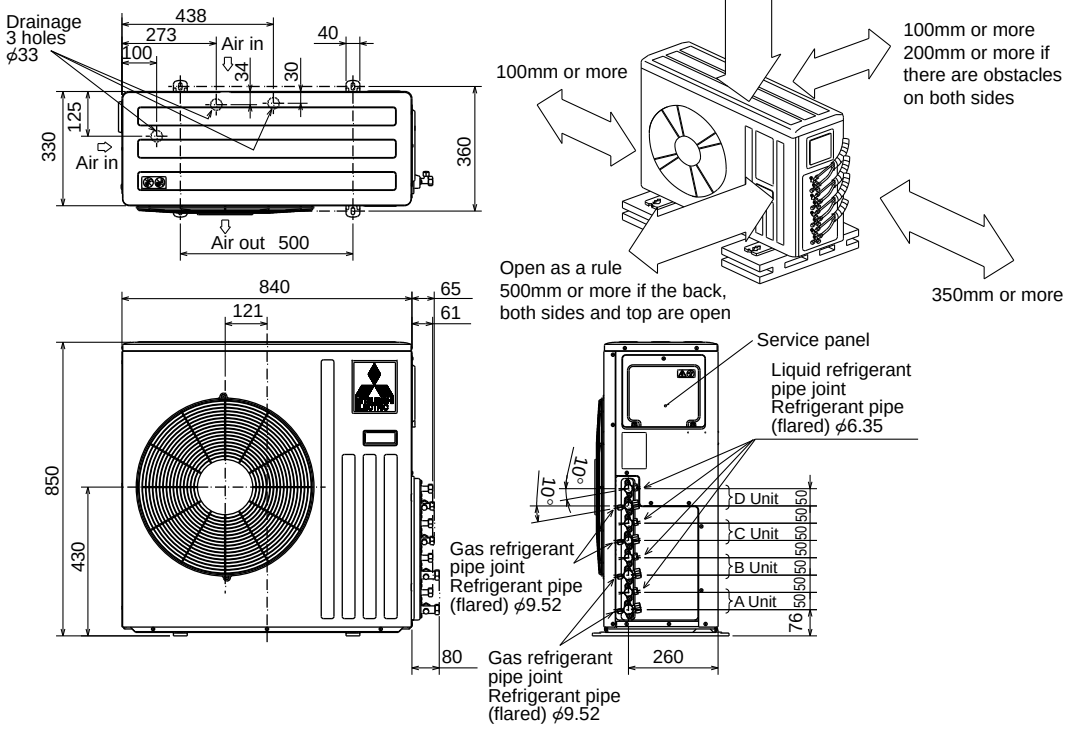




OUTDOOR UNIT

MUX-4A73VB-E1

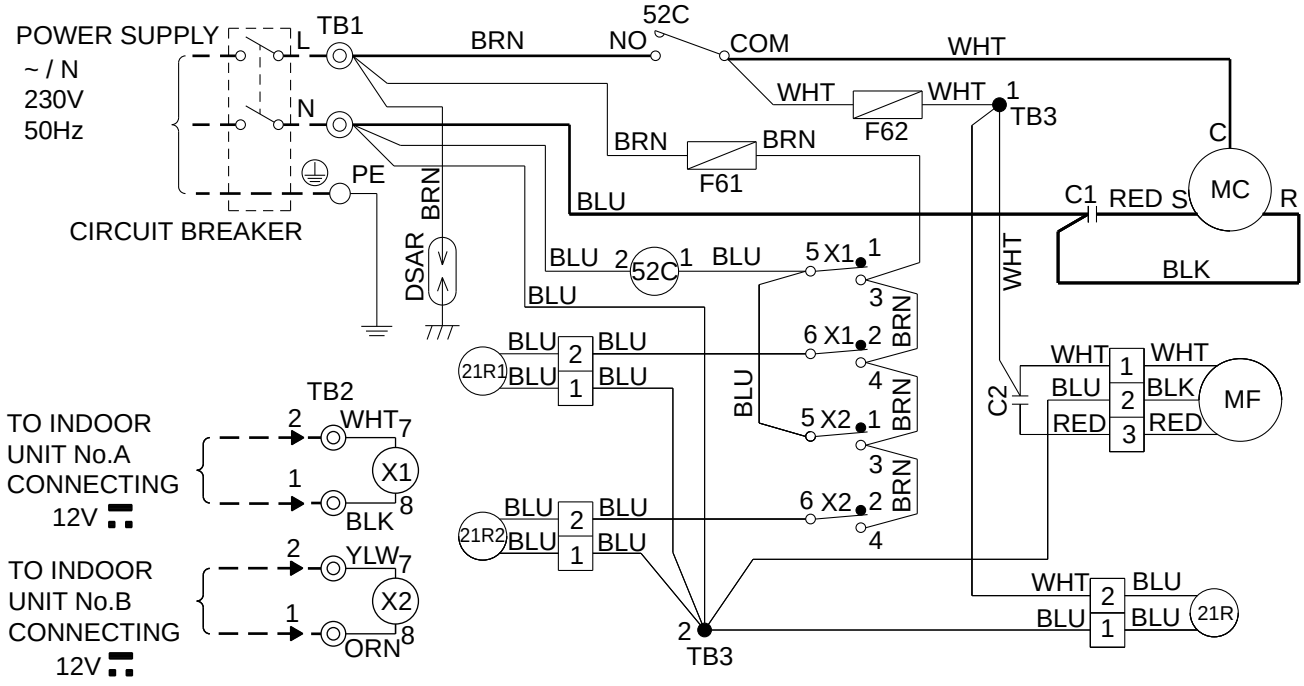
Unit: mm



7 WIRING DIAGRAM

MUX-2A28VB -E1

OUTDOOR UNIT MODEL WIRING DIAGRAM



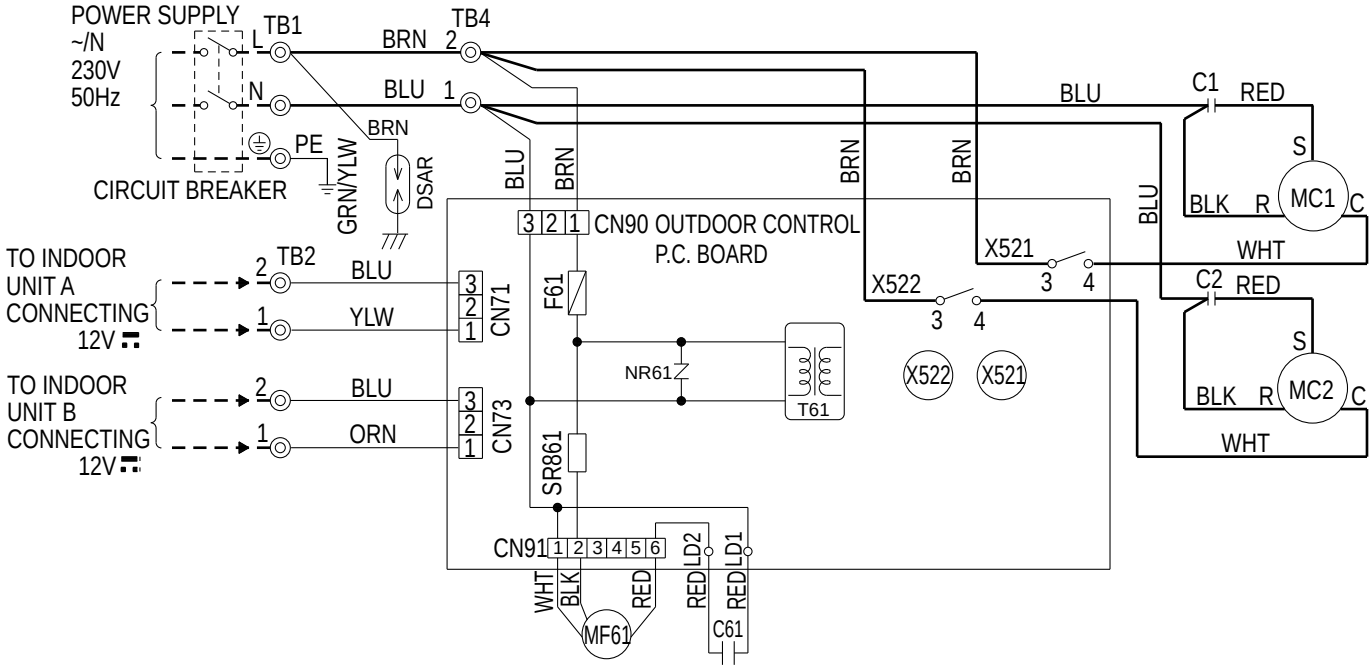
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR	MF	OUTDOOR FAN MOTOR(INNER FUSE)	21R1	SOLENOID COIL(A)
C2	OUTDOOR FAN CAPACITOR	TB1,TB2,TB3	TERMINAL BLOCK	21R2	SOLENOID COIL(B)
DSAR	SURGE ABSORBER	X1	RELAY(A)	52C	COMPRESSOR CONTACTOR
F61,F62	FUSE(2A)	X2	RELAY(B)		
MC	COMPRESSOR(INNER PROTECTOR)	21R	SOLENOID COIL		

NOTE:1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
◎: Terminal block, □□□□: Connector

MUX-2A59VB -E1
MUX-2A70VB -E1

MODELS WIRING DIAGRAM

OUTDOOR UNIT



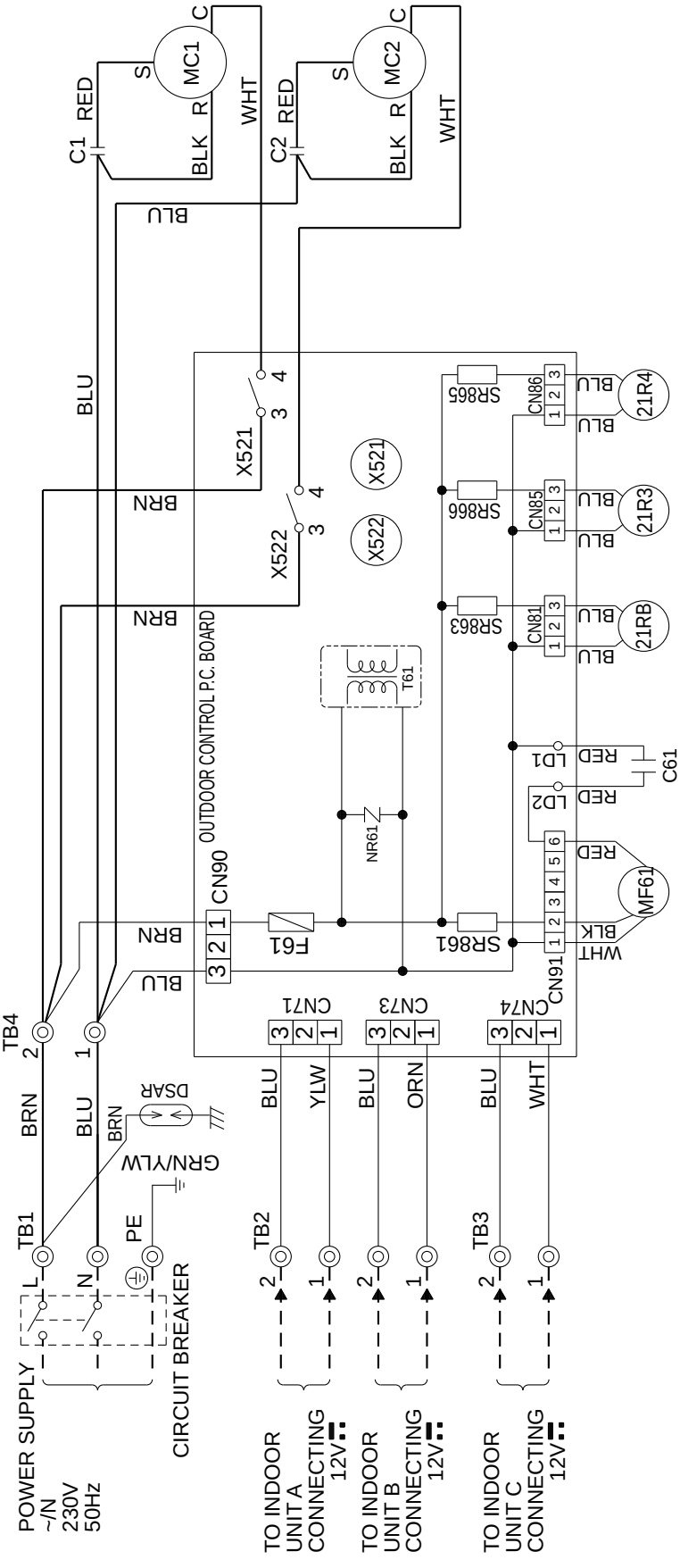
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR(MC1)	MC1	COMPRESSOR(INNER PROTECTOR)	TB1	TERMINAL BLOCK
C2	COMPRESSOR CAPACITOR(MC2)	MC2	COMPRESSOR(INNER PROTECTOR)	TB2~TB4	TERMINAL BLOCK
C61	OUTDOOR FAN CAPACITOR	MF61	OUTDOOR FAN MOTOR (INNER PROTECTOR)	T61	TRANSFORMER
DSAR	SURGE ABSORBER	NR61	SURGE ABSORBER	X521	COMPRESSOR CONTACTOR(MC1)
F61	FUSE(3.15A)	SR861	OUTDOOR FAN RELAY	X522	COMPRESSOR CONTACTOR(MC2)

NOTE:1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
◎: Terminal block, □□□□: Connector

MUX-3A60VB -E1

OUTDOOR UNIT

MODEL WIRING DIAGRAM



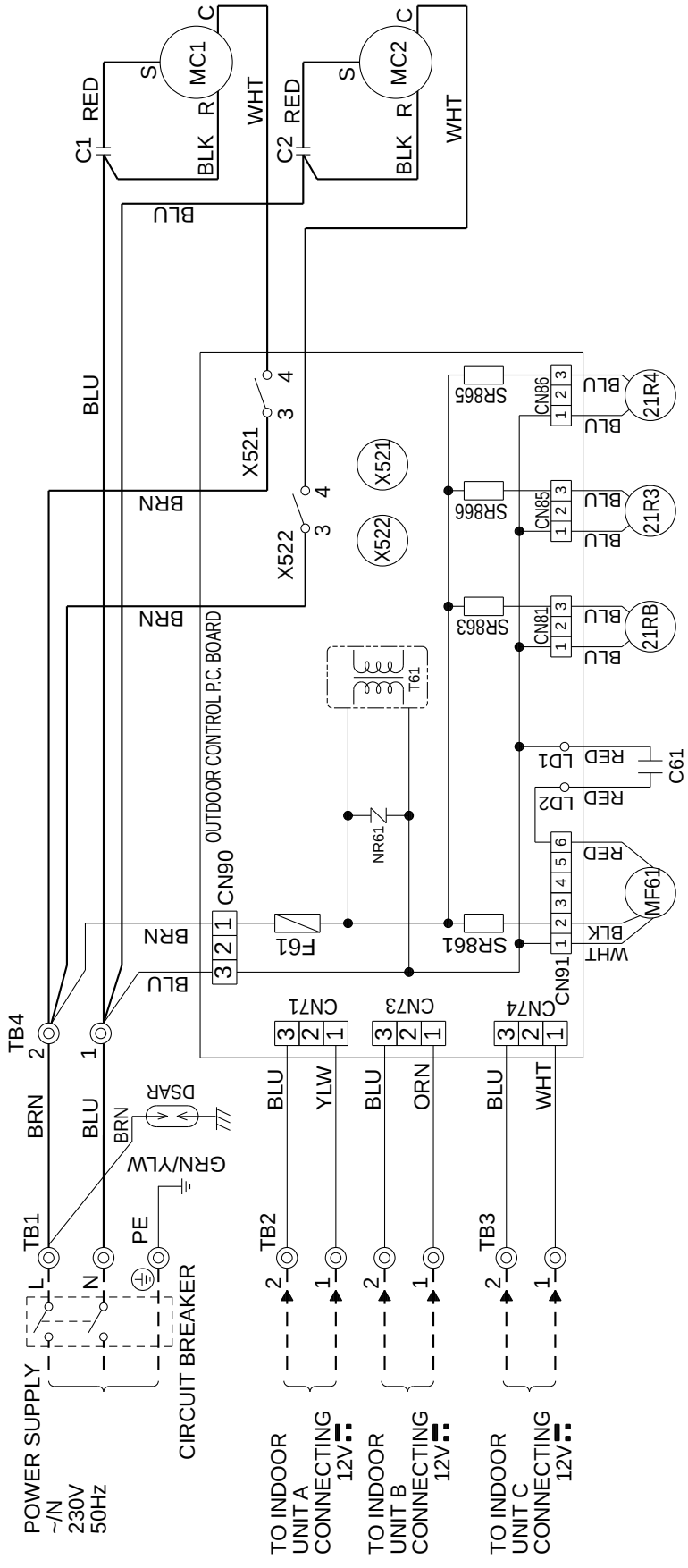
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR(MC1)	MF61	OUTDOOR FAN MOTOR(INNER PROTECTOR)	TB2~TB4	TERMINAL BLOCK
C2	COMPRESSOR CAPACITOR(MC2)	NR61	SURGE ABSORBER	T61	TRANSFORMER
C61	OUTDOOR FAN CAPACITOR	SR861	OUTDOOR FAN RELAY	X521	COMPRESSOR CONTACTOR(MC1)
DSAR	SURGE ABSORBER	SR863	RELAY (21RB)	X522	COMPRESSOR CONTACTOR(MC2)
F61	FUSE(3.15A)	SR865	RELAY (C) (21R4)	21RB	SOLENOID COIL
MC1	COMPRESSOR(INNER PROTECTOR)	SR866	RELAY (B) (21R3)	21R3	SOLENOID COIL (B)
MC2	COMPRESSOR(INNER PROTECTOR)	TB1	TERMINAL BLOCK	21R4	SOLENOID COIL (C)

NOTE:1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
◎: Terminal block, □□□ : Connector

MUX-3A63VB -E1

OUTDOOR UNIT

MODEL WIRING DIAGRAM



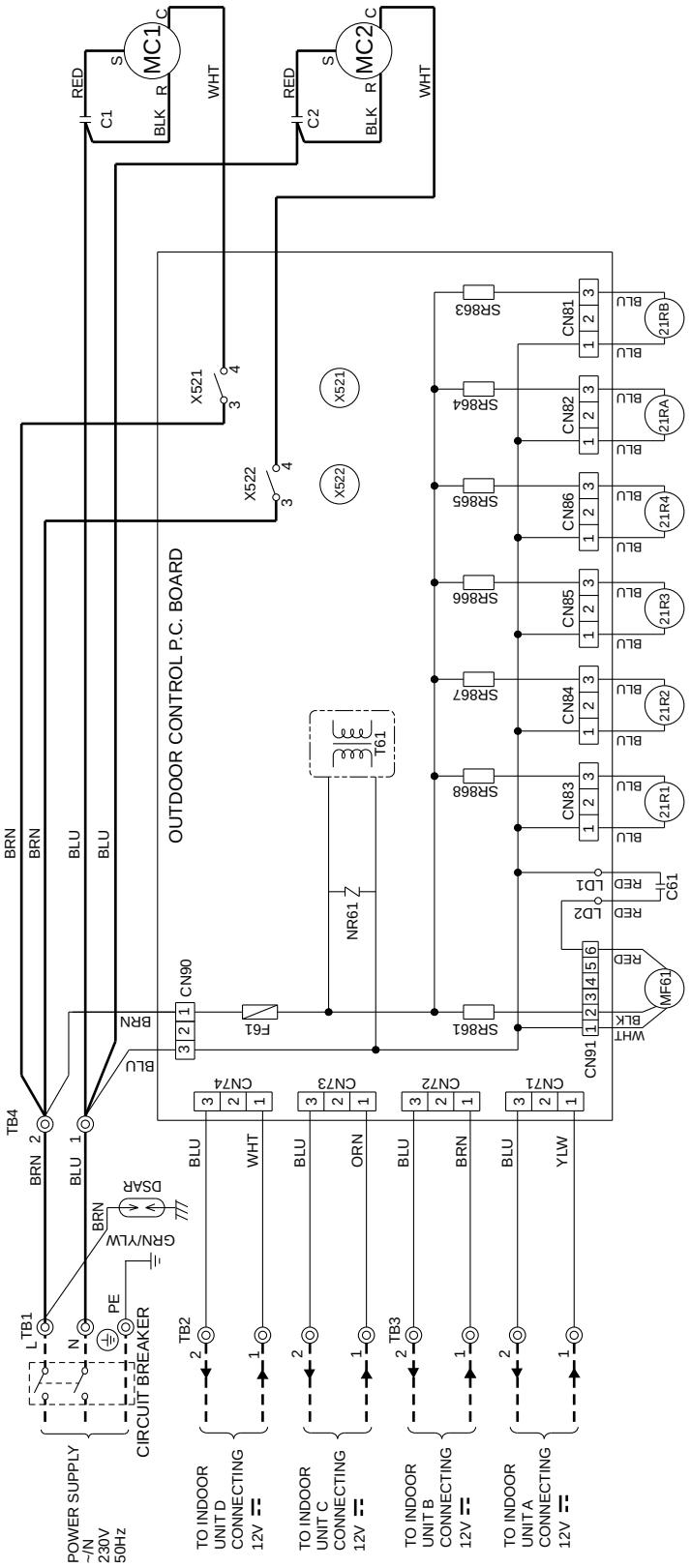
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR(MC1)	MF61	OUTDOOR FAN MOTOR(INNER PROTECTOR)	TB2~TB4	TERMINAL BLOCK
C2	COMPRESSOR CAPACITOR(MC2)	NR61	SURGE ABSORBER	T61	TRANSFORMER
C61	OUTDOOR FAN CAPACITOR	SR861	OUTDOOR FAN RELAY	X521	COMPRESSOR CONTACTOR(MC1)
DSAR	SURGE ABSORBER	SR863	RELAY (21RB)	X522	COMPRESSOR CONTACTOR(MC2)
F61	FUSE(3.15A)	SR865	RELAY (C) (21R4)	21RB	SOLENOID COIL
MC1	COMPRESSOR(INNER PROTECTOR)	SR866	RELAY (B) (21R3)	21R3	SOLENOID COIL (B)
MC2	COMPRESSOR(INNER PROTECTOR)	TB1	TERMINAL BLOCK	21R4	SOLENOID COIL (C)

NOTE:1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
◎: Terminal block, □□□ : Connector

MUX-4A73VB -E1

OUTDOOR UNIT

MODEL WIRING DIAGRAM



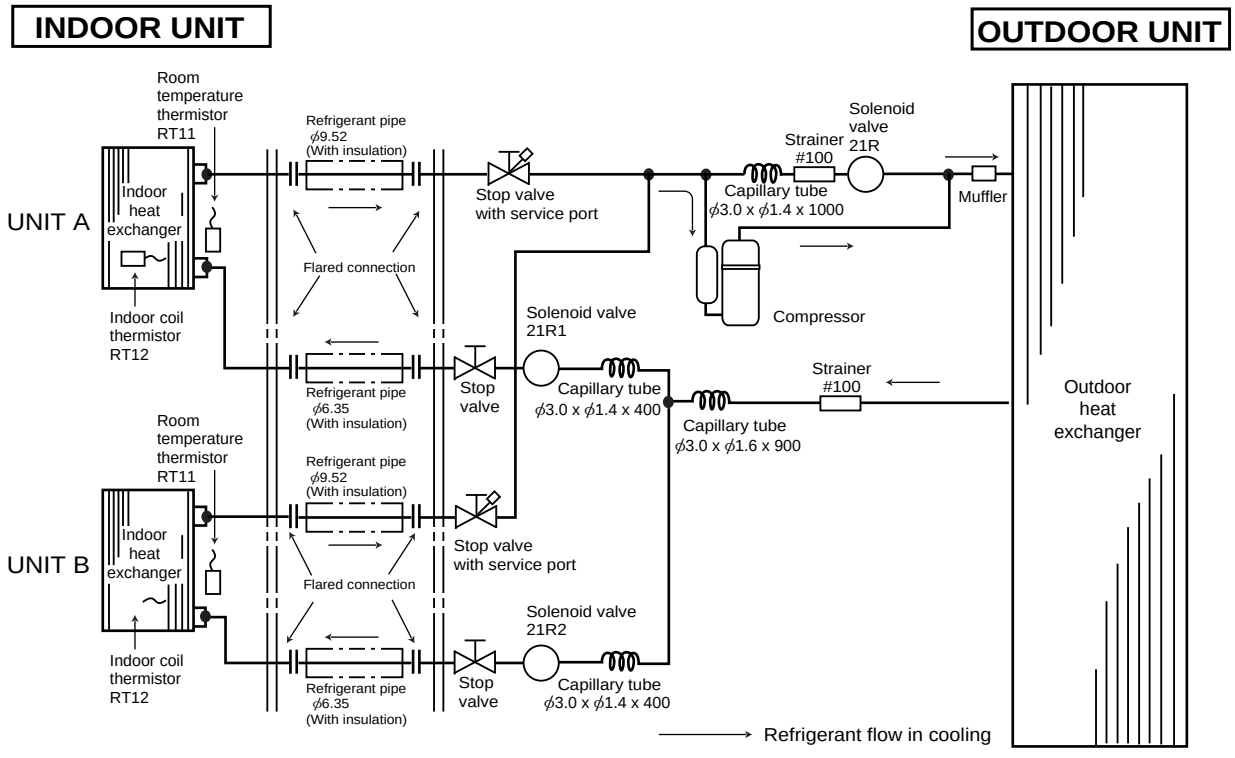
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR(MC1)	SR861	OUTDOOR FAN RELAY	X521	COMPRESSOR CONTACTOR(MC1)
C2	COMPRESSOR CAPACITOR(MC2)	SR863	RELAY (21RB)	X522	COMPRESSOR CONTACTOR(MC2)
C61	OUTDOOR FAN CAPACITOR	SR864	RELAY (21RA)	21RA	SOLENOID COIL (BALANCE)
DSAR	SURGE ABSORBER	SR865	RELAY (D) (21R4)	21RB	SOLENOID COIL (BALANCE)
F61	FUSE(3.15A)	SR866	RELAY (C) (21R3)	21R1	SOLENOID COIL (A)
MC1	COMPRESSOR(INNER PROTECTOR)	SR867	RELAY (B) (21R2)	21R2	SOLENOID COIL (B)
MC2	COMPRESSOR(INNER PROTECTOR)	SR868	RELAY (A) (21R1)	21R3	SOLENOID COIL (C)
MF61	OUTDOOR FAN MOTOR(INNER PROTECTOR)	TB1~TB4	TERMINAL BLOCK	21R4	SOLENOID COIL (D)
NR61	SURGE ABSORBER	T61	TRANSFORMER		

NOTE:1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
◎: Terminal block, □□□□ : Connector

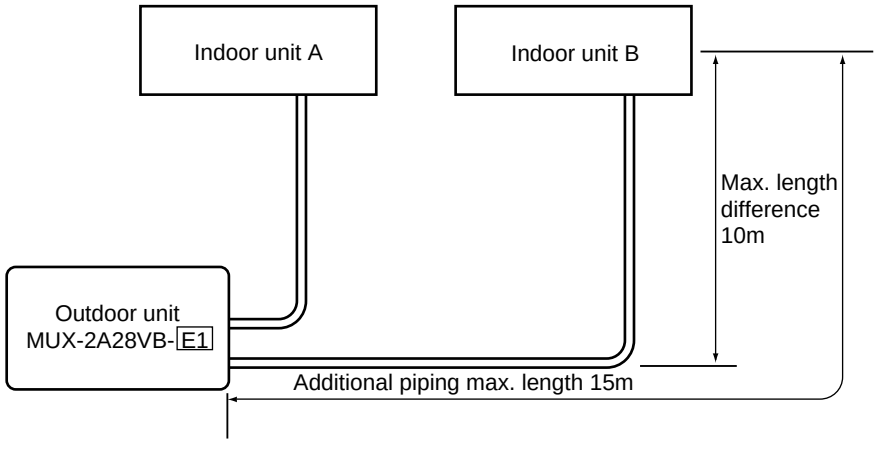
8 REFRIGERANT SYSTEM DIAGRAM

Unit : mm

MUX-2A28VB-E1



MAX. REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



ADDITIONAL REFRIGERANT CHARGE (R410A:g)

UNIT No.	Outdoor unit precharged	Refrigerant piping length (one way)																				
		10 m	11 m	12 m	13 m	14 m	15 m	16 m	17 m	18 m	19 m	20 m	21 m	22 m	23 m	24 m	25 m	26 m	27 m	28 m	29 m	30 m
A unit + B unit	900g	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200

PIPING PREPARATION

① Table below shows the specifications of pipes commercially available.

UNIT No.	Pipe	Outside diameter mm	Insulation thickness	Insulation material
A and B UNIT	For liquid	6.35	8 mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8 mm	

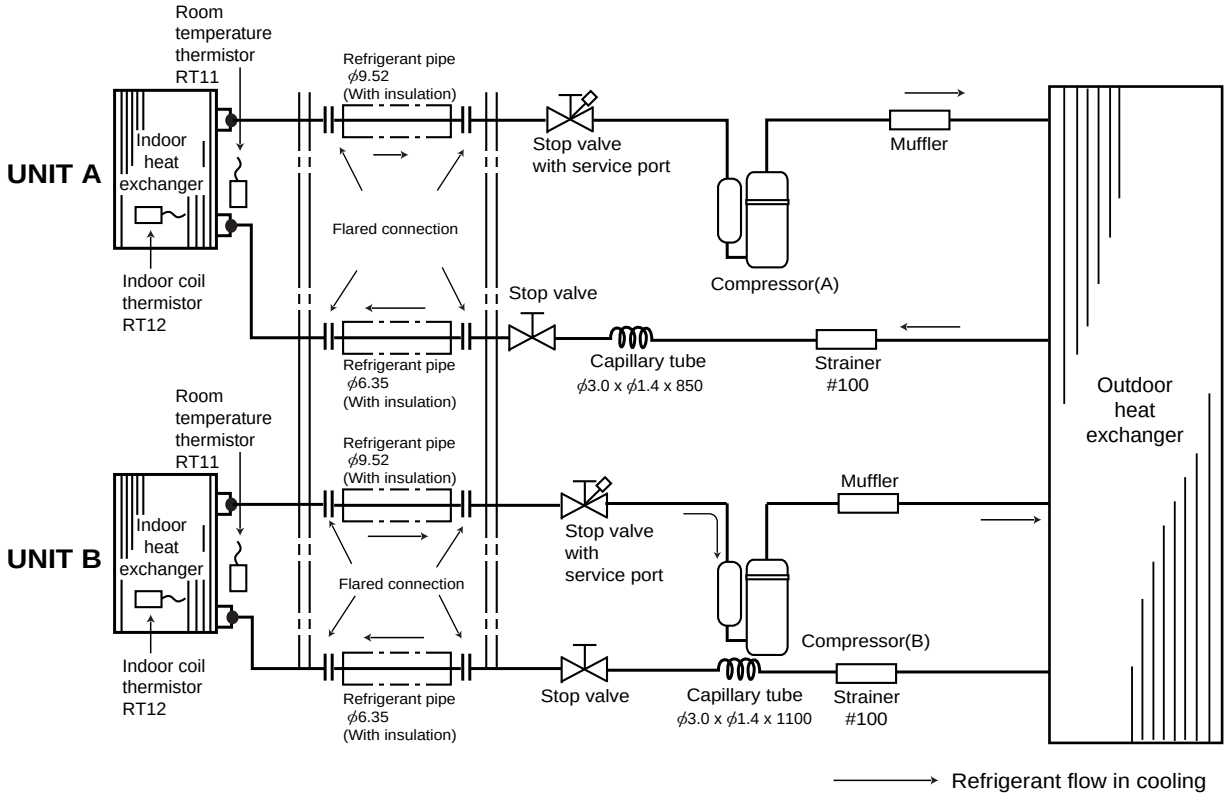
② Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.

③ Refrigerant bending radius must be 10cm or more.

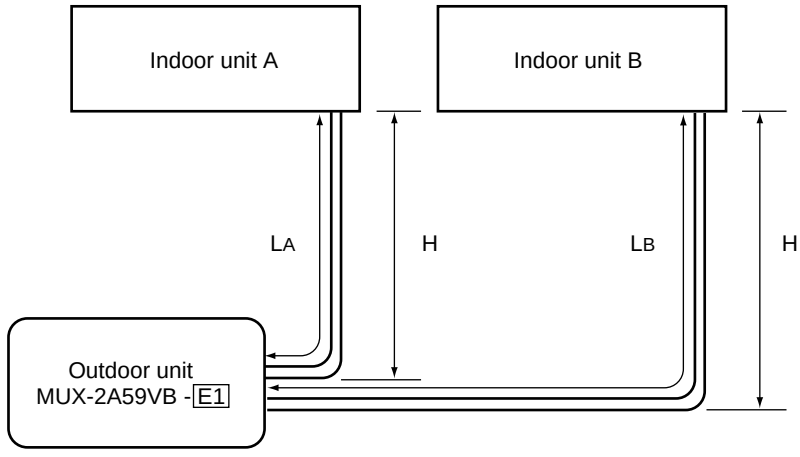
Unit : mm

MUX-2A59VB-E1

INDOOR UNIT **OUTDOOR UNIT**



MAX.REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



	UNIT No.	Pipe length		Height difference (H)	No. of bends
Max. limits	A	LA	15m	10m	10
	B	LB	15m	10m	10

ADDITIONAL REFRIGERANT CHARGE (R410A:g)

		Refrigerant piping length (one way)								
A unit	Outdoor unit precharged	7m	8m	9m	10m	11m	12m	13m	14m	15m
	1000g	0	20	40	60	80	100	120	140	160
		Refrigerant piping length (one way,2 unit total)								
B unit	Outdoor unit precharged	7m	8m	9m	10m	11m	12m	13m	14m	15m
	800g	0	20	40	60	80	100	120	140	160

PIPING PREPARATION

①Table below shows the specifications of pipes commercially available.

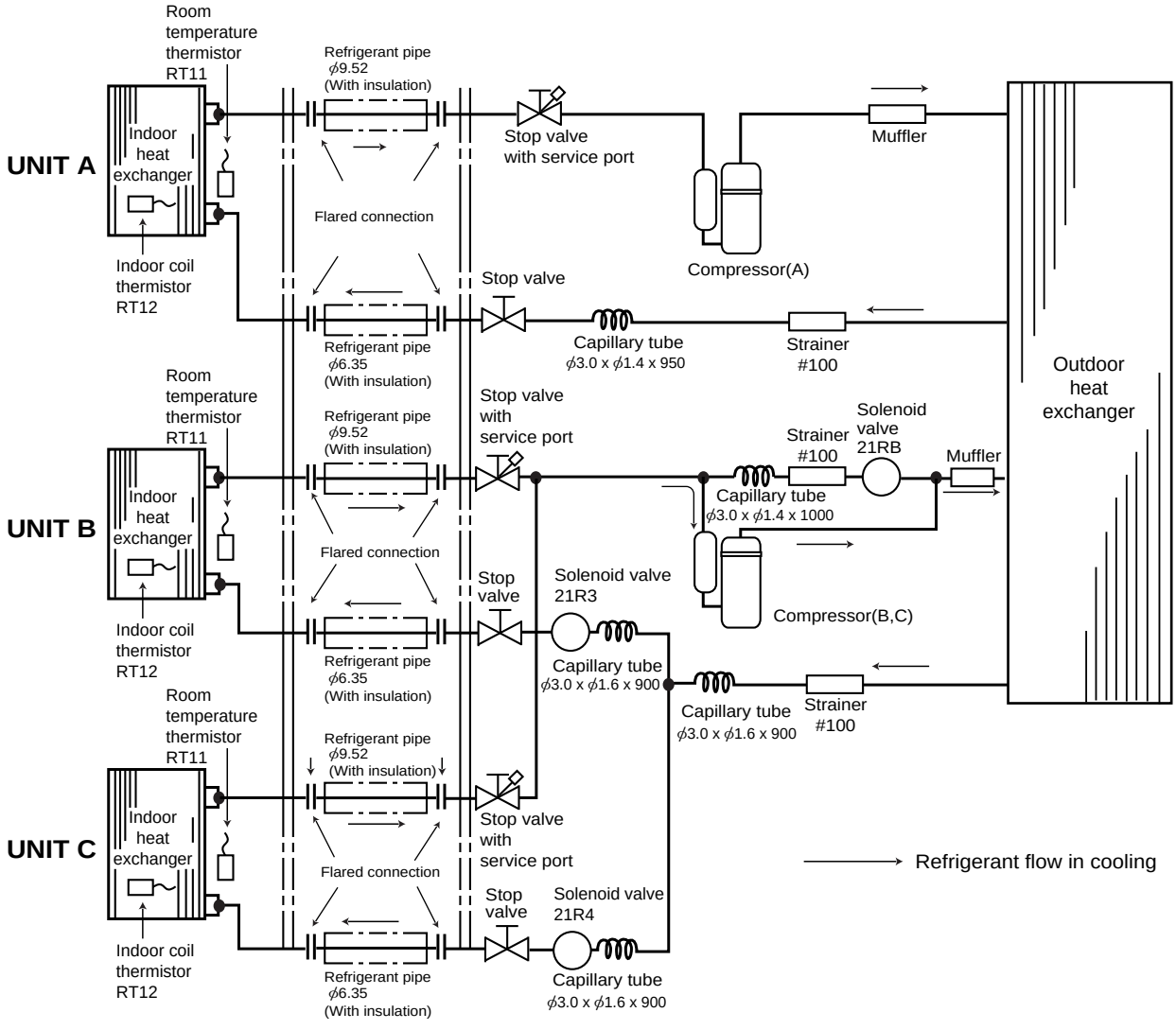
UNIT No.	Pipe	Outside diameter	Insulation thickness	Insulation material
		mm		
A unit	For liquid	6.35	8mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8mm	
B unit	For liquid	6.35	8mm	
	For gas	9.52	8mm	

②Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.
③Refrigerant bending radius must be 10cm or more.

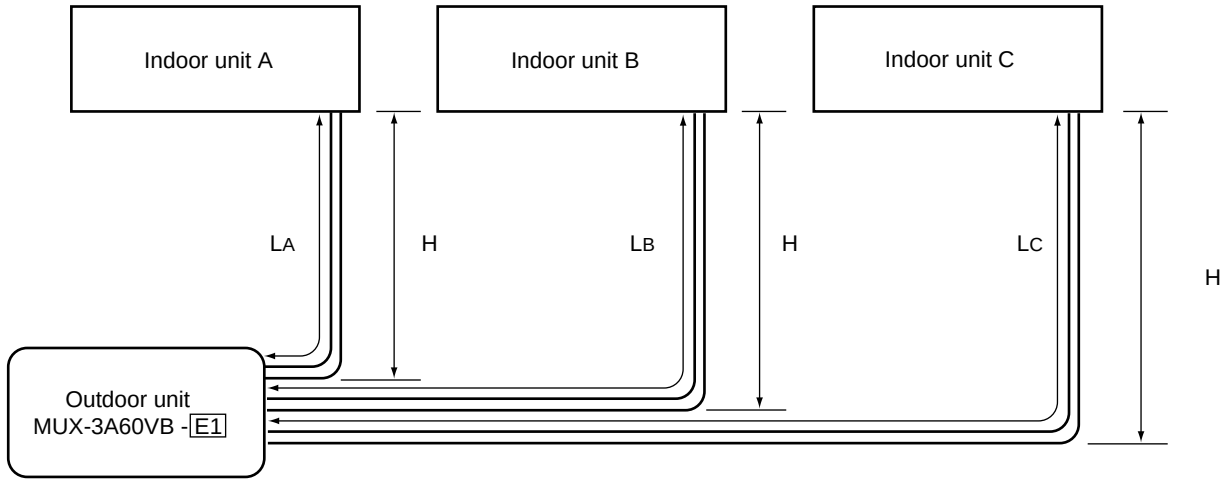
Unit : mm

MUX-3A60VB-E1

INDOOR UNIT **OUTDOOR UNIT**



MAX.REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



	UNIT No.	Pipe length				Height difference (H)	No. of bends	
Max. limits	A	LA	15m			10m	10	
	B	LB	15m	LB + LC	Total 30m	10m	10	Total 15
	C	LC	15m			10m	10	

ADDITIONAL REFRIGERANT CHARGE (R410A:g)

A unit	Outdoor unit precharged	Refrigerant piping length (one way)								
		7m	8m	9m	10m	11m	12m	13m	14m	15m
	800g	0	20	40	50	80	100	120	140	160

B unit + C unit	Outdoor unit precharged	Refrigerant piping length (one way, 2 unit total)																							
		10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	21m	22m	23m	24m	25m	26m	28m	27m	29m	30m			
	1000g	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	180	170	190	200			

PIPING PREPARATION

①Table below shows the specifications of pipes commercially available.

UNIT No.	Pipe	Outside diameter	Insulation thickness	Insulation material
		mm		
A , B and C unit	For liquid	6.35	8mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8mm	

②Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.

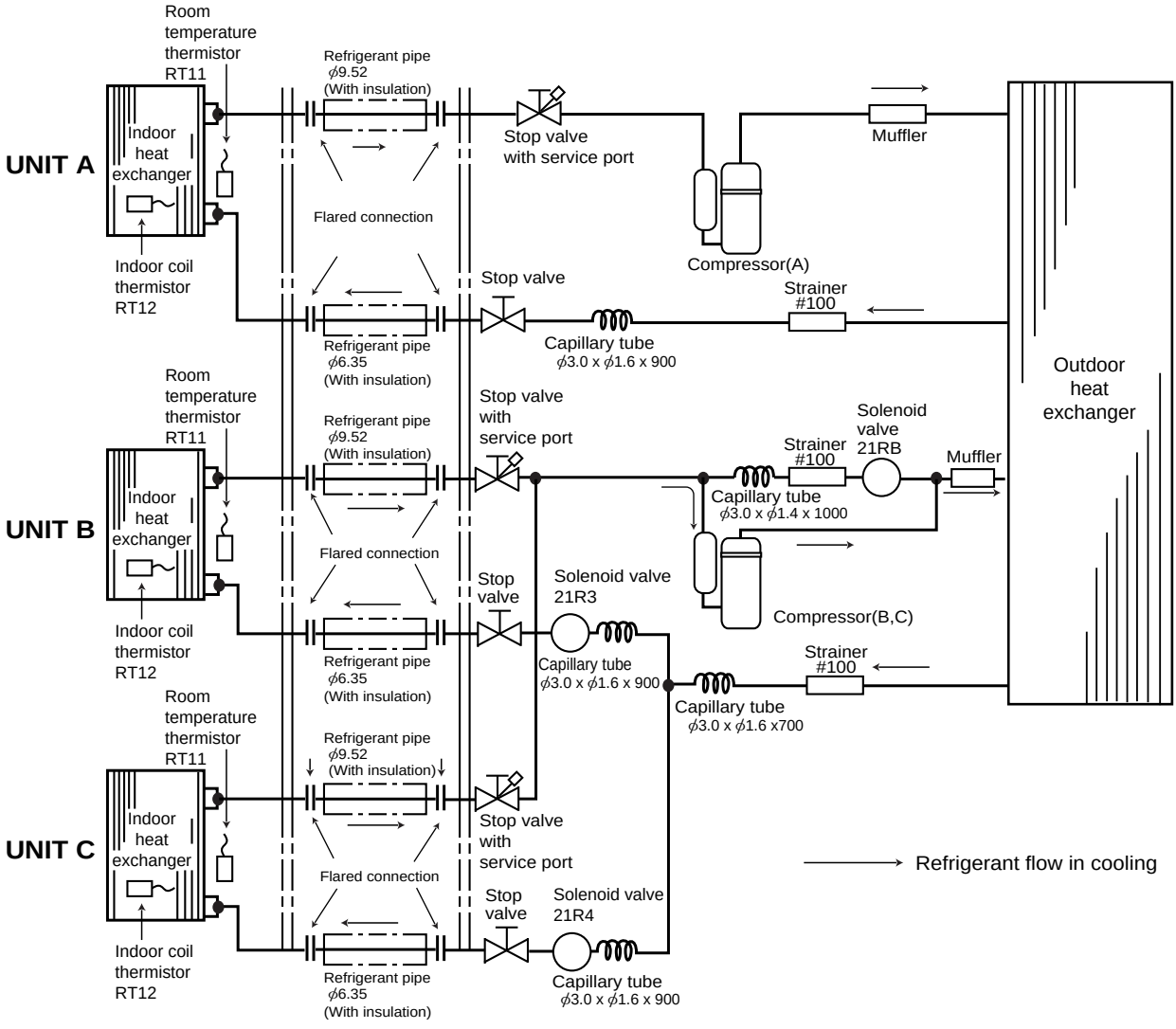
③Refrigerant bending radius must be 100mm or more.

Unit : mm

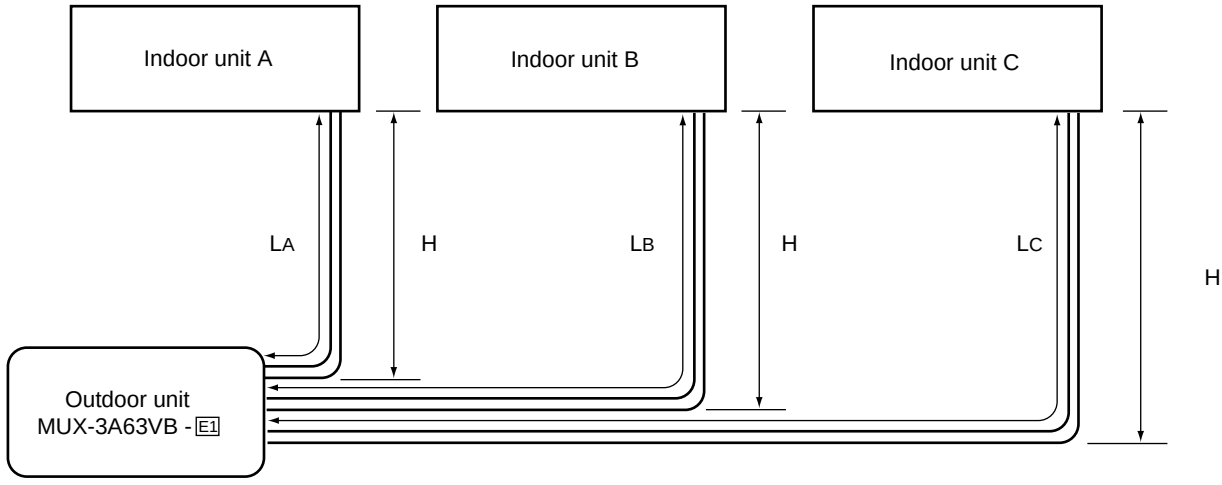
MUX-3A63VB- E1

INDOOR UNIT

OUTDOOR UNIT



MAX.REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



	UNIT No.	Pipe length				Height difference (H)	No. of bends	
Max. limits	Unit A	LA	15m			10m	10	
	Unit B	LB	15m	LB + LC	Total 30m	10m	10	Total 15
	Unit C	LC	15m			10m	10	

ADDITIONAL REFRIGERANT CHARGE (R410A:g)

Unit A	Outdoor unit precharged	Refrigerant piping length (one way)								
		7m	8m	9m	10m	11m	12m	13m	14m	15m
	850g	0	20	40	60	80	100	120	140	160

Unit B + Unit C	Outdoor unit precharged	Refrigerant piping length (one way, 2 unit total)																				
		10 m	11 m	12 m	13 m	14 m	15 m	16 m	17 m	18 m	19 m	20 m	21 m	22 m	23 m	24 m	25 m	26 m	27 m	28 m	29 m	30 m
	850g	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200

PIPING PREPARATION

①Table below shows the specifications of pipes commercially available.

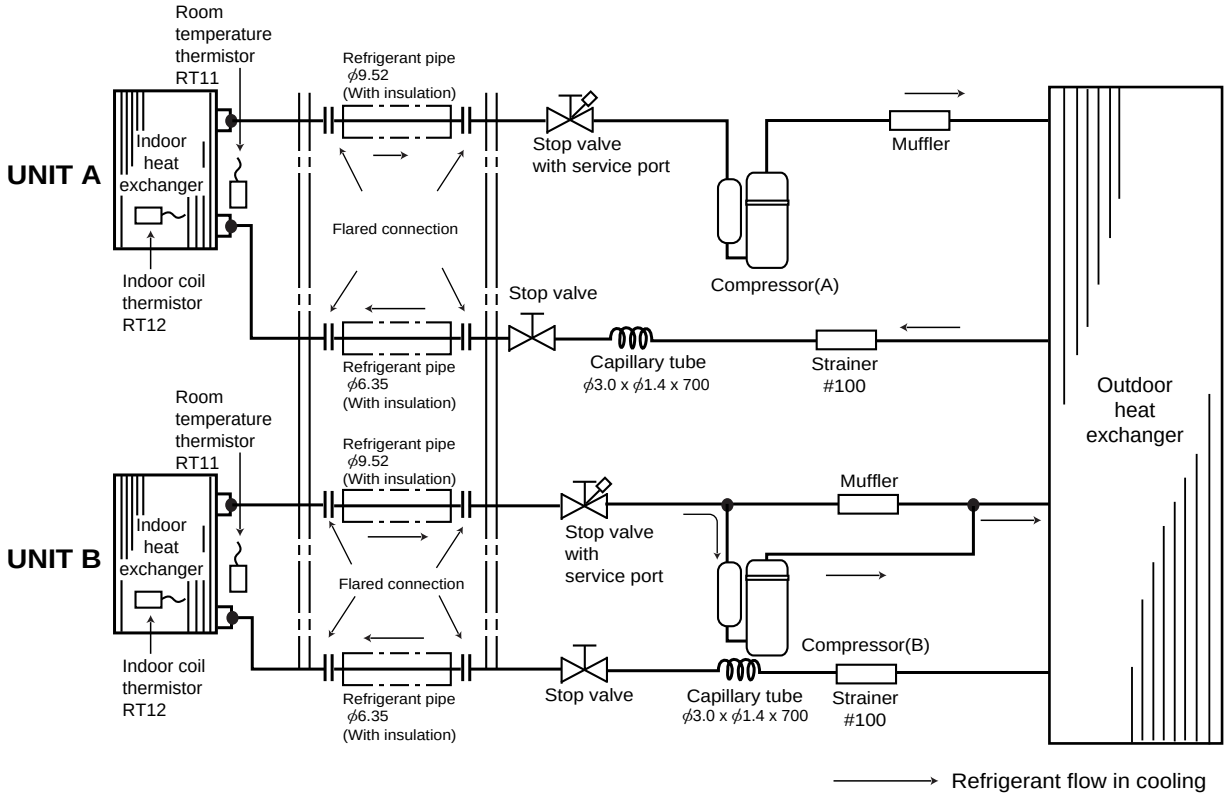
UNIT No.	Pipe	Outside diameter	Insulation thickness	Insulation material
		mm		
Unit A	For liquid	6.35	8mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8mm	
Unit B and Unit C	For liquid	6.35	8mm	
	For gas	9.52	8mm	

②Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.
③Refrigerant bending radius must be 100mm or more.

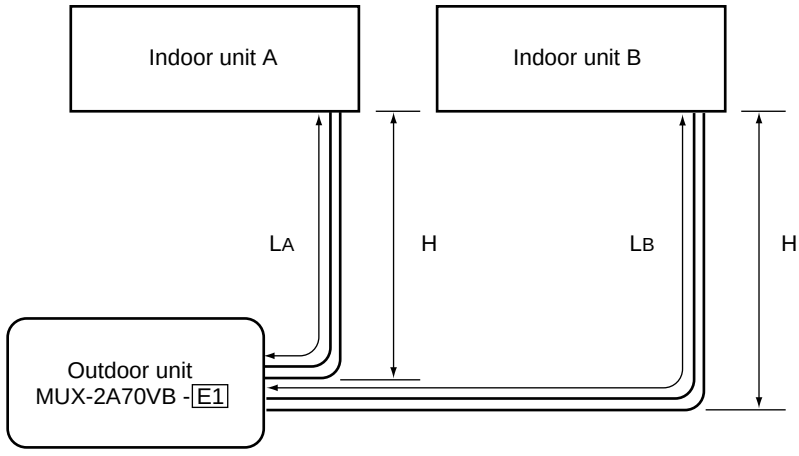
Unit : mm

MUX-2A70VB-E1

INDOOR UNIT **OUTDOOR UNIT**



MAX.REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



	UNIT No.	Pipe length		Height difference (H)	No. of bends
Max. limits	A	LA	15m	10m	10
	B	LB	15m	10m	10

ADDITIONAL REFRIGERANT CHARGE (R410A:g)

A unit	Outdoor unit precharged	Refrigerant piping length (one way)								
		7m	8m	9m	10m	11m	12m	13m	14m	15m
	950g	0	20	40	60	80	100	120	140	160
B unit	Outdoor unit precharged	Refrigerant piping length (one way)								
		7m	8m	9m	10m	11m	12m	13m	14m	15m
	950g	0	20	40	60	80	100	120	140	160

PIPING PREPARATION

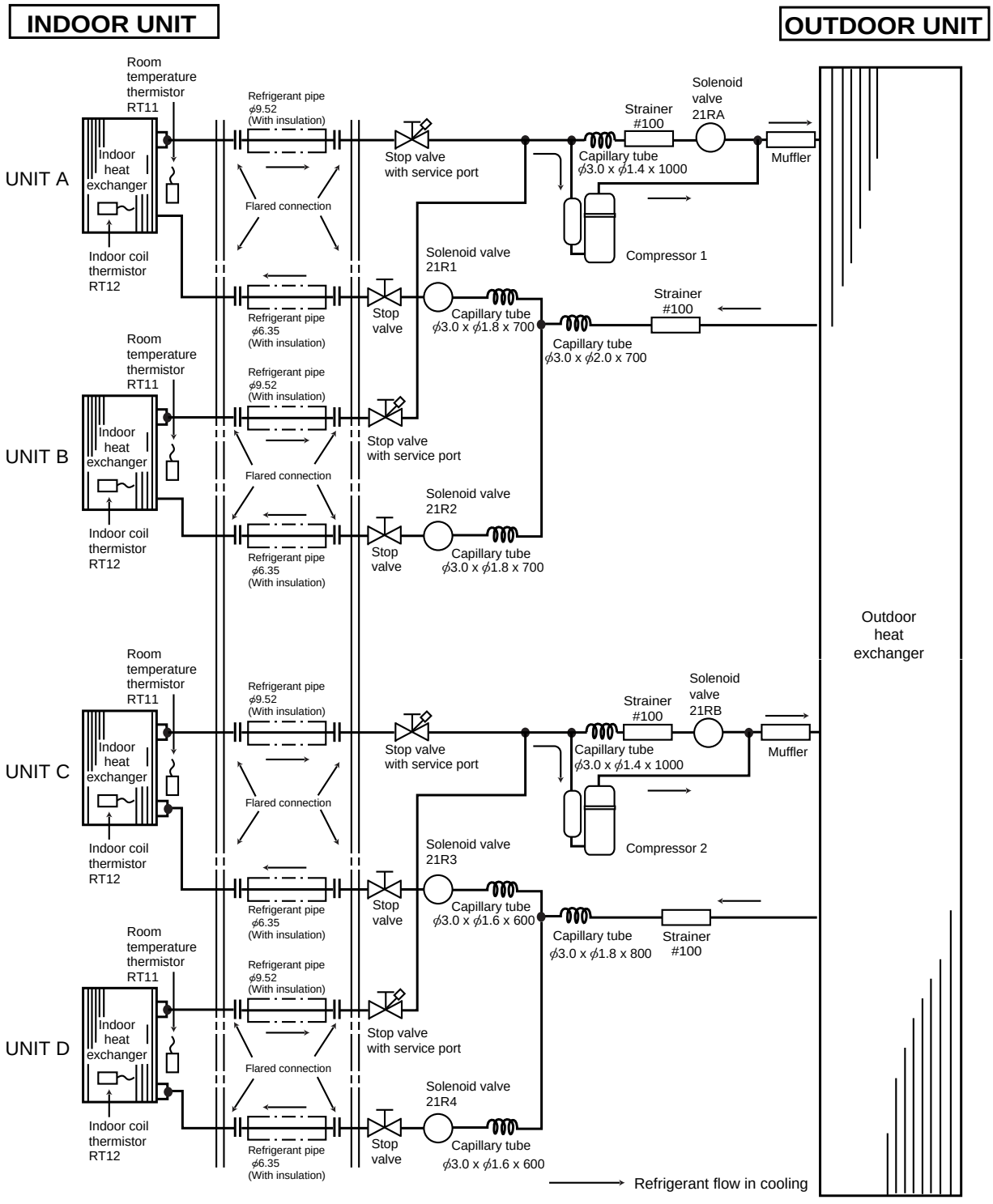
①Table below shows the specifications of pipes commercially available.

UNIT No.	Pipe	Outside diameter	Insulation thickness	Insulation material
		mm		
A and B unit	For liquid	6.35	8mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8mm	

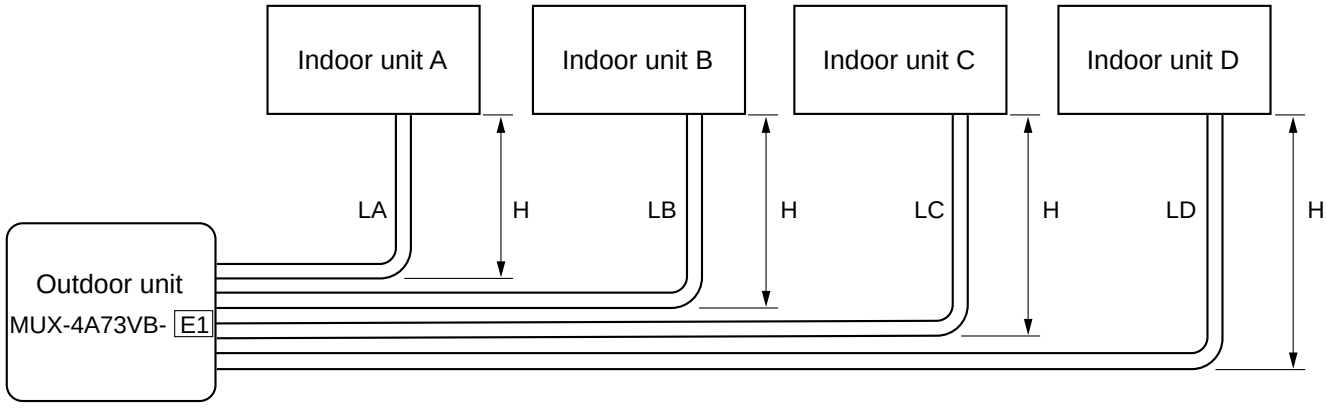
②Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.
③Refrigerant bending radius must be 10cm or more.

Unit : mm

MUX-4A73VB-E1



MAX.REFRIGERANT PIPING LENGTH & MAX. HEIGHT DIFFERENCE



	UNIT No.	Pipe length				Height difference (H)	No. of bends	
Max. limits	A	LA	15m	LA + LB	Total 30m	10m	10	Total 15
	B	LB	15m			10m	10	
	C	LC	15m	LC + LD	Total 30m	10m	10	Total 15
	D	LD	15m			10m	10	

ADDITIONAL REFRIGERANT CHARGE (R410A:g)

UNIT No.	Outdoor unit precharged	Refrigerant piping length (one way, 2 unit total)																				
		10 m	11 m	12 m	13 m	14 m	15 m	16 m	17 m	18 m	19 m	20 m	21 m	22 m	23 m	24 m	25 m	26 m	27 m	28 m	29 m	30 m
A unit + B unit	1050g	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
C unit + D unit	1050g	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200

PIPING PREPARATION

①Table below shows the specifications of pipes commercially available.

UNIT No.	Pipe	Outside diameter	Insulation thickness	Insulation material
		mm		
A and B unit	For liquid	6.35	8mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	8mm	
C and D unit	For liquid	6.35	8mm	
	For gas	9.52	8mm	

②Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.
③Refrigerant bending radius must be 10cm or more.

9 PERFORMANCE CURVES

MUX-2A28VB -E1 MUX-3A63VB -E1
MUX-2A59VB -E1 MUX-2A70VB -E1
MUX-3A60VB -E1 MUX-4A73VB -E1

The standard data contained in these specifications apply only to the operation of the air conditioner under normal conditions, since operating conditions vary according to the areas where these units are installed. The following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

(1) GUARANTEED VOLTAGE

198~264V, 50Hz

(2) AIR FLOW

Air flow should be set at MAX.

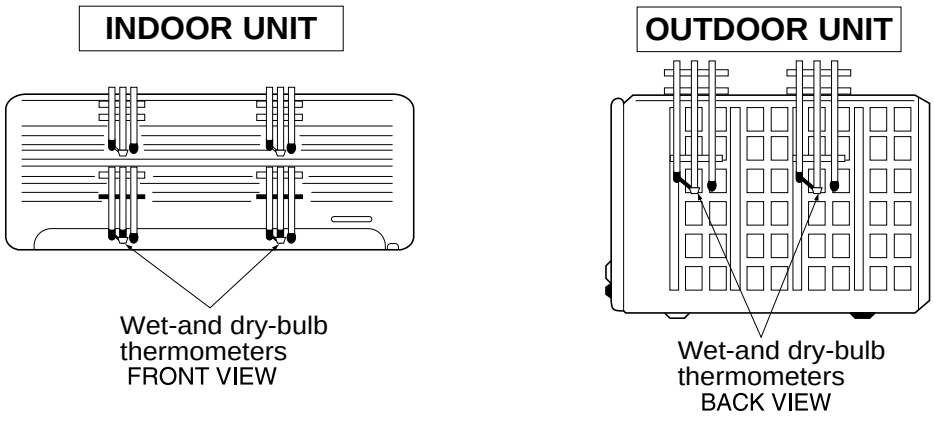
(3) MAIN READINGS

(1) Indoor intake air wet-bulb temperature : °CWB
(2) Indoor outlet air wet-bulb temperature : °CWB
(3) Outdoor intake air dry-bulb temperature : °CDB
(4) Total input: W

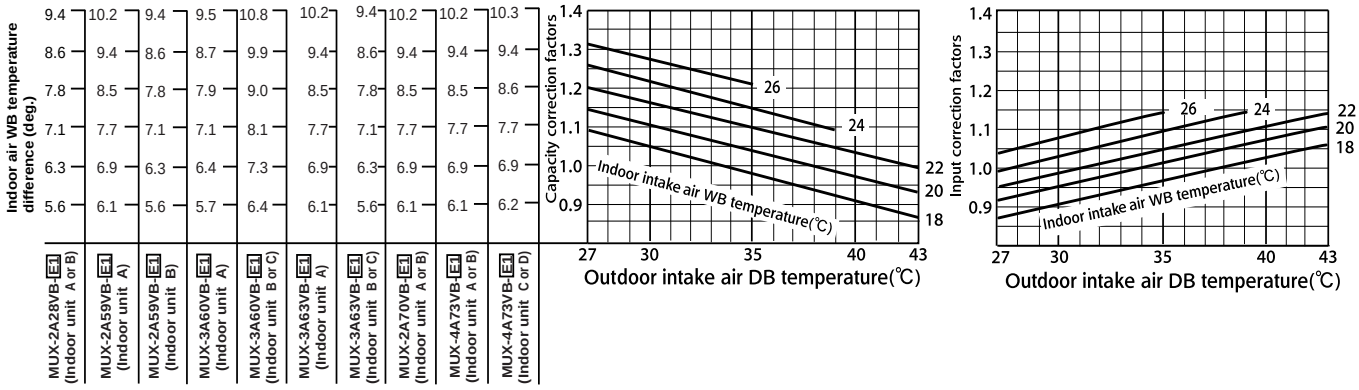
Indoor air wet/dry-bulb temperature difference on the left side of the chart on the next page shows the difference between the indoor intake air wet/dry-bulb temperature and the indoor outlet air wet/dry-bulb temperature for your reference at service.

How to measure the indoor air wet-bulb/dry-bulb temperature difference

1. Attach at least 2 sets of wet-and dry-bulb thermometers to the indoor air intake as shown in the figure, and at least 2 sets of wet-and dry-bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
2. Attach at least 2 sets of wet-and dry-bulb thermometers to the outdoor air intake. Cover the thermometers to prevent direct rays of the sun.
3. Check that the air filter is cleaned.
4. Open windows and doors of room.
5. Press the EMERGENCY OPERATION switch once to start the EMERGENCY COOL MODE.
6. When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
7. 10 minutes later, measure temperature again and check that the temperature does not change.



9-1.CAPACITY AND THE INPUT CURVES (ONE INDOOR UNIT WITH ONE OUTDOOR UNIT)



9-2.OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT

COOL operation

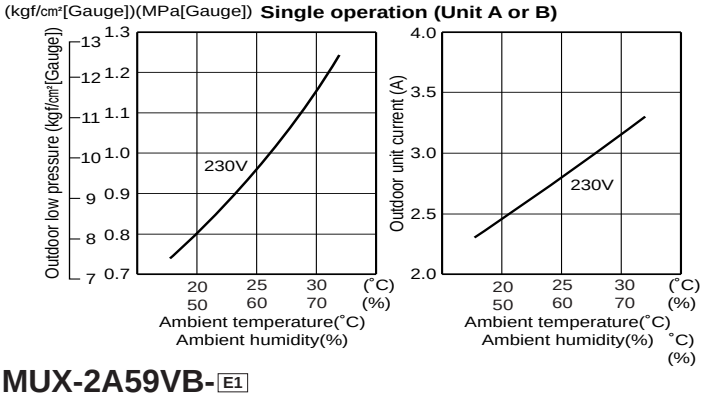
① Both indoor and outdoor unit are under same temperature/humidity condition.

Dry-bulb temperature	Relative humidity (%)
20	50
25	60
30	70

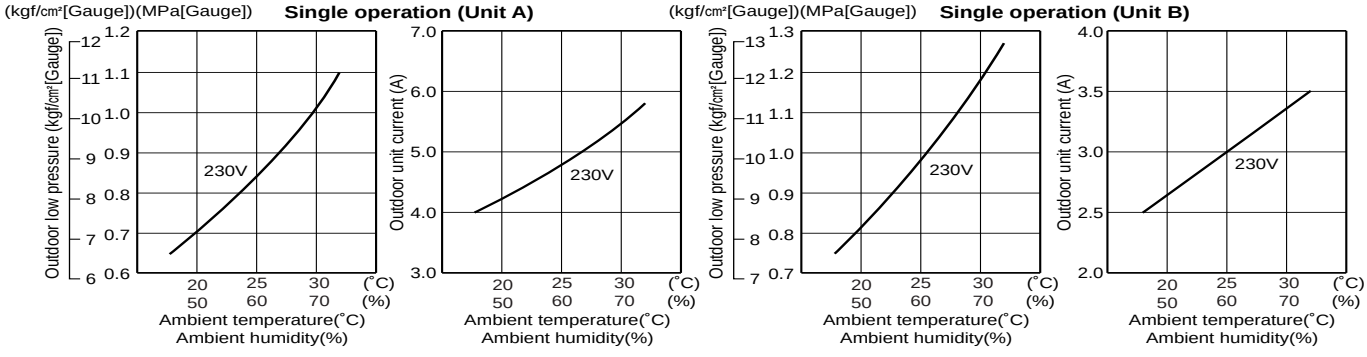
② Air flow should be set at MAX.

③ The unit of pressure has been changed to MPa on the international system of units(SI unit system).
The conversion factor is : **1(MPa[Gauge]) =10.2(kgf/㎠[Gauge])**

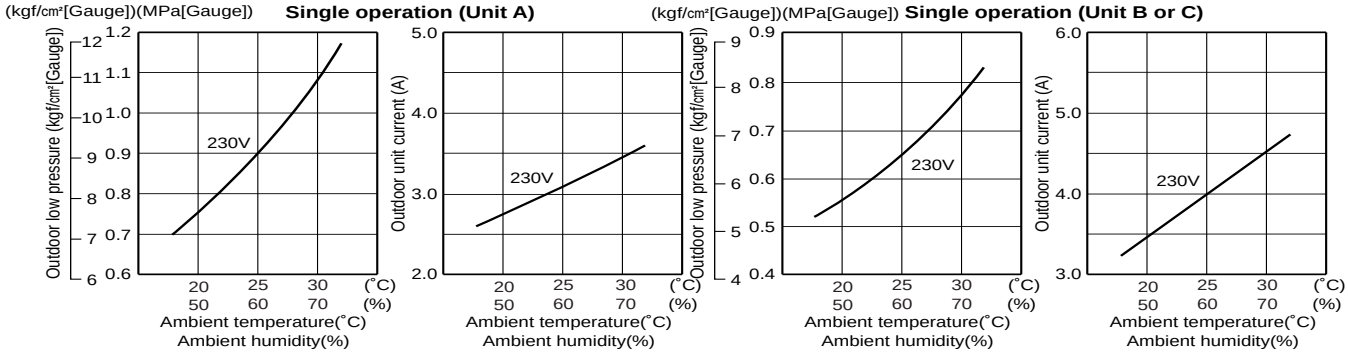
MUX-2A28VB-E1



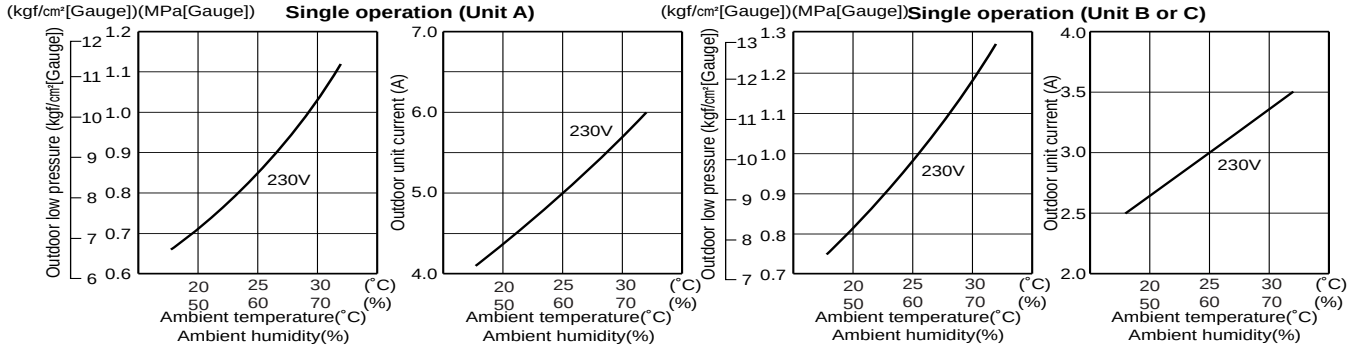
MUX-2A59VB-E1



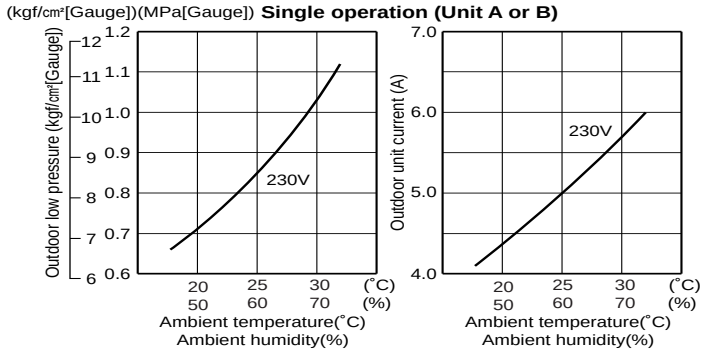
MUX-3A60VB-E1



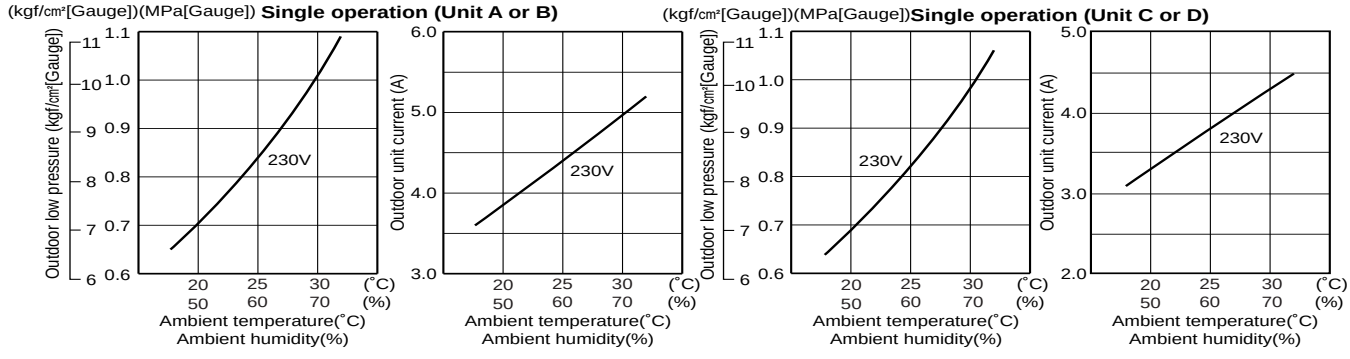
MUX-3A63VB-E1



MUX-2A70VB-E1



MUX-4A73VB-E1



PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1 (Single) : MUX-2A28VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 760(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.82	1.58	0.56	608	2.70	1.51	0.56	638	2.59	1.45	0.56	669	2.50	1.40	0.56	699
21	20	2.94	1.29	0.44	638	2.82	1.24	0.44	676	2.74	1.20	0.44	692	2.64	1.16	0.44	722
22	18	2.82	1.69	0.60	608	2.70	1.62	0.60	638	2.59	1.56	0.60	669	2.50	1.50	0.60	699
22	20	2.94	1.41	0.48	638	2.82	1.35	0.48	676	2.74	1.31	0.48	692	2.64	1.27	0.48	722
22	22	3.06	1.10	0.36	661	2.95	1.06	0.36	703	2.88	1.04	0.36	722	2.76	0.99	0.36	752
23	18	2.82	1.80	0.64	608	2.70	1.73	0.64	638	2.59	1.66	0.64	669	2.50	1.60	0.64	699
23	20	2.94	1.53	0.52	638	2.82	1.47	0.52	676	2.74	1.42	0.52	692	2.64	1.37	0.52	722
23	22	3.06	1.22	0.40	661	2.95	1.18	0.40	703	2.88	1.15	0.40	722	2.76	1.10	0.40	752
24	18	2.82	1.92	0.68	608	2.70	1.84	0.68	638	2.59	1.76	0.68	669	2.50	1.70	0.68	699
24	20	2.94	1.65	0.56	638	2.82	1.58	0.56	676	2.74	1.53	0.56	692	2.64	1.48	0.56	722
24	22	3.06	1.35	0.44	661	2.95	1.30	0.44	703	2.88	1.27	0.44	722	2.76	1.21	0.44	752
24	24	3.22	1.03	0.32	692	3.10	0.99	0.32	730	3.02	0.97	0.32	752	2.93	0.94	0.32	790
25	18	2.82	2.03	0.72	608	2.70	1.94	0.72	638	2.59	1.87	0.72	669	2.50	1.80	0.72	699
25	20	2.94	1.76	0.60	638	2.82	1.69	0.60	676	2.74	1.64	0.60	692	2.64	1.58	0.60	722
25	22	3.06	1.47	0.48	661	2.95	1.42	0.48	703	2.88	1.38	0.48	722	2.76	1.32	0.48	752
25	24	3.22	1.16	0.36	692	3.10	1.11	0.36	730	3.02	1.09	0.36	752	2.93	1.05	0.36	790
26	18	2.82	2.14	0.76	608	2.70	2.05	0.76	638	2.59	1.97	0.76	669	2.50	1.90	0.76	699
26	20	2.94	1.88	0.64	638	2.82	1.80	0.64	676	2.74	1.75	0.64	692	2.64	1.69	0.64	722
26	22	3.06	1.59	0.52	661	2.95	1.54	0.52	703	2.88	1.50	0.52	722	2.76	1.44	0.52	752
26	24	3.22	1.29	0.40	692	3.10	1.24	0.40	730	3.02	1.21	0.40	752	2.93	1.17	0.40	790
26	26	3.31	0.93	0.28	730	3.22	0.90	0.28	768	3.17	0.89	0.28	790	3.07	0.86	0.28	813
27	18	2.82	2.26	0.80	608	2.70	2.16	0.80	638	2.59	2.07	0.80	669	2.50	2.00	0.80	699
27	20	2.94	2.00	0.68	638	2.82	1.92	0.68	676	2.74	1.86	0.68	692	2.64	1.80	0.68	722
27	22	3.06	1.71	0.56	661	2.95	1.65	0.56	703	2.88	1.61	0.56	722	2.76	1.55	0.56	752
27	24	3.22	1.42	0.44	692	3.10	1.36	0.44	730	3.02	1.33	0.44	752	2.93	1.29	0.44	790
27	26	3.31	1.06	0.32	730	3.22	1.03	0.32	768	3.17	1.01	0.32	790	3.07	0.98	0.32	813
28	18	2.82	2.37	0.84	608	2.70	2.27	0.84	638	2.59	2.18	0.84	669	2.50	2.10	0.84	699
28	20	2.94	2.12	0.72	638	2.82	2.03	0.72	676	2.74	1.97	0.72	692	2.64	1.90	0.72	722
28	22	3.06	1.84	0.60	661	2.95	1.77	0.60	703	2.88	1.73	0.60	722	2.76	1.66	0.60	752
28	24	3.22	1.54	0.48	692	3.10	1.49	0.48	730	3.02	1.45	0.48	752	2.93	1.41	0.48	790
28	26	3.31	1.19	0.36	730	3.22	1.16	0.36	768	3.17	1.14	0.36	790	3.07	1.11	0.36	813
29	18	2.82	2.48	0.88	608	2.70	2.38	0.88	638	2.59	2.28	0.88	669	2.50	2.20	0.88	699
29	20	2.94	2.23	0.76	638	2.82	2.14	0.76	676	2.74	2.08	0.76	692	2.64	2.01	0.76	722
29	22	3.06	1.96	0.64	661	2.95	1.89	0.64	703	2.88	1.84	0.64	722	2.76	1.77	0.64	752
29	24	3.22	1.67	0.52	692	3.10	1.61	0.52	730	3.02	1.57	0.52	752	2.93	1.52	0.52	790
29	26	3.31	1.32	0.40	730	3.22	1.29	0.40	768	3.17	1.27	0.40	790	3.07	1.23	0.40	813
30	18	2.82	2.59	0.92	608	2.70	2.48	0.92	638	2.59	2.38	0.92	669	2.50	2.30	0.92	699
30	20	2.94	2.35	0.80	638	2.82	2.26	0.80	676	2.74	2.19	0.80	692	2.64	2.11	0.80	722
30	22	3.06	2.08	0.68	661	2.95	2.01	0.68	703	2.88	1.96	0.68	722	2.76	1.88	0.68	752
30	24	3.22	1.80	0.56	692	3.10	1.73	0.56	730	3.02	1.69	0.56	752	2.93	1.64	0.56	790
30	26	3.31	1.46	0.44	730	3.22	1.42	0.44	768	3.17	1.39	0.44	790	3.07	1.35	0.44	813
31	18	2.82	2.71	0.96	608	2.70	2.59	0.96	638	2.59	2.49	0.96	669	2.50	2.40	0.96	699
31	20	2.94	2.47	0.84	638	2.82	2.37	0.84	676	2.74	2.30	0.84	692	2.64	2.22	0.84	722
31	22	3.06	2.20	0.72	661	2.95	2.13	0.72	703	2.88	2.07	0.72	722	2.76	1.99	0.72	752
31	24	3.22	1.93	0.60	692	3.10	1.86	0.60	730	3.02	1.81	0.60	752	2.93	1.76	0.60	790
31	26	3.31	1.59	0.48	730	3.22	1.54	0.48	768	3.17	1.52	0.48	790	3.07	1.47	0.48	813
32	18	2.82	2.82	1.00	608	2.70	2.70	1.00	638	2.59	2.59	1.00	669	2.50	2.50	1.00	699
32	20	2.94	2.59	0.88	638	2.82	2.48	0.88	676	2.74	2.41	0.88	692	2.64	2.32	0.88	722
32	22	3.06	2.33	0.76	661	2.95	2.24	0.76	703	2.88	2.19	0.76	722	2.76	2.10	0.76	752
32	24	3.22	2.06	0.64	692	3.10	1.98	0.64	730	3.02	1.94	0.64	752	2.93	1.87	0.64	790
32	26	3.31	1.72	0.52	730	3.22	1.67	0.52	768	3.17	1.65	0.52	790	3.07	1.60	0.52	813

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1 (Single) : MUX-2A28VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 760(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.35	1.32	0.56	745	2.16	1.21	0.56	790	2.08	1.16	0.56	806
21	20	2.47	1.09	0.44	775	2.30	1.01	0.44	813	2.22	0.98	0.44	836
22	18	2.35	1.41	0.60	745	2.16	1.30	0.60	790	2.08	1.25	0.60	806
22	20	2.47	1.19	0.48	775	2.30	1.11	0.48	813	2.22	1.07	0.48	836
22	22	2.62	0.94	0.36	806	2.45	0.88	0.36	851	2.36	0.85	0.36	866
23	18	2.35	1.51	0.64	745	2.16	1.38	0.64	790	2.08	1.33	0.64	806
23	20	2.47	1.29	0.52	775	2.30	1.20	0.52	813	2.22	1.15	0.52	836
23	22	2.62	1.05	0.40	806	2.45	0.98	0.40	851	2.36	0.95	0.40	866
24	18	2.35	1.60	0.68	745	2.16	1.47	0.68	790	2.08	1.41	0.68	806
24	20	2.47	1.38	0.56	775	2.30	1.29	0.56	813	2.22	1.24	0.56	836
24	22	2.62	1.15	0.44	806	2.45	1.08	0.44	851	2.36	1.04	0.44	866
24	24	2.76	0.88	0.32	836	2.59	0.83	0.32	874	2.52	0.81	0.32	893
25	18	2.35	1.69	0.72	745	2.16	1.56	0.72	790	2.08	1.49	0.72	806
25	20	2.47	1.48	0.60	775	2.30	1.38	0.60	813	2.22	1.33	0.60	836
25	22	2.62	1.26	0.48	806	2.45	1.18	0.48	851	2.36	1.13	0.48	866
25	24	2.76	0.99	0.36	836	2.59	0.93	0.36	874	2.52	0.91	0.36	893
26	18	2.35	1.79	0.76	745	2.16	1.64	0.76	790	2.08	1.58	0.76	806
26	20	2.47	1.58	0.64	775	2.30	1.47	0.64	813	2.22	1.42	0.64	836
26	22	2.62	1.36	0.52	806	2.45	1.27	0.52	851	2.36	1.23	0.52	866
26	24	2.76	1.10	0.40	836	2.59	1.04	0.40	874	2.52	1.01	0.40	893
26	26	2.90	0.81	0.28	866	2.74	0.77	0.28	904	2.65	0.74	0.28	923
27	18	2.35	1.88	0.80	745	2.16	1.73	0.80	790	2.08	1.66	0.80	806
27	20	2.47	1.68	0.68	775	2.30	1.57	0.68	813	2.22	1.51	0.68	836
27	22	2.62	1.46	0.56	806	2.45	1.37	0.56	851	2.36	1.32	0.56	866
27	24	2.76	1.21	0.44	836	2.59	1.14	0.44	874	2.52	1.11	0.44	893
27	26	2.90	0.93	0.32	866	2.74	0.88	0.32	904	2.65	0.85	0.32	923
28	18	2.35	1.98	0.84	745	2.16	1.81	0.84	790	2.08	1.74	0.84	806
28	20	2.47	1.78	0.72	775	2.30	1.66	0.72	813	2.22	1.60	0.72	836
28	22	2.62	1.57	0.60	806	2.45	1.47	0.60	851	2.36	1.42	0.60	866
28	24	2.76	1.32	0.48	836	2.59	1.24	0.48	874	2.52	1.21	0.48	893
28	26	2.90	1.05	0.36	866	2.74	0.98	0.36	904	2.65	0.95	0.36	923
29	18	2.35	2.07	0.88	745	2.16	1.90	0.88	790	2.08	1.83	0.88	806
29	20	2.47	1.88	0.76	775	2.30	1.75	0.76	813	2.22	1.69	0.76	836
29	22	2.62	1.67	0.64	806	2.45	1.57	0.64	851	2.36	1.51	0.64	866
29	24	2.76	1.44	0.52	836	2.59	1.35	0.52	874	2.52	1.31	0.52	893
29	26	2.90	1.16	0.40	866	2.74	1.09	0.40	904	2.65	1.06	0.40	923
30	18	2.35	2.16	0.92	745	2.16	1.99	0.92	790	2.08	1.91	0.92	806
30	20	2.47	1.98	0.80	775	2.30	1.84	0.80	813	2.22	1.78	0.80	836
30	22	2.62	1.78	0.68	806	2.45	1.66	0.68	851	2.36	1.61	0.68	866
30	24	2.76	1.55	0.56	836	2.59	1.45	0.56	874	2.52	1.41	0.56	893
30	26	2.90	1.28	0.44	866	2.74	1.20	0.44	904	2.65	1.17	0.44	923
31	18	2.35	2.26	0.96	745	2.16	2.07	0.96	790	2.08	1.99	0.96	806
31	20	2.47	2.08	0.84	775	2.30	1.94	0.84	813	2.22	1.86	0.84	836
31	22	2.62	1.88	0.72	806	2.45	1.76	0.72	851	2.36	1.70	0.72	866
31	24	2.76	1.66	0.60	836	2.59	1.56	0.60	874	2.52	1.51	0.60	893
31	26	2.90	1.39	0.48	866	2.74	1.31	0.48	904	2.65	1.27	0.48	923
32	18	2.35	2.35	1.00	745	2.16	2.16	1.00	790	2.08	2.08	1.00	806
32	20	2.47	2.18	0.88	775	2.30	2.03	0.88	813	2.22	1.95	0.88	836
32	22	2.62	1.99	0.76	806	2.45	1.86	0.76	851	2.36	1.80	0.76	866
32	24	2.76	1.77	0.64	836	2.59	1.66	0.64	874	2.52	1.61	0.64	893
32	26	2.90	1.51	0.52	866	2.74	1.42	0.52	904	2.65	1.38	0.52	923

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1 (Single : Room B) : MUX-2A59VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 820(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.82	1.58	0.56	656	2.70	1.51	0.56	689	2.59	1.45	0.56	722	2.50	1.40	0.56	754
21	20	2.94	1.29	0.44	689	2.82	1.24	0.44	730	2.74	1.20	0.44	746	2.64	1.16	0.44	779
22	18	2.82	1.69	0.60	656	2.70	1.62	0.60	689	2.59	1.56	0.60	722	2.50	1.50	0.60	754
22	20	2.94	1.41	0.48	689	2.82	1.35	0.48	730	2.74	1.31	0.48	746	2.64	1.27	0.48	779
22	22	3.06	1.10	0.36	713	2.95	1.06	0.36	759	2.88	1.04	0.36	779	2.76	0.99	0.36	812
23	18	2.82	1.80	0.64	656	2.70	1.73	0.64	689	2.59	1.66	0.64	722	2.50	1.60	0.64	754
23	20	2.94	1.53	0.52	689	2.82	1.47	0.52	730	2.74	1.42	0.52	746	2.64	1.37	0.52	779
23	22	3.06	1.22	0.40	713	2.95	1.18	0.40	759	2.88	1.15	0.40	779	2.76	1.10	0.40	812
24	18	2.82	1.92	0.68	656	2.70	1.84	0.68	689	2.59	1.76	0.68	722	2.50	1.70	0.68	754
24	20	2.94	1.65	0.56	689	2.82	1.58	0.56	730	2.74	1.53	0.56	746	2.64	1.48	0.56	779
24	22	3.06	1.35	0.44	713	2.95	1.30	0.44	759	2.88	1.27	0.44	779	2.76	1.21	0.44	812
24	24	3.22	1.03	0.32	746	3.10	0.99	0.32	787	3.02	0.97	0.32	812	2.93	0.94	0.32	853
25	18	2.82	2.03	0.72	656	2.70	1.94	0.72	689	2.59	1.87	0.72	722	2.50	1.80	0.72	754
25	20	2.94	1.76	0.60	689	2.82	1.69	0.60	730	2.74	1.64	0.60	746	2.64	1.58	0.60	779
25	22	3.06	1.47	0.48	713	2.95	1.42	0.48	759	2.88	1.38	0.48	779	2.76	1.32	0.48	812
25	24	3.22	1.16	0.36	746	3.10	1.11	0.36	787	3.02	1.09	0.36	812	2.93	1.05	0.36	853
26	18	2.82	2.14	0.76	656	2.70	2.05	0.76	689	2.59	1.97	0.76	722	2.50	1.90	0.76	754
26	20	2.94	1.88	0.64	689	2.82	1.80	0.64	730	2.74	1.75	0.64	746	2.64	1.69	0.64	779
26	22	3.06	1.59	0.52	713	2.95	1.54	0.52	759	2.88	1.50	0.52	779	2.76	1.44	0.52	812
26	24	3.22	1.29	0.40	746	3.10	1.24	0.40	787	3.02	1.21	0.40	812	2.93	1.17	0.40	853
26	26	3.31	0.93	0.28	787	3.22	0.90	0.28	828	3.17	0.89	0.28	853	3.07	0.86	0.28	877
27	18	2.82	2.26	0.80	656	2.70	2.16	0.80	689	2.59	2.07	0.80	722	2.50	2.00	0.80	754
27	20	2.94	2.00	0.68	689	2.82	1.92	0.68	730	2.74	1.86	0.68	746	2.64	1.80	0.68	779
27	22	3.06	1.71	0.56	713	2.95	1.65	0.56	759	2.88	1.61	0.56	779	2.76	1.55	0.56	812
27	24	3.22	1.42	0.44	746	3.10	1.36	0.44	787	3.02	1.33	0.44	812	2.93	1.29	0.44	853
27	26	3.31	1.06	0.32	787	3.22	1.03	0.32	828	3.17	1.01	0.32	853	3.07	0.98	0.32	877
28	18	2.82	2.37	0.84	656	2.70	2.27	0.84	689	2.59	2.18	0.84	722	2.50	2.10	0.84	754
28	20	2.94	2.12	0.72	689	2.82	2.03	0.72	730	2.74	1.97	0.72	746	2.64	1.90	0.72	779
28	22	3.06	1.84	0.60	713	2.95	1.77	0.60	759	2.88	1.73	0.60	779	2.76	1.66	0.60	812
28	24	3.22	1.54	0.48	746	3.10	1.49	0.48	787	3.02	1.45	0.48	812	2.93	1.41	0.48	853
28	26	3.31	1.19	0.36	787	3.22	1.16	0.36	828	3.17	1.14	0.36	853	3.07	1.11	0.36	877
29	18	2.82	2.48	0.88	656	2.70	2.38	0.88	689	2.59	2.28	0.88	722	2.50	2.20	0.88	754
29	20	2.94	2.23	0.76	689	2.82	2.14	0.76	730	2.74	2.08	0.76	746	2.64	2.01	0.76	779
29	22	3.06	1.96	0.64	713	2.95	1.89	0.64	759	2.88	1.84	0.64	779	2.76	1.77	0.64	812
29	24	3.22	1.67	0.52	746	3.10	1.61	0.52	787	3.02	1.57	0.52	812	2.93	1.52	0.52	853
29	26	3.31	1.32	0.40	787	3.22	1.29	0.40	828	3.17	1.27	0.40	853	3.07	1.23	0.40	877
30	18	2.82	2.59	0.92	656	2.70	2.48	0.92	689	2.59	2.38	0.92	722	2.50	2.30	0.92	754
30	20	2.94	2.35	0.80	689	2.82	2.26	0.80	730	2.74	2.19	0.80	746	2.64	2.11	0.80	779
30	22	3.06	2.08	0.68	713	2.95	2.01	0.68	759	2.88	1.96	0.68	779	2.76	1.88	0.68	812
30	24	3.22	1.80	0.56	746	3.10	1.73	0.56	787	3.02	1.69	0.56	812	2.93	1.64	0.56	853
30	26	3.31	1.46	0.44	787	3.22	1.42	0.44	828	3.17	1.39	0.44	853	3.07	1.35	0.44	877
31	18	2.82	2.71	0.96	656	2.70	2.59	0.96	689	2.59	2.49	0.96	722	2.50	2.40	0.96	754
31	20	2.94	2.47	0.84	689	2.82	2.37	0.84	730	2.74	2.30	0.84	746	2.64	2.22	0.84	779
31	22	3.06	2.20	0.72	713	2.95	2.13	0.72	759	2.88	2.07	0.72	779	2.76	1.99	0.72	812
31	24	3.22	1.93	0.60	746	3.10	1.86	0.60	787	3.02	1.81	0.60	812	2.93	1.76	0.60	853
31	26	3.31	1.59	0.48	787	3.22	1.54	0.48	828	3.17	1.52	0.48	853	3.07	1.47	0.48	877
32	18	2.82	2.82	1.00	656	2.70	2.70	1.00	689	2.59	2.59	1.00	722	2.50	2.50	1.00	754
32	20	2.94	2.59	0.88	689	2.82	2.48	0.88	730	2.74	2.41	0.88	746	2.64	2.32	0.88	779
32	22	3.06	2.33	0.76	713	2.95	2.24	0.76	759	2.88	2.19	0.76	779	2.76	2.10	0.76	812
32	24	3.22	2.06	0.64	746	3.10	1.98	0.64	787	3.02	1.94	0.64	812	2.93	1.87	0.64	853
32	26	3.31	1.72	0.52	787	3.22	1.67	0.52	828	3.17	1.65	0.52	853	3.07	1.60	0.52	877

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1 (Single : Room B) : MUX-2A59VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 820(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.35	1.32	0.56	804	2.16	1.21	0.56	853	2.08	1.16	0.56	869
21	20	2.47	1.09	0.44	836	2.30	1.01	0.44	877	2.22	0.98	0.44	902
22	18	2.35	1.41	0.60	804	2.16	1.30	0.60	853	2.08	1.25	0.60	869
22	20	2.47	1.19	0.48	836	2.30	1.11	0.48	877	2.22	1.07	0.48	902
22	22	2.62	0.94	0.36	869	2.45	0.88	0.36	918	2.36	0.85	0.36	935
23	18	2.35	1.51	0.64	804	2.16	1.38	0.64	853	2.08	1.33	0.64	869
23	20	2.47	1.29	0.52	836	2.30	1.20	0.52	877	2.22	1.15	0.52	902
23	22	2.62	1.05	0.40	869	2.45	0.98	0.40	918	2.36	0.95	0.40	935
24	18	2.35	1.60	0.68	804	2.16	1.47	0.68	853	2.08	1.41	0.68	869
24	20	2.47	1.38	0.56	836	2.30	1.29	0.56	877	2.22	1.24	0.56	902
24	22	2.62	1.15	0.44	869	2.45	1.08	0.44	918	2.36	1.04	0.44	935
24	24	2.76	0.88	0.32	902	2.59	0.83	0.32	943	2.52	0.81	0.32	964
25	18	2.35	1.69	0.72	804	2.16	1.56	0.72	853	2.08	1.49	0.72	869
25	20	2.47	1.48	0.60	836	2.30	1.38	0.60	877	2.22	1.33	0.60	902
25	22	2.62	1.26	0.48	869	2.45	1.18	0.48	918	2.36	1.13	0.48	935
25	24	2.76	0.99	0.36	902	2.59	0.93	0.36	943	2.52	0.91	0.36	964
26	18	2.35	1.79	0.76	804	2.16	1.64	0.76	853	2.08	1.58	0.76	869
26	20	2.47	1.58	0.64	836	2.30	1.47	0.64	877	2.22	1.42	0.64	902
26	22	2.62	1.36	0.52	869	2.45	1.27	0.52	918	2.36	1.23	0.52	935
26	24	2.76	1.10	0.40	902	2.59	1.04	0.40	943	2.52	1.01	0.40	964
26	26	2.90	0.81	0.28	935	2.74	0.77	0.28	976	2.65	0.74	0.28	996
27	18	2.35	1.88	0.80	804	2.16	1.73	0.80	853	2.08	1.66	0.80	869
27	20	2.47	1.68	0.68	836	2.30	1.57	0.68	877	2.22	1.51	0.68	902
27	22	2.62	1.46	0.56	869	2.45	1.37	0.56	918	2.36	1.32	0.56	935
27	24	2.76	1.21	0.44	902	2.59	1.14	0.44	943	2.52	1.11	0.44	964
27	26	2.90	0.93	0.32	935	2.74	0.88	0.32	976	2.65	0.85	0.32	996
28	18	2.35	1.98	0.84	804	2.16	1.81	0.84	853	2.08	1.74	0.84	869
28	20	2.47	1.78	0.72	836	2.30	1.66	0.72	877	2.22	1.60	0.72	902
28	22	2.62	1.57	0.60	869	2.45	1.47	0.60	918	2.36	1.42	0.60	935
28	24	2.76	1.32	0.48	902	2.59	1.24	0.48	943	2.52	1.21	0.48	964
28	26	2.90	1.05	0.36	935	2.74	0.98	0.36	976	2.65	0.95	0.36	996
29	18	2.35	2.07	0.88	804	2.16	1.90	0.88	853	2.08	1.83	0.88	869
29	20	2.47	1.88	0.76	836	2.30	1.75	0.76	877	2.22	1.69	0.76	902
29	22	2.62	1.67	0.64	869	2.45	1.57	0.64	918	2.36	1.51	0.64	935
29	24	2.76	1.44	0.52	902	2.59	1.35	0.52	943	2.52	1.31	0.52	964
29	26	2.90	1.16	0.40	935	2.74	1.09	0.40	976	2.65	1.06	0.40	996
30	18	2.35	2.16	0.92	804	2.16	1.99	0.92	853	2.08	1.91	0.92	869
30	20	2.47	1.98	0.80	836	2.30	1.84	0.80	877	2.22	1.78	0.80	902
30	22	2.62	1.78	0.68	869	2.45	1.66	0.68	918	2.36	1.61	0.68	935
30	24	2.76	1.55	0.56	902	2.59	1.45	0.56	943	2.52	1.41	0.56	964
30	26	2.90	1.28	0.44	935	2.74	1.20	0.44	976	2.65	1.17	0.44	996
31	18	2.35	2.26	0.96	804	2.16	2.07	0.96	853	2.08	1.99	0.96	869
31	20	2.47	2.08	0.84	836	2.30	1.94	0.84	877	2.22	1.86	0.84	902
31	22	2.62	1.88	0.72	869	2.45	1.76	0.72	918	2.36	1.70	0.72	935
31	24	2.76	1.66	0.60	902	2.59	1.56	0.60	943	2.52	1.51	0.60	964
31	26	2.90	1.39	0.48	935	2.74	1.31	0.48	976	2.65	1.27	0.48	996
32	18	2.35	2.35	1.00	804	2.16	2.16	1.00	853	2.08	2.08	1.00	869
32	20	2.47	2.18	0.88	836	2.30	2.03	0.88	877	2.22	1.95	0.88	902
32	22	2.62	1.99	0.76	869	2.45	1.86	0.76	918	2.36	1.80	0.76	935
32	24	2.76	1.77	0.64	902	2.59	1.66	0.64	943	2.52	1.61	0.64	964
32	26	2.90	1.51	0.52	935	2.74	1.42	0.52	976	2.65	1.38	0.52	996

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-2A59VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1320(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.11	2.25	0.55	1056	3.94	2.15	0.55	1109	3.78	2.07	0.55	1162	3.64	1.99	0.55	1214
21	20	4.29	1.83	0.43	1109	4.11	1.76	0.43	1175	3.99	1.70	0.43	1201	3.85	1.64	0.43	1254
22	18	4.11	2.41	0.59	1056	3.94	2.31	0.59	1109	3.78	2.22	0.59	1162	3.64	2.14	0.59	1214
22	20	4.29	2.00	0.47	1109	4.11	1.92	0.47	1175	3.99	1.86	0.47	1201	3.85	1.80	0.47	1254
22	22	4.46	1.55	0.35	1148	4.31	1.49	0.35	1221	4.20	1.46	0.35	1254	4.03	1.40	0.35	1307
23	18	4.11	2.58	0.63	1056	3.94	2.47	0.63	1109	3.78	2.37	0.63	1162	3.64	2.28	0.63	1214
23	20	4.29	2.17	0.51	1109	4.11	2.09	0.51	1175	3.99	2.02	0.51	1201	3.85	1.95	0.51	1254
23	22	4.46	1.73	0.39	1148	4.31	1.67	0.39	1221	4.20	1.63	0.39	1254	4.03	1.56	0.39	1307
24	18	4.11	2.74	0.67	1056	3.94	2.63	0.67	1109	3.78	2.52	0.67	1162	3.64	2.43	0.67	1214
24	20	4.29	2.35	0.55	1109	4.11	2.25	0.55	1175	3.99	2.18	0.55	1201	3.85	2.11	0.55	1254
24	22	4.46	1.91	0.43	1148	4.31	1.84	0.43	1221	4.20	1.79	0.43	1254	4.03	1.72	0.43	1307
24	24	4.69	1.44	0.31	1201	4.52	1.39	0.31	1267	4.41	1.35	0.31	1307	4.27	1.31	0.31	1373
25	18	4.11	2.91	0.71	1056	3.94	2.78	0.71	1109	3.78	2.67	0.71	1162	3.64	2.57	0.71	1214
25	20	4.29	2.52	0.59	1109	4.11	2.41	0.59	1175	3.99	2.34	0.59	1201	3.85	2.26	0.59	1254
25	22	4.46	2.08	0.47	1148	4.31	2.01	0.47	1221	4.20	1.96	0.47	1254	4.03	1.88	0.47	1307
25	24	4.69	1.63	0.35	1201	4.52	1.57	0.35	1267	4.41	1.53	0.35	1307	4.27	1.48	0.35	1373
26	18	4.11	3.07	0.75	1056	3.94	2.94	0.75	1109	3.78	2.82	0.75	1162	3.64	2.72	0.75	1214
26	20	4.29	2.69	0.63	1109	4.11	2.58	0.63	1175	3.99	2.50	0.63	1201	3.85	2.41	0.63	1254
26	22	4.46	2.26	0.51	1148	4.31	2.18	0.51	1221	4.20	2.13	0.51	1254	4.03	2.04	0.51	1307
26	24	4.69	1.82	0.39	1201	4.52	1.75	0.39	1267	4.41	1.71	0.39	1307	4.27	1.65	0.39	1373
26	26	4.83	1.29	0.27	1267	4.69	1.25	0.27	1333	4.62	1.23	0.27	1373	4.48	1.20	0.27	1412
27	18	4.11	3.24	0.79	1056	3.94	3.10	0.79	1109	3.78	2.97	0.79	1162	3.64	2.86	0.79	1214
27	20	4.29	2.86	0.67	1109	4.11	2.74	0.67	1175	3.99	2.66	0.67	1201	3.85	2.57	0.67	1254
27	22	4.46	2.44	0.55	1148	4.31	2.35	0.55	1221	4.20	2.30	0.55	1254	4.03	2.20	0.55	1307
27	24	4.69	2.00	0.43	1201	4.52	1.93	0.43	1267	4.41	1.88	0.43	1307	4.27	1.82	0.43	1373
27	26	4.83	1.48	0.31	1267	4.69	1.44	0.31	1333	4.62	1.42	0.31	1373	4.48	1.38	0.31	1412
28	18	4.11	3.40	0.83	1056	3.94	3.26	0.83	1109	3.78	3.13	0.83	1162	3.64	3.01	0.83	1214
28	20	4.29	3.03	0.71	1109	4.11	2.91	0.71	1175	3.99	2.82	0.71	1201	3.85	2.72	0.71	1254
28	22	4.46	2.62	0.59	1148	4.31	2.53	0.59	1221	4.20	2.47	0.59	1254	4.03	2.36	0.59	1307
28	24	4.69	2.19	0.47	1201	4.52	2.11	0.47	1267	4.41	2.06	0.47	1307	4.27	1.99	0.47	1373
28	26	4.83	1.68	0.35	1267	4.69	1.63	0.35	1333	4.62	1.60	0.35	1373	4.48	1.55	0.35	1412
29	18	4.11	3.57	0.87	1056	3.94	3.41	0.87	1109	3.78	3.28	0.87	1162	3.64	3.16	0.87	1214
29	20	4.29	3.20	0.75	1109	4.11	3.07	0.75	1175	3.99	2.98	0.75	1201	3.85	2.88	0.75	1254
29	22	4.46	2.80	0.63	1148	4.31	2.70	0.63	1221	4.20	2.63	0.63	1254	4.03	2.52	0.63	1307
29	24	4.69	2.38	0.51	1201	4.52	2.29	0.51	1267	4.41	2.24	0.51	1307	4.27	2.16	0.51	1373
29	26	4.83	1.87	0.39	1267	4.69	1.82	0.39	1333	4.62	1.79	0.39	1373	4.48	1.73	0.39	1412
30	18	4.11	3.73	0.91	1056	3.94	3.57	0.91	1109	3.78	3.43	0.91	1162	3.64	3.30	0.91	1214
30	20	4.29	3.37	0.79	1109	4.11	3.24	0.79	1175	3.99	3.14	0.79	1201	3.85	3.03	0.79	1254
30	22	4.46	2.98	0.67	1148	4.31	2.87	0.67	1221	4.20	2.80	0.67	1254	4.03	2.68	0.67	1307
30	24	4.69	2.57	0.55	1201	4.52	2.47	0.55	1267	4.41	2.41	0.55	1307	4.27	2.34	0.55	1373
30	26	4.83	2.06	0.43	1267	4.69	2.00	0.43	1333	4.62	1.97	0.43	1373	4.48	1.91	0.43	1412
31	18	4.11	3.89	0.95	1056	3.94	3.73	0.95	1109	3.78	3.58	0.95	1162	3.64	3.45	0.95	1214
31	20	4.29	3.55	0.83	1109	4.11	3.40	0.83	1175	3.99	3.30	0.83	1201	3.85	3.18	0.83	1254
31	22	4.46	3.15	0.71	1148	4.31	3.04	0.71	1221	4.20	2.97	0.71	1254	4.03	2.85	0.71	1307
31	24	4.69	2.75	0.59	1201	4.52	2.65	0.59	1267	4.41	2.59	0.59	1307	4.27	2.51	0.59	1373
31	26	4.83	2.26	0.47	1267	4.69	2.19	0.47	1333	4.62	2.16	0.47	1373	4.48	2.09	0.47	1412
32	18	4.11	4.06	0.99	1056	3.94	3.89	0.99	1109	3.78	3.73	0.99	1162	3.64	3.59	0.99	1214
32	20	4.29	3.72	0.87	1109	4.11	3.57	0.87	1175	3.99	3.46	0.87	1201	3.85	3.34	0.87	1254
32	22	4.46	3.33	0.75	1148	4.31	3.22	0.75	1221	4.20	3.14	0.75	1254	4.03	3.01	0.75	1307
32	24	4.69	2.94	0.63	1201	4.52	2.83	0.63	1267	4.41	2.77	0.63	1307	4.27	2.68	0.63	1373
32	26	4.83	2.45	0.51	1267	4.69	2.38	0.51	1333	4.62	2.34	0.51	1373	4.48	2.27	0.51	1412

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-2A59VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1320(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.43	1.88	0.55	1294	3.15	1.72	0.55	1373	3.03	1.66	0.55	1399
21	20	3.61	1.54	0.43	1346	3.36	1.43	0.43	1412	3.24	1.38	0.43	1452
22	18	3.43	2.01	0.59	1294	3.15	1.85	0.59	1373	3.03	1.78	0.59	1399
22	20	3.61	1.68	0.47	1346	3.36	1.57	0.47	1412	3.24	1.51	0.47	1452
22	22	3.82	1.32	0.35	1399	3.57	1.24	0.35	1478	3.45	1.20	0.35	1505
23	18	3.43	2.15	0.63	1294	3.15	1.98	0.63	1373	3.03	1.90	0.63	1399
23	20	3.61	1.83	0.51	1346	3.36	1.70	0.51	1412	3.24	1.64	0.51	1452
23	22	3.82	1.48	0.39	1399	3.57	1.38	0.39	1478	3.45	1.33	0.39	1505
24	18	3.43	2.29	0.67	1294	3.15	2.10	0.67	1373	3.03	2.02	0.67	1399
24	20	3.61	1.97	0.55	1346	3.36	1.84	0.55	1412	3.24	1.77	0.55	1452
24	22	3.82	1.63	0.43	1399	3.57	1.52	0.43	1478	3.45	1.47	0.43	1505
24	24	4.03	1.24	0.31	1452	3.78	1.16	0.31	1518	3.68	1.13	0.31	1551
25	18	3.43	2.43	0.71	1294	3.15	2.23	0.71	1373	3.03	2.14	0.71	1399
25	20	3.61	2.12	0.59	1346	3.36	1.97	0.59	1412	3.24	1.90	0.59	1452
25	22	3.82	1.78	0.47	1399	3.57	1.67	0.47	1478	3.45	1.61	0.47	1505
25	24	4.03	1.40	0.35	1452	3.78	1.31	0.35	1518	3.68	1.28	0.35	1551
26	18	3.43	2.56	0.75	1294	3.15	2.35	0.75	1373	3.03	2.26	0.75	1399
26	20	3.61	2.26	0.63	1346	3.36	2.11	0.63	1412	3.24	2.03	0.63	1452
26	22	3.82	1.93	0.51	1399	3.57	1.81	0.51	1478	3.45	1.75	0.51	1505
26	24	4.03	1.56	0.39	1452	3.78	1.46	0.39	1518	3.68	1.42	0.39	1551
26	26	4.24	1.13	0.27	1505	3.99	1.07	0.27	1571	3.87	1.03	0.27	1604
27	18	3.43	2.70	0.79	1294	3.15	2.48	0.79	1373	3.03	2.38	0.79	1399
27	20	3.61	2.40	0.67	1346	3.36	2.24	0.67	1412	3.24	2.16	0.67	1452
27	22	3.82	2.09	0.55	1399	3.57	1.95	0.55	1478	3.45	1.89	0.55	1505
27	24	4.03	1.72	0.43	1452	3.78	1.61	0.43	1518	3.68	1.57	0.43	1551
27	26	4.24	1.30	0.31	1505	3.99	1.22	0.31	1571	3.87	1.19	0.31	1604
28	18	3.43	2.84	0.83	1294	3.15	2.61	0.83	1373	3.03	2.50	0.83	1399
28	20	3.61	2.55	0.71	1346	3.36	2.38	0.71	1412	3.24	2.29	0.71	1452
28	22	3.82	2.24	0.59	1399	3.57	2.10	0.59	1478	3.45	2.02	0.59	1505
28	24	4.03	1.88	0.47	1452	3.78	1.77	0.47	1518	3.68	1.72	0.47	1551
28	26	4.24	1.47	0.35	1505	3.99	1.38	0.35	1571	3.87	1.34	0.35	1604
29	18	3.43	2.97	0.87	1294	3.15	2.73	0.87	1373	3.03	2.62	0.87	1399
29	20	3.61	2.69	0.75	1346	3.36	2.51	0.75	1412	3.24	2.42	0.75	1452
29	22	3.82	2.39	0.63	1399	3.57	2.24	0.63	1478	3.45	2.16	0.63	1505
29	24	4.03	2.04	0.51	1452	3.78	1.92	0.51	1518	3.68	1.86	0.51	1551
29	26	4.24	1.64	0.39	1505	3.99	1.54	0.39	1571	3.87	1.50	0.39	1604
30	18	3.43	3.11	0.91	1294	3.15	2.86	0.91	1373	3.03	2.75	0.91	1399
30	20	3.61	2.84	0.79	1346	3.36	2.64	0.79	1412	3.24	2.55	0.79	1452
30	22	3.82	2.54	0.67	1399	3.57	2.38	0.67	1478	3.45	2.30	0.67	1505
30	24	4.03	2.20	0.55	1452	3.78	2.07	0.55	1518	3.68	2.01	0.55	1551
30	26	4.24	1.81	0.43	1505	3.99	1.70	0.43	1571	3.87	1.65	0.43	1604
31	18	3.43	3.25	0.95	1294	3.15	2.98	0.95	1373	3.03	2.87	0.95	1399
31	20	3.61	2.98	0.83	1346	3.36	2.78	0.83	1412	3.24	2.68	0.83	1452
31	22	3.82	2.70	0.71	1399	3.57	2.52	0.71	1478	3.45	2.44	0.71	1505
31	24	4.03	2.36	0.59	1452	3.78	2.22	0.59	1518	3.68	2.16	0.59	1551
31	26	4.24	1.98	0.47	1505	3.99	1.86	0.47	1571	3.87	1.81	0.47	1604
32	18	3.43	3.39	0.99	1294	3.15	3.11	0.99	1373	3.03	2.99	0.99	1399
32	20	3.61	3.13	0.87	1346	3.36	2.91	0.87	1412	3.24	2.81	0.87	1452
32	22	3.82	2.85	0.75	1399	3.57	2.67	0.75	1478	3.45	2.58	0.75	1505
32	24	4.03	2.52	0.63	1452	3.78	2.37	0.63	1518	3.68	2.30	0.63	1551
32	26	4.24	2.15	0.51	1505	3.99	2.02	0.51	1571	3.87	1.96	0.51	1604

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1 (Single : Room A) : MUX-3A60VB -E1

CAPACITY : 2.6(kW) SHF : 0.75 INPUT : 850(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.06	1.74	0.57	680	2.93	1.67	0.57	714	2.81	1.60	0.57	748	2.70	1.54	0.57	782
21	20	3.19	1.43	0.45	714	3.06	1.37	0.45	757	2.96	1.33	0.45	774	2.86	1.29	0.45	808
22	18	3.06	1.86	0.61	680	2.93	1.78	0.61	714	2.81	1.71	0.61	748	2.70	1.65	0.61	782
22	20	3.19	1.56	0.49	714	3.06	1.50	0.49	757	2.96	1.45	0.49	774	2.86	1.40	0.49	808
22	22	3.32	1.23	0.37	740	3.20	1.18	0.37	786	3.12	1.15	0.37	808	2.99	1.11	0.37	842
23	18	3.06	1.99	0.65	680	2.93	1.90	0.65	714	2.81	1.83	0.65	748	2.70	1.76	0.65	782
23	20	3.19	1.69	0.53	714	3.06	1.62	0.53	757	2.96	1.57	0.53	774	2.86	1.52	0.53	808
23	22	3.32	1.36	0.41	740	3.20	1.31	0.41	786	3.12	1.28	0.41	808	2.99	1.23	0.41	842
24	18	3.06	2.11	0.69	680	2.93	2.02	0.69	714	2.81	1.94	0.69	748	2.70	1.87	0.69	782
24	20	3.19	1.82	0.57	714	3.06	1.74	0.57	757	2.96	1.69	0.57	774	2.86	1.63	0.57	808
24	22	3.32	1.49	0.45	740	3.20	1.44	0.45	786	3.12	1.40	0.45	808	2.99	1.35	0.45	842
24	24	3.48	1.15	0.33	774	3.35	1.11	0.33	816	3.28	1.08	0.33	842	3.17	1.05	0.33	884
25	18	3.06	2.23	0.73	680	2.93	2.14	0.73	714	2.81	2.05	0.73	748	2.70	1.97	0.73	782
25	20	3.19	1.94	0.61	714	3.06	1.86	0.61	757	2.96	1.81	0.61	774	2.86	1.74	0.61	808
25	22	3.32	1.62	0.49	740	3.20	1.57	0.49	786	3.12	1.53	0.49	808	2.99	1.47	0.49	842
25	24	3.48	1.29	0.37	774	3.35	1.24	0.37	816	3.28	1.21	0.37	842	3.17	1.17	0.37	884
26	18	3.06	2.35	0.77	680	2.93	2.25	0.77	714	2.81	2.16	0.77	748	2.70	2.08	0.77	782
26	20	3.19	2.07	0.65	714	3.06	1.99	0.65	757	2.96	1.93	0.65	774	2.86	1.86	0.65	808
26	22	3.32	1.76	0.53	740	3.20	1.69	0.53	786	3.12	1.65	0.53	808	2.99	1.58	0.53	842
26	24	3.48	1.43	0.41	774	3.35	1.38	0.41	816	3.28	1.34	0.41	842	3.17	1.30	0.41	884
26	26	3.59	1.04	0.29	816	3.48	1.01	0.29	859	3.43	1.00	0.29	884	3.33	0.97	0.29	910
27	18	3.06	2.47	0.81	680	2.93	2.37	0.81	714	2.81	2.27	0.81	748	2.70	2.19	0.81	782
27	20	3.19	2.20	0.69	714	3.06	2.11	0.69	757	2.96	2.05	0.69	774	2.86	1.97	0.69	808
27	22	3.32	1.89	0.57	740	3.20	1.82	0.57	786	3.12	1.78	0.57	808	2.99	1.70	0.57	842
27	24	3.48	1.57	0.45	774	3.35	1.51	0.45	816	3.28	1.47	0.45	842	3.17	1.43	0.45	884
27	26	3.59	1.18	0.33	816	3.48	1.15	0.33	859	3.43	1.13	0.33	884	3.33	1.10	0.33	910
28	18	3.06	2.60	0.85	680	2.93	2.49	0.85	714	2.81	2.39	0.85	748	2.70	2.30	0.85	782
28	20	3.19	2.33	0.73	714	3.06	2.23	0.73	757	2.96	2.16	0.73	774	2.86	2.09	0.73	808
28	22	3.32	2.02	0.61	740	3.20	1.95	0.61	786	3.12	1.90	0.61	808	2.99	1.82	0.61	842
28	24	3.48	1.71	0.49	774	3.35	1.64	0.49	816	3.28	1.61	0.49	842	3.17	1.55	0.49	884
28	26	3.59	1.33	0.37	816	3.48	1.29	0.37	859	3.43	1.27	0.37	884	3.33	1.23	0.37	910
29	18	3.06	2.72	0.89	680	2.93	2.60	0.89	714	2.81	2.50	0.89	748	2.70	2.41	0.89	782
29	20	3.19	2.45	0.77	714	3.06	2.35	0.77	757	2.96	2.28	0.77	774	2.86	2.20	0.77	808
29	22	3.32	2.15	0.65	740	3.20	2.08	0.65	786	3.12	2.03	0.65	808	2.99	1.94	0.65	842
29	24	3.48	1.85	0.53	774	3.35	1.78	0.53	816	3.28	1.74	0.53	842	3.17	1.68	0.53	884
29	26	3.59	1.47	0.41	816	3.48	1.43	0.41	859	3.43	1.41	0.41	884	3.33	1.36	0.41	910
30	18	3.06	2.84	0.93	680	2.93	2.72	0.93	714	2.81	2.61	0.93	748	2.70	2.51	0.93	782
30	20	3.19	2.58	0.81	714	3.06	2.47	0.81	757	2.96	2.40	0.81	774	2.86	2.32	0.81	808
30	22	3.32	2.29	0.69	740	3.20	2.21	0.69	786	3.12	2.15	0.69	808	2.99	2.06	0.69	842
30	24	3.48	1.99	0.57	774	3.35	1.91	0.57	816	3.28	1.87	0.57	842	3.17	1.81	0.57	884
30	26	3.59	1.61	0.45	816	3.48	1.57	0.45	859	3.43	1.54	0.45	884	3.33	1.50	0.45	910
31	18	3.06	2.96	0.97	680	2.93	2.84	0.97	714	2.81	2.72	0.97	748	2.70	2.62	0.97	782
31	20	3.19	2.71	0.85	714	3.06	2.60	0.85	757	2.96	2.52	0.85	774	2.86	2.43	0.85	808
31	22	3.32	2.42	0.73	740	3.20	2.33	0.73	786	3.12	2.28	0.73	808	2.99	2.18	0.73	842
31	24	3.48	2.13	0.61	774	3.35	2.05	0.61	816	3.28	2.00	0.61	842	3.17	1.93	0.61	884
31	26	3.59	1.76	0.49	816	3.48	1.71	0.49	859	3.43	1.68	0.49	884	3.33	1.63	0.49	910
32	18	3.06	3.09	1.01	680	2.93	2.95	1.01	714	2.81	2.84	1.01	748	2.70	2.73	1.01	782
32	20	3.19	2.83	0.89	714	3.06	2.72	0.89	757	2.96	2.64	0.89	774	2.86	2.55	0.89	808
32	22	3.32	2.55	0.77	740	3.20	2.46	0.77	786	3.12	2.40	0.77	808	2.99	2.30	0.77	842
32	24	3.48	2.26	0.65	774	3.35	2.18	0.65	816	3.28	2.13	0.65	842	3.17	2.06	0.65	884
32	26	3.59	1.90	0.53	816	3.48	1.85	0.53	859	3.43	1.82	0.53	884	3.33	1.76	0.53	910

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1 (Single : Room A) : MUX-3A60VB -E1

CAPACITY : 2.6(kW) SHF : 0.75 INPUT : 850(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.55	1.45	0.57	833	2.34	1.33	0.57	884	2.25	1.28	0.57	901
21	20	2.68	1.21	0.45	867	2.50	1.12	0.45	910	2.41	1.08	0.45	935
22	18	2.55	1.55	0.61	833	2.34	1.43	0.61	884	2.25	1.37	0.61	901
22	20	2.68	1.31	0.49	867	2.50	1.22	0.49	910	2.41	1.18	0.49	935
22	22	2.83	1.05	0.37	901	2.65	0.98	0.37	952	2.56	0.95	0.37	969
23	18	2.55	1.66	0.65	833	2.34	1.52	0.65	884	2.25	1.46	0.65	901
23	20	2.68	1.42	0.53	867	2.50	1.32	0.53	910	2.41	1.27	0.53	935
23	22	2.83	1.16	0.41	901	2.65	1.09	0.41	952	2.56	1.05	0.41	969
24	18	2.55	1.76	0.69	833	2.34	1.61	0.69	884	2.25	1.55	0.69	901
24	20	2.68	1.53	0.57	867	2.50	1.42	0.57	910	2.41	1.37	0.57	935
24	22	2.83	1.28	0.45	901	2.65	1.19	0.45	952	2.56	1.15	0.45	969
24	24	2.99	0.99	0.33	935	2.81	0.93	0.33	978	2.73	0.90	0.33	999
25	18	2.55	1.86	0.73	833	2.34	1.71	0.73	884	2.25	1.64	0.73	901
25	20	2.68	1.63	0.61	867	2.50	1.52	0.61	910	2.41	1.47	0.61	935
25	22	2.83	1.39	0.49	901	2.65	1.30	0.49	952	2.56	1.25	0.49	969
25	24	2.99	1.11	0.37	935	2.81	1.04	0.37	978	2.73	1.01	0.37	999
26	18	2.55	1.96	0.77	833	2.34	1.80	0.77	884	2.25	1.73	0.77	901
26	20	2.68	1.74	0.65	867	2.50	1.62	0.65	910	2.41	1.56	0.65	935
26	22	2.83	1.50	0.53	901	2.65	1.41	0.53	952	2.56	1.36	0.53	969
26	24	2.99	1.23	0.41	935	2.81	1.15	0.41	978	2.73	1.12	0.41	999
26	26	3.15	0.91	0.29	969	2.96	0.86	0.29	1012	2.87	0.83	0.29	1033
27	18	2.55	2.06	0.81	833	2.34	1.90	0.81	884	2.25	1.82	0.81	901
27	20	2.68	1.85	0.69	867	2.50	1.72	0.69	910	2.41	1.66	0.69	935
27	22	2.83	1.62	0.57	901	2.65	1.51	0.57	952	2.56	1.46	0.57	969
27	24	2.99	1.35	0.45	935	2.81	1.26	0.45	978	2.73	1.23	0.45	999
27	26	3.15	1.04	0.33	969	2.96	0.98	0.33	1012	2.87	0.95	0.33	1033
28	18	2.55	2.17	0.85	833	2.34	1.99	0.85	884	2.25	1.91	0.85	901
28	20	2.68	1.95	0.73	867	2.50	1.82	0.73	910	2.41	1.76	0.73	935
28	22	2.83	1.73	0.61	901	2.65	1.62	0.61	952	2.56	1.56	0.61	969
28	24	2.99	1.47	0.49	935	2.81	1.38	0.49	978	2.73	1.34	0.49	999
28	26	3.15	1.16	0.37	969	2.96	1.10	0.37	1012	2.87	1.06	0.37	1033
29	18	2.55	2.27	0.89	833	2.34	2.08	0.89	884	2.25	2.00	0.89	901
29	20	2.68	2.06	0.77	867	2.50	1.92	0.77	910	2.41	1.85	0.77	935
29	22	2.83	1.84	0.65	901	2.65	1.72	0.65	952	2.56	1.66	0.65	969
29	24	2.99	1.58	0.53	935	2.81	1.49	0.53	978	2.73	1.45	0.53	999
29	26	3.15	1.29	0.41	969	2.96	1.22	0.41	1012	2.87	1.18	0.41	1033
30	18	2.55	2.37	0.93	833	2.34	2.18	0.93	884	2.25	2.09	0.93	901
30	20	2.68	2.17	0.81	867	2.50	2.02	0.81	910	2.41	1.95	0.81	935
30	22	2.83	1.96	0.69	901	2.65	1.83	0.69	952	2.56	1.77	0.69	969
30	24	2.99	1.70	0.57	935	2.81	1.60	0.57	978	2.73	1.56	0.57	999
30	26	3.15	1.42	0.45	969	2.96	1.33	0.45	1012	2.87	1.29	0.45	1033
31	18	2.55	2.47	0.97	833	2.34	2.27	0.97	884	2.25	2.18	0.97	901
31	20	2.68	2.28	0.85	867	2.50	2.12	0.85	910	2.41	2.04	0.85	935
31	22	2.83	2.07	0.73	901	2.65	1.94	0.73	952	2.56	1.87	0.73	969
31	24	2.99	1.82	0.61	935	2.81	1.71	0.61	978	2.73	1.67	0.61	999
31	26	3.15	1.54	0.49	969	2.96	1.45	0.49	1012	2.87	1.41	0.49	1033
32	18	2.55	2.57	1.01	833	2.34	2.36	1.01	884	2.25	2.27	1.01	901
32	20	2.68	2.38	0.89	867	2.50	2.22	0.89	910	2.41	2.14	0.89	935
32	22	2.83	2.18	0.77	901	2.65	2.04	0.77	952	2.56	1.97	0.77	969
32	24	2.99	1.94	0.65	935	2.81	1.83	0.65	978	2.73	1.77	0.65	999
32	26	3.15	1.67	0.53	969	2.96	1.57	0.53	1012	2.87	1.52	0.53	1033

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1(Single : Room B) : MUX-3A60VB -E1

CAPACITY : 2.9(kW) SHF : 0.71 INPUT : 1110(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.41	1.82	0.53	888	3.26	1.74	0.53	932	3.13	1.67	0.53	977	3.02	1.61	0.53	1021
21	20	3.55	1.47	0.41	932	3.41	1.41	0.41	988	3.31	1.37	0.41	1010	3.19	1.32	0.41	1055
22	18	3.41	1.95	0.57	888	3.26	1.87	0.57	932	3.13	1.79	0.57	977	3.02	1.73	0.57	1021
22	20	3.55	1.61	0.45	932	3.41	1.54	0.45	988	3.31	1.50	0.45	1010	3.19	1.45	0.45	1055
22	22	3.70	1.23	0.33	966	3.57	1.19	0.33	1027	3.48	1.16	0.33	1055	3.34	1.11	0.33	1099
23	18	3.41	2.09	0.61	888	3.26	2.00	0.61	932	3.13	1.92	0.61	977	3.02	1.85	0.61	1021
23	20	3.55	1.75	0.49	932	3.41	1.68	0.49	988	3.31	1.63	0.49	1010	3.19	1.57	0.49	1055
23	22	3.70	1.38	0.37	966	3.57	1.33	0.37	1027	3.48	1.30	0.37	1055	3.34	1.24	0.37	1099
24	18	3.41	2.23	0.65	888	3.26	2.13	0.65	932	3.13	2.05	0.65	977	3.02	1.97	0.65	1021
24	20	3.55	1.89	0.53	932	3.41	1.82	0.53	988	3.31	1.76	0.53	1010	3.19	1.70	0.53	1055
24	22	3.70	1.53	0.41	966	3.57	1.47	0.41	1027	3.48	1.44	0.41	1055	3.34	1.38	0.41	1099
24	24	3.89	1.14	0.29	1010	3.74	1.10	0.29	1066	3.65	1.07	0.29	1099	3.54	1.04	0.29	1154
25	18	3.41	2.36	0.69	888	3.26	2.26	0.69	932	3.13	2.17	0.69	977	3.02	2.09	0.69	1021
25	20	3.55	2.04	0.57	932	3.41	1.95	0.57	988	3.31	1.89	0.57	1010	3.19	1.83	0.57	1055
25	22	3.70	1.67	0.45	966	3.57	1.62	0.45	1027	3.48	1.58	0.45	1055	3.34	1.51	0.45	1099
25	24	3.89	1.29	0.33	1010	3.74	1.25	0.33	1066	3.65	1.22	0.33	1099	3.54	1.18	0.33	1154
26	18	3.41	2.50	0.73	888	3.26	2.39	0.73	932	3.13	2.30	0.73	977	3.02	2.21	0.73	1021
26	20	3.55	2.18	0.61	932	3.41	2.09	0.61	988	3.31	2.03	0.61	1010	3.19	1.96	0.61	1055
26	22	3.70	1.82	0.49	966	3.57	1.76	0.49	1027	3.48	1.72	0.49	1055	3.34	1.64	0.49	1099
26	24	3.89	1.45	0.37	1010	3.74	1.40	0.37	1066	3.65	1.36	0.37	1099	3.54	1.32	0.37	1154
26	26	4.00	1.01	0.25	1066	3.89	0.98	0.25	1121	3.83	0.97	0.25	1154	3.71	0.94	0.25	1188
27	18	3.41	2.63	0.77	888	3.26	2.52	0.77	932	3.13	2.42	0.77	977	3.02	2.33	0.77	1021
27	20	3.55	2.32	0.65	932	3.41	2.23	0.65	988	3.31	2.16	0.65	1010	3.19	2.08	0.65	1055
27	22	3.70	1.97	0.53	966	3.57	1.90	0.53	1027	3.48	1.85	0.53	1055	3.34	1.78	0.53	1099
27	24	3.89	1.60	0.41	1010	3.74	1.55	0.41	1066	3.65	1.51	0.41	1099	3.54	1.46	0.41	1154
27	26	4.00	1.17	0.29	1066	3.89	1.14	0.29	1121	3.83	1.12	0.29	1154	3.71	1.09	0.29	1188
28	18	3.41	2.77	0.81	888	3.26	2.65	0.81	932	3.13	2.55	0.81	977	3.02	2.45	0.81	1021
28	20	3.55	2.46	0.69	932	3.41	2.36	0.69	988	3.31	2.29	0.69	1010	3.19	2.21	0.69	1055
28	22	3.70	2.12	0.57	966	3.57	2.04	0.57	1027	3.48	1.99	0.57	1055	3.34	1.91	0.57	1099
28	24	3.89	1.76	0.45	1010	3.74	1.69	0.45	1066	3.65	1.66	0.45	1099	3.54	1.60	0.45	1154
28	26	4.00	1.33	0.33	1066	3.89	1.29	0.33	1121	3.83	1.27	0.33	1154	3.71	1.24	0.33	1188
29	18	3.41	2.91	0.85	888	3.26	2.78	0.85	932	3.13	2.67	0.85	977	3.02	2.57	0.85	1021
29	20	3.55	2.60	0.73	932	3.41	2.50	0.73	988	3.31	2.42	0.73	1010	3.19	2.34	0.73	1055
29	22	3.70	2.27	0.61	966	3.57	2.19	0.61	1027	3.48	2.13	0.61	1055	3.34	2.04	0.61	1099
29	24	3.89	1.92	0.49	1010	3.74	1.84	0.49	1066	3.65	1.80	0.49	1099	3.54	1.74	0.49	1154
29	26	4.00	1.49	0.37	1066	3.89	1.45	0.37	1121	3.83	1.43	0.37	1154	3.71	1.38	0.37	1188
30	18	3.41	3.04	0.89	888	3.26	2.91	0.89	932	3.13	2.80	0.89	977	3.02	2.69	0.89	1021
30	20	3.55	2.75	0.77	932	3.41	2.63	0.77	988	3.31	2.56	0.77	1010	3.19	2.47	0.77	1055
30	22	3.70	2.41	0.65	966	3.57	2.33	0.65	1027	3.48	2.27	0.65	1055	3.34	2.18	0.65	1099
30	24	3.89	2.07	0.53	1010	3.74	1.99	0.53	1066	3.65	1.95	0.53	1099	3.54	1.89	0.53	1154
30	26	4.00	1.65	0.41	1066	3.89	1.60	0.41	1121	3.83	1.58	0.41	1154	3.71	1.53	0.41	1188
31	18	3.41	3.18	0.93	888	3.26	3.04	0.93	932	3.13	2.92	0.93	977	3.02	2.81	0.93	1021
31	20	3.55	2.89	0.81	932	3.41	2.77	0.81	988	3.31	2.69	0.81	1010	3.19	2.59	0.81	1055
31	22	3.70	2.56	0.69	966	3.57	2.47	0.69	1027	3.48	2.41	0.69	1055	3.34	2.31	0.69	1099
31	24	3.89	2.23	0.57	1010	3.74	2.14	0.57	1066	3.65	2.09	0.57	1099	3.54	2.03	0.57	1154
31	26	4.00	1.81	0.45	1066	3.89	1.76	0.45	1121	3.83	1.73	0.45	1154	3.71	1.68	0.45	1188
32	18	3.41	3.32	0.97	888	3.26	3.17	0.97	932	3.13	3.05	0.97	977	3.02	2.93	0.97	1021
32	20	3.55	3.03	0.85	932	3.41	2.91	0.85	988	3.31	2.82	0.85	1010	3.19	2.72	0.85	1055
32	22	3.70	2.71	0.73	966	3.57	2.61	0.73	1027	3.48	2.55	0.73	1055	3.34	2.44	0.73	1099
32	24	3.89	2.38	0.61	1010	3.74	2.29	0.61	1066	3.65	2.24	0.61	1099	3.54	2.17	0.61	1154
32	26	4.00	1.97	0.49	1066	3.89	1.92	0.49	1121	3.83	1.89	0.49	1154	3.71	1.83	0.49	1188

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1 (Single : Room B) : MUX-3A60VB -E1

CAPACITY : 2.9(kW) SHF : 0.71 INPUT : 1110(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.84	1.51	0.53	1088	2.61	1.39	0.53	1154	2.51	1.34	0.53	1177
21	20	2.99	1.23	0.41	1132	2.78	1.15	0.41	1188	2.68	1.11	0.41	1221
22	18	2.84	1.63	0.57	1088	2.61	1.50	0.57	1154	2.51	1.44	0.57	1177
22	20	2.99	1.35	0.45	1132	2.78	1.26	0.45	1188	2.68	1.22	0.45	1221
22	22	3.16	1.05	0.33	1177	2.96	0.99	0.33	1243	2.86	0.95	0.33	1265
23	18	2.84	1.74	0.61	1088	2.61	1.60	0.61	1154	2.51	1.54	0.61	1177
23	20	2.99	1.47	0.49	1132	2.78	1.37	0.49	1188	2.68	1.32	0.49	1221
23	22	3.16	1.18	0.37	1177	2.96	1.10	0.37	1243	2.86	1.07	0.37	1265
24	18	2.84	1.86	0.65	1088	2.61	1.70	0.65	1154	2.51	1.64	0.65	1177
24	20	2.99	1.59	0.53	1132	2.78	1.48	0.53	1188	2.68	1.43	0.53	1221
24	22	3.16	1.31	0.41	1177	2.96	1.22	0.41	1243	2.86	1.18	0.41	1265
24	24	3.34	0.98	0.29	1221	3.13	0.92	0.29	1277	3.05	0.89	0.29	1304
25	18	2.84	1.97	0.69	1088	2.61	1.81	0.69	1154	2.51	1.74	0.69	1177
25	20	2.99	1.71	0.57	1132	2.78	1.60	0.57	1188	2.68	1.54	0.57	1221
25	22	3.16	1.43	0.45	1177	2.96	1.34	0.45	1243	2.86	1.29	0.45	1265
25	24	3.34	1.11	0.33	1221	3.13	1.04	0.33	1277	3.05	1.01	0.33	1304
26	18	2.84	2.08	0.73	1088	2.61	1.91	0.73	1154	2.51	1.84	0.73	1177
26	20	2.99	1.83	0.61	1132	2.78	1.71	0.61	1188	2.68	1.64	0.61	1221
26	22	3.16	1.56	0.49	1177	2.96	1.46	0.49	1243	2.86	1.41	0.49	1265
26	24	3.34	1.24	0.37	1221	3.13	1.17	0.37	1277	3.05	1.14	0.37	1304
26	26	3.51	0.89	0.25	1265	3.31	0.84	0.25	1321	3.20	0.81	0.25	1349
27	18	2.84	2.20	0.77	1088	2.61	2.02	0.77	1154	2.51	1.94	0.77	1177
27	20	2.99	1.95	0.65	1132	2.78	1.82	0.65	1188	2.68	1.75	0.65	1221
27	22	3.16	1.68	0.53	1177	2.96	1.58	0.53	1243	2.86	1.52	0.53	1265
27	24	3.34	1.38	0.41	1221	3.13	1.29	0.41	1277	3.05	1.26	0.41	1304
27	26	3.51	1.03	0.29	1265	3.31	0.97	0.29	1321	3.20	0.94	0.29	1349
28	18	2.84	2.31	0.81	1088	2.61	2.12	0.81	1154	2.51	2.04	0.81	1177
28	20	2.99	2.07	0.69	1132	2.78	1.93	0.69	1188	2.68	1.86	0.69	1221
28	22	3.16	1.81	0.57	1177	2.96	1.69	0.57	1243	2.86	1.64	0.57	1265
28	24	3.34	1.51	0.45	1221	3.13	1.42	0.45	1277	3.05	1.38	0.45	1304
28	26	3.51	1.17	0.33	1265	3.31	1.10	0.33	1321	3.20	1.07	0.33	1349
29	18	2.84	2.42	0.85	1088	2.61	2.23	0.85	1154	2.51	2.14	0.85	1177
29	20	2.99	2.19	0.73	1132	2.78	2.04	0.73	1188	2.68	1.97	0.73	1221
29	22	3.16	1.94	0.61	1177	2.96	1.81	0.61	1243	2.86	1.75	0.61	1265
29	24	3.34	1.64	0.49	1221	3.13	1.54	0.49	1277	3.05	1.50	0.49	1304
29	26	3.51	1.31	0.37	1265	3.31	1.23	0.37	1321	3.20	1.20	0.37	1349
30	18	2.84	2.54	0.89	1088	2.61	2.33	0.89	1154	2.51	2.24	0.89	1177
30	20	2.99	2.31	0.77	1132	2.78	2.15	0.77	1188	2.68	2.07	0.77	1221
30	22	3.16	2.06	0.65	1177	2.96	1.93	0.65	1243	2.86	1.87	0.65	1265
30	24	3.34	1.78	0.53	1221	3.13	1.67	0.53	1277	3.05	1.62	0.53	1304
30	26	3.51	1.45	0.41	1265	3.31	1.37	0.41	1321	3.20	1.32	0.41	1349
31	18	2.84	2.65	0.93	1088	2.61	2.44	0.93	1154	2.51	2.34	0.93	1177
31	20	2.99	2.43	0.81	1132	2.78	2.26	0.81	1188	2.68	2.18	0.81	1221
31	22	3.16	2.19	0.69	1177	2.96	2.05	0.69	1243	2.86	1.98	0.69	1265
31	24	3.34	1.91	0.57	1221	3.13	1.79	0.57	1277	3.05	1.74	0.57	1304
31	26	3.51	1.59	0.45	1265	3.31	1.50	0.45	1321	3.20	1.45	0.45	1349
32	18	2.84	2.77	0.97	1088	2.61	2.54	0.97	1154	2.51	2.44	0.97	1177
32	20	2.99	2.55	0.85	1132	2.78	2.37	0.85	1188	2.68	2.29	0.85	1221
32	22	3.16	2.32	0.73	1177	2.96	2.17	0.73	1243	2.86	2.09	0.73	1265
32	24	3.34	2.04	0.61	1221	3.13	1.92	0.61	1277	3.05	1.87	0.61	1304
32	26	3.51	1.73	0.49	1265	3.31	1.63	0.49	1321	3.20	1.58	0.49	1349

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-3A63VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1320(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.11	2.25	0.55	1056	3.94	2.15	0.55	1109	3.78	2.07	0.55	1162	3.64	1.99	0.55	1214
21	20	4.29	1.83	0.43	1109	4.11	1.76	0.43	1175	3.99	1.70	0.43	1201	3.85	1.64	0.43	1254
22	18	4.11	2.41	0.59	1056	3.94	2.31	0.59	1109	3.78	2.22	0.59	1162	3.64	2.14	0.59	1214
22	20	4.29	2.00	0.47	1109	4.11	1.92	0.47	1175	3.99	1.86	0.47	1201	3.85	1.80	0.47	1254
22	22	4.46	1.55	0.35	1148	4.31	1.49	0.35	1221	4.20	1.46	0.35	1254	4.03	1.40	0.35	1307
23	18	4.11	2.58	0.63	1056	3.94	2.47	0.63	1109	3.78	2.37	0.63	1162	3.64	2.28	0.63	1214
23	20	4.29	2.17	0.51	1109	4.11	2.09	0.51	1175	3.99	2.02	0.51	1201	3.85	1.95	0.51	1254
23	22	4.46	1.73	0.39	1148	4.31	1.67	0.39	1221	4.20	1.63	0.39	1254	4.03	1.56	0.39	1307
24	18	4.11	2.74	0.67	1056	3.94	2.63	0.67	1109	3.78	2.52	0.67	1162	3.64	2.43	0.67	1214
24	20	4.29	2.35	0.55	1109	4.11	2.25	0.55	1175	3.99	2.18	0.55	1201	3.85	2.11	0.55	1254
24	22	4.46	1.91	0.43	1148	4.31	1.84	0.43	1221	4.20	1.79	0.43	1254	4.03	1.72	0.43	1307
24	24	4.69	1.44	0.31	1201	4.52	1.39	0.31	1267	4.41	1.35	0.31	1307	4.27	1.31	0.31	1373
25	18	4.11	2.91	0.71	1056	3.94	2.78	0.71	1109	3.78	2.67	0.71	1162	3.64	2.57	0.71	1214
25	20	4.29	2.52	0.59	1109	4.11	2.41	0.59	1175	3.99	2.34	0.59	1201	3.85	2.26	0.59	1254
25	22	4.46	2.08	0.47	1148	4.31	2.01	0.47	1221	4.20	1.96	0.47	1254	4.03	1.88	0.47	1307
25	24	4.69	1.63	0.35	1201	4.52	1.57	0.35	1267	4.41	1.53	0.35	1307	4.27	1.48	0.35	1373
26	18	4.11	3.07	0.75	1056	3.94	2.94	0.75	1109	3.78	2.82	0.75	1162	3.64	2.72	0.75	1214
26	20	4.29	2.69	0.63	1109	4.11	2.58	0.63	1175	3.99	2.50	0.63	1201	3.85	2.41	0.63	1254
26	22	4.46	2.26	0.51	1148	4.31	2.18	0.51	1221	4.20	2.13	0.51	1254	4.03	2.04	0.51	1307
26	24	4.69	1.82	0.39	1201	4.52	1.75	0.39	1267	4.41	1.71	0.39	1307	4.27	1.65	0.39	1373
26	26	4.83	1.29	0.27	1267	4.69	1.25	0.27	1333	4.62	1.23	0.27	1373	4.48	1.20	0.27	1412
27	18	4.11	3.24	0.79	1056	3.94	3.10	0.79	1109	3.78	2.97	0.79	1162	3.64	2.86	0.79	1214
27	20	4.29	2.86	0.67	1109	4.11	2.74	0.67	1175	3.99	2.66	0.67	1201	3.85	2.57	0.67	1254
27	22	4.46	2.44	0.55	1148	4.31	2.35	0.55	1221	4.20	2.30	0.55	1254	4.03	2.20	0.55	1307
27	24	4.69	2.00	0.43	1201	4.52	1.93	0.43	1267	4.41	1.88	0.43	1307	4.27	1.82	0.43	1373
27	26	4.83	1.48	0.31	1267	4.69	1.44	0.31	1333	4.62	1.42	0.31	1373	4.48	1.38	0.31	1412
28	18	4.11	3.40	0.83	1056	3.94	3.26	0.83	1109	3.78	3.13	0.83	1162	3.64	3.01	0.83	1214
28	20	4.29	3.03	0.71	1109	4.11	2.91	0.71	1175	3.99	2.82	0.71	1201	3.85	2.72	0.71	1254
28	22	4.46	2.62	0.59	1148	4.31	2.53	0.59	1221	4.20	2.47	0.59	1254	4.03	2.36	0.59	1307
28	24	4.69	2.19	0.47	1201	4.52	2.11	0.47	1267	4.41	2.06	0.47	1307	4.27	1.99	0.47	1373
28	26	4.83	1.68	0.35	1267	4.69	1.63	0.35	1333	4.62	1.60	0.35	1373	4.48	1.55	0.35	1412
29	18	4.11	3.57	0.87	1056	3.94	3.41	0.87	1109	3.78	3.28	0.87	1162	3.64	3.16	0.87	1214
29	20	4.29	3.20	0.75	1109	4.11	3.07	0.75	1175	3.99	2.98	0.75	1201	3.85	2.88	0.75	1254
29	22	4.46	2.80	0.63	1148	4.31	2.70	0.63	1221	4.20	2.63	0.63	1254	4.03	2.52	0.63	1307
29	24	4.69	2.38	0.51	1201	4.52	2.29	0.51	1267	4.41	2.24	0.51	1307	4.27	2.16	0.51	1373
29	26	4.83	1.87	0.39	1267	4.69	1.82	0.39	1333	4.62	1.79	0.39	1373	4.48	1.73	0.39	1412
30	18	4.11	3.73	0.91	1056	3.94	3.57	0.91	1109	3.78	3.43	0.91	1162	3.64	3.30	0.91	1214
30	20	4.29	3.37	0.79	1109	4.11	3.24	0.79	1175	3.99	3.14	0.79	1201	3.85	3.03	0.79	1254
30	22	4.46	2.98	0.67	1148	4.31	2.87	0.67	1221	4.20	2.80	0.67	1254	4.03	2.68	0.67	1307
30	24	4.69	2.57	0.55	1201	4.52	2.47	0.55	1267	4.41	2.41	0.55	1307	4.27	2.34	0.55	1373
30	26	4.83	2.06	0.43	1267	4.69	2.00	0.43	1333	4.62	1.97	0.43	1373	4.48	1.91	0.43	1412
31	18	4.11	3.89	0.95	1056	3.94	3.73	0.95	1109	3.78	3.58	0.95	1162	3.64	3.45	0.95	1214
31	20	4.29	3.55	0.83	1109	4.11	3.40	0.83	1175	3.99	3.30	0.83	1201	3.85	3.18	0.83	1254
31	22	4.46	3.15	0.71	1148	4.31	3.04	0.71	1221	4.20	2.97	0.71	1254	4.03	2.85	0.71	1307
31	24	4.69	2.75	0.59	1201	4.52	2.65	0.59	1267	4.41	2.59	0.59	1307	4.27	2.51	0.59	1373
31	26	4.83	2.26	0.47	1267	4.69	2.19	0.47	1333	4.62	2.16	0.47	1373	4.48	2.09	0.47	1412
32	18	4.11	4.06	0.99	1056	3.94	3.89	0.99	1109	3.78	3.73	0.99	1162	3.64	3.59	0.99	1214
32	20	4.29	3.72	0.87	1109	4.11	3.57	0.87	1175	3.99	3.46	0.87	1201	3.85	3.34	0.87	1254
32	22	4.46	3.33	0.75	1148	4.31	3.22	0.75	1221	4.20	3.14	0.75	1254	4.03	3.01	0.75	1307
32	24	4.69	2.94	0.63	1201	4.52	2.83	0.63	1267	4.41	2.77	0.63	1307	4.27	2.68	0.63	1373
32	26	4.83	2.45	0.51	1267	4.69	2.38	0.51	1333	4.62	2.34	0.51	1373	4.48	2.27	0.51	1412

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-3A63VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1320(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.43	1.88	0.55	1294	3.15	1.72	0.55	1373	3.03	1.66	0.55	1399
21	20	3.61	1.54	0.43	1346	3.36	1.43	0.43	1412	3.24	1.38	0.43	1452
22	18	3.43	2.01	0.59	1294	3.15	1.85	0.59	1373	3.03	1.78	0.59	1399
22	20	3.61	1.68	0.47	1346	3.36	1.57	0.47	1412	3.24	1.51	0.47	1452
22	22	3.82	1.32	0.35	1399	3.57	1.24	0.35	1478	3.45	1.20	0.35	1505
23	18	3.43	2.15	0.63	1294	3.15	1.98	0.63	1373	3.03	1.90	0.63	1399
23	20	3.61	1.83	0.51	1346	3.36	1.70	0.51	1412	3.24	1.64	0.51	1452
23	22	3.82	1.48	0.39	1399	3.57	1.38	0.39	1478	3.45	1.33	0.39	1505
24	18	3.43	2.29	0.67	1294	3.15	2.10	0.67	1373	3.03	2.02	0.67	1399
24	20	3.61	1.97	0.55	1346	3.36	1.84	0.55	1412	3.24	1.77	0.55	1452
24	22	3.82	1.63	0.43	1399	3.57	1.52	0.43	1478	3.45	1.47	0.43	1505
24	24	4.03	1.24	0.31	1452	3.78	1.16	0.31	1518	3.68	1.13	0.31	1551
25	18	3.43	2.43	0.71	1294	3.15	2.23	0.71	1373	3.03	2.14	0.71	1399
25	20	3.61	2.12	0.59	1346	3.36	1.97	0.59	1412	3.24	1.90	0.59	1452
25	22	3.82	1.78	0.47	1399	3.57	1.67	0.47	1478	3.45	1.61	0.47	1505
25	24	4.03	1.40	0.35	1452	3.78	1.31	0.35	1518	3.68	1.28	0.35	1551
26	18	3.43	2.56	0.75	1294	3.15	2.35	0.75	1373	3.03	2.26	0.75	1399
26	20	3.61	2.26	0.63	1346	3.36	2.11	0.63	1412	3.24	2.03	0.63	1452
26	22	3.82	1.93	0.51	1399	3.57	1.81	0.51	1478	3.45	1.75	0.51	1505
26	24	4.03	1.56	0.39	1452	3.78	1.46	0.39	1518	3.68	1.42	0.39	1551
26	26	4.24	1.13	0.27	1505	3.99	1.07	0.27	1571	3.87	1.03	0.27	1604
27	18	3.43	2.70	0.79	1294	3.15	2.48	0.79	1373	3.03	2.38	0.79	1399
27	20	3.61	2.40	0.67	1346	3.36	2.24	0.67	1412	3.24	2.16	0.67	1452
27	22	3.82	2.09	0.55	1399	3.57	1.95	0.55	1478	3.45	1.89	0.55	1505
27	24	4.03	1.72	0.43	1452	3.78	1.61	0.43	1518	3.68	1.57	0.43	1551
27	26	4.24	1.30	0.31	1505	3.99	1.22	0.31	1571	3.87	1.19	0.31	1604
28	18	3.43	2.84	0.83	1294	3.15	2.61	0.83	1373	3.03	2.50	0.83	1399
28	20	3.61	2.55	0.71	1346	3.36	2.38	0.71	1412	3.24	2.29	0.71	1452
28	22	3.82	2.24	0.59	1399	3.57	2.10	0.59	1478	3.45	2.02	0.59	1505
28	24	4.03	1.88	0.47	1452	3.78	1.77	0.47	1518	3.68	1.72	0.47	1551
28	26	4.24	1.47	0.35	1505	3.99	1.38	0.35	1571	3.87	1.34	0.35	1604
29	18	3.43	2.97	0.87	1294	3.15	2.73	0.87	1373	3.03	2.62	0.87	1399
29	20	3.61	2.69	0.75	1346	3.36	2.51	0.75	1412	3.24	2.42	0.75	1452
29	22	3.82	2.39	0.63	1399	3.57	2.24	0.63	1478	3.45	2.16	0.63	1505
29	24	4.03	2.04	0.51	1452	3.78	1.92	0.51	1518	3.68	1.86	0.51	1551
29	26	4.24	1.64	0.39	1505	3.99	1.54	0.39	1571	3.87	1.50	0.39	1604
30	18	3.43	3.11	0.91	1294	3.15	2.86	0.91	1373	3.03	2.75	0.91	1399
30	20	3.61	2.84	0.79	1346	3.36	2.64	0.79	1412	3.24	2.55	0.79	1452
30	22	3.82	2.54	0.67	1399	3.57	2.38	0.67	1478	3.45	2.30	0.67	1505
30	24	4.03	2.20	0.55	1452	3.78	2.07	0.55	1518	3.68	2.01	0.55	1551
30	26	4.24	1.81	0.43	1505	3.99	1.70	0.43	1571	3.87	1.65	0.43	1604
31	18	3.43	3.25	0.95	1294	3.15	2.98	0.95	1373	3.03	2.87	0.95	1399
31	20	3.61	2.98	0.83	1346	3.36	2.78	0.83	1412	3.24	2.68	0.83	1452
31	22	3.82	2.70	0.71	1399	3.57	2.52	0.71	1478	3.45	2.44	0.71	1505
31	24	4.03	2.36	0.59	1452	3.78	2.22	0.59	1518	3.68	2.16	0.59	1551
31	26	4.24	1.98	0.47	1505	3.99	1.86	0.47	1571	3.87	1.81	0.47	1604
32	18	3.43	3.39	0.99	1294	3.15	3.11	0.99	1373	3.03	2.99	0.99	1399
32	20	3.61	3.13	0.87	1346	3.36	2.91	0.87	1412	3.24	2.81	0.87	1452
32	22	3.82	2.85	0.75	1399	3.57	2.67	0.75	1478	3.45	2.58	0.75	1505
32	24	4.03	2.52	0.63	1452	3.78	2.37	0.63	1518	3.68	2.30	0.63	1551
32	26	4.24	2.15	0.51	1505	3.99	2.02	0.51	1571	3.87	1.96	0.51	1604

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1(Single : Room B or C) : MUX-3A63VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 850(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.82	1.58	0.56	680	2.70	1.51	0.56	714	2.59	1.45	0.56	748	2.50	1.40	0.56	782
21	20	2.94	1.29	0.44	714	2.82	1.24	0.44	757	2.74	1.20	0.44	774	2.64	1.16	0.44	808
22	18	2.82	1.69	0.60	680	2.70	1.62	0.60	714	2.59	1.56	0.60	748	2.50	1.50	0.60	782
22	20	2.94	1.41	0.48	714	2.82	1.35	0.48	757	2.74	1.31	0.48	774	2.64	1.27	0.48	808
22	22	3.06	1.10	0.36	740	2.95	1.06	0.36	786	2.88	1.04	0.36	808	2.76	0.99	0.36	842
23	18	2.82	1.80	0.64	680	2.70	1.73	0.64	714	2.59	1.66	0.64	748	2.50	1.60	0.64	782
23	20	2.94	1.53	0.52	714	2.82	1.47	0.52	757	2.74	1.42	0.52	774	2.64	1.37	0.52	808
23	22	3.06	1.22	0.40	740	2.95	1.18	0.40	786	2.88	1.15	0.40	808	2.76	1.10	0.40	842
24	18	2.82	1.92	0.68	680	2.70	1.84	0.68	714	2.59	1.76	0.68	748	2.50	1.70	0.68	782
24	20	2.94	1.65	0.56	714	2.82	1.58	0.56	757	2.74	1.53	0.56	774	2.64	1.48	0.56	808
24	22	3.06	1.35	0.44	740	2.95	1.30	0.44	786	2.88	1.27	0.44	808	2.76	1.21	0.44	842
24	24	3.22	1.03	0.32	774	3.10	0.99	0.32	816	3.02	0.97	0.32	842	2.93	0.94	0.32	884
25	18	2.82	2.03	0.72	680	2.70	1.94	0.72	714	2.59	1.87	0.72	748	2.50	1.80	0.72	782
25	20	2.94	1.76	0.60	714	2.82	1.69	0.60	757	2.74	1.64	0.60	774	2.64	1.58	0.60	808
25	22	3.06	1.47	0.48	740	2.95	1.42	0.48	786	2.88	1.38	0.48	808	2.76	1.32	0.48	842
25	24	3.22	1.16	0.36	774	3.10	1.11	0.36	816	3.02	1.09	0.36	842	2.93	1.05	0.36	884
26	18	2.82	2.14	0.76	680	2.70	2.05	0.76	714	2.59	1.97	0.76	748	2.50	1.90	0.76	782
26	20	2.94	1.88	0.64	714	2.82	1.80	0.64	757	2.74	1.75	0.64	774	2.64	1.69	0.64	808
26	22	3.06	1.59	0.52	740	2.95	1.54	0.52	786	2.88	1.50	0.52	808	2.76	1.44	0.52	842
26	24	3.22	1.29	0.40	774	3.10	1.24	0.40	816	3.02	1.21	0.40	842	2.93	1.17	0.40	884
26	26	3.31	0.93	0.28	816	3.22	0.90	0.28	859	3.17	0.89	0.28	884	3.07	0.86	0.28	910
27	18	2.82	2.26	0.80	680	2.70	2.16	0.80	714	2.59	2.07	0.80	748	2.50	2.00	0.80	782
27	20	2.94	2.00	0.68	714	2.82	1.92	0.68	757	2.74	1.86	0.68	774	2.64	1.80	0.68	808
27	22	3.06	1.71	0.56	740	2.95	1.65	0.56	786	2.88	1.61	0.56	808	2.76	1.55	0.56	842
27	24	3.22	1.42	0.44	774	3.10	1.36	0.44	816	3.02	1.33	0.44	842	2.93	1.29	0.44	884
27	26	3.31	1.06	0.32	816	3.22	1.03	0.32	859	3.17	1.01	0.32	884	3.07	0.98	0.32	910
28	18	2.82	2.37	0.84	680	2.70	2.27	0.84	714	2.59	2.18	0.84	748	2.50	2.10	0.84	782
28	20	2.94	2.12	0.72	714	2.82	2.03	0.72	757	2.74	1.97	0.72	774	2.64	1.90	0.72	808
28	22	3.06	1.84	0.60	740	2.95	1.77	0.60	786	2.88	1.73	0.60	808	2.76	1.66	0.60	842
28	24	3.22	1.54	0.48	774	3.10	1.49	0.48	816	3.02	1.45	0.48	842	2.93	1.41	0.48	884
28	26	3.31	1.19	0.36	816	3.22	1.16	0.36	859	3.17	1.14	0.36	884	3.07	1.11	0.36	910
29	18	2.82	2.48	0.88	680	2.70	2.38	0.88	714	2.59	2.28	0.88	748	2.50	2.20	0.88	782
29	20	2.94	2.23	0.76	714	2.82	2.14	0.76	757	2.74	2.08	0.76	774	2.64	2.01	0.76	808
29	22	3.06	1.96	0.64	740	2.95	1.89	0.64	786	2.88	1.84	0.64	808	2.76	1.77	0.64	842
29	24	3.22	1.67	0.52	774	3.10	1.61	0.52	816	3.02	1.57	0.52	842	2.93	1.52	0.52	884
29	26	3.31	1.32	0.40	816	3.22	1.29	0.40	859	3.17	1.27	0.40	884	3.07	1.23	0.40	910
30	18	2.82	2.59	0.92	680	2.70	2.48	0.92	714	2.59	2.38	0.92	748	2.50	2.30	0.92	782
30	20	2.94	2.35	0.80	714	2.82	2.26	0.80	757	2.74	2.19	0.80	774	2.64	2.11	0.80	808
30	22	3.06	2.08	0.68	740	2.95	2.01	0.68	786	2.88	1.96	0.68	808	2.76	1.88	0.68	842
30	24	3.22	1.80	0.56	774	3.10	1.73	0.56	816	3.02	1.69	0.56	842	2.93	1.64	0.56	884
30	26	3.31	1.46	0.44	816	3.22	1.42	0.44	859	3.17	1.39	0.44	884	3.07	1.35	0.44	910
31	18	2.82	2.71	0.96	680	2.70	2.59	0.96	714	2.59	2.49	0.96	748	2.50	2.40	0.96	782
31	20	2.94	2.47	0.84	714	2.82	2.37	0.84	757	2.74	2.30	0.84	774	2.64	2.22	0.84	808
31	22	3.06	2.20	0.72	740	2.95	2.13	0.72	786	2.88	2.07	0.72	808	2.76	1.99	0.72	842
31	24	3.22	1.93	0.60	774	3.10	1.86	0.60	816	3.02	1.81	0.60	842	2.93	1.76	0.60	884
31	26	3.31	1.59	0.48	816	3.22	1.54	0.48	859	3.17	1.52	0.48	884	3.07	1.47	0.48	910
32	18	2.82	2.82	1.00	680	2.70	2.70	1.00	714	2.59	2.59	1.00	748	2.50	2.50	1.00	782
32	20	2.94	2.59	0.88	714	2.82	2.48	0.88	757	2.74	2.41	0.88	774	2.64	2.32	0.88	808
32	22	3.06	2.33	0.76	740	2.95	2.24	0.76	786	2.88	2.19	0.76	808	2.76	2.10	0.76	842
32	24	3.22	2.06	0.64	774	3.10	1.98	0.64	816	3.02	1.94	0.64	842	2.93	1.87	0.64	884
32	26	3.31	1.72	0.52	816	3.22	1.67	0.52	859	3.17	1.65	0.52	884	3.07	1.60	0.52	910

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA20VB -E1 MSC-GA20VB -E1 (Single : Room B or C) : MUX-3A63VB -E1

CAPACITY : 2.4(kW) SHF : 0.74 INPUT : 850(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.35	1.32	0.56	833	2.16	1.21	0.56	884	2.08	1.16	0.56	901
21	20	2.47	1.09	0.44	867	2.30	1.01	0.44	910	2.22	0.98	0.44	935
22	18	2.35	1.41	0.60	833	2.16	1.30	0.60	884	2.08	1.25	0.60	901
22	20	2.47	1.19	0.48	867	2.30	1.11	0.48	910	2.22	1.07	0.48	935
22	22	2.62	0.94	0.36	901	2.45	0.88	0.36	952	2.36	0.85	0.36	969
23	18	2.35	1.51	0.64	833	2.16	1.38	0.64	884	2.08	1.33	0.64	901
23	20	2.47	1.29	0.52	867	2.30	1.20	0.52	910	2.22	1.15	0.52	935
23	22	2.62	1.05	0.40	901	2.45	0.98	0.40	952	2.36	0.95	0.40	969
24	18	2.35	1.60	0.68	833	2.16	1.47	0.68	884	2.08	1.41	0.68	901
24	20	2.47	1.38	0.56	867	2.30	1.29	0.56	910	2.22	1.24	0.56	935
24	22	2.62	1.15	0.44	901	2.45	1.08	0.44	952	2.36	1.04	0.44	969
24	24	2.76	0.88	0.32	935	2.59	0.83	0.32	978	2.52	0.81	0.32	999
25	18	2.35	1.69	0.72	833	2.16	1.56	0.72	884	2.08	1.49	0.72	901
25	20	2.47	1.48	0.60	867	2.30	1.38	0.60	910	2.22	1.33	0.60	935
25	22	2.62	1.26	0.48	901	2.45	1.18	0.48	952	2.36	1.13	0.48	969
25	24	2.76	0.99	0.36	935	2.59	0.93	0.36	978	2.52	0.91	0.36	999
26	18	2.35	1.79	0.76	833	2.16	1.64	0.76	884	2.08	1.58	0.76	901
26	20	2.47	1.58	0.64	867	2.30	1.47	0.64	910	2.22	1.42	0.64	935
26	22	2.62	1.36	0.52	901	2.45	1.27	0.52	952	2.36	1.23	0.52	969
26	24	2.76	1.10	0.40	935	2.59	1.04	0.40	978	2.52	1.01	0.40	999
26	26	2.90	0.81	0.28	969	2.74	0.77	0.28	1012	2.65	0.74	0.28	1033
27	18	2.35	1.88	0.80	833	2.16	1.73	0.80	884	2.08	1.66	0.80	901
27	20	2.47	1.68	0.68	867	2.30	1.57	0.68	910	2.22	1.51	0.68	935
27	22	2.62	1.46	0.56	901	2.45	1.37	0.56	952	2.36	1.32	0.56	969
27	24	2.76	1.21	0.44	935	2.59	1.14	0.44	978	2.52	1.11	0.44	999
27	26	2.90	0.93	0.32	969	2.74	0.88	0.32	1012	2.65	0.85	0.32	1033
28	18	2.35	1.98	0.84	833	2.16	1.81	0.84	884	2.08	1.74	0.84	901
28	20	2.47	1.78	0.72	867	2.30	1.66	0.72	910	2.22	1.60	0.72	935
28	22	2.62	1.57	0.60	901	2.45	1.47	0.60	952	2.36	1.42	0.60	969
28	24	2.76	1.32	0.48	935	2.59	1.24	0.48	978	2.52	1.21	0.48	999
28	26	2.90	1.05	0.36	969	2.74	0.98	0.36	1012	2.65	0.95	0.36	1033
29	18	2.35	2.07	0.88	833	2.16	1.90	0.88	884	2.08	1.83	0.88	901
29	20	2.47	1.88	0.76	867	2.30	1.75	0.76	910	2.22	1.69	0.76	935
29	22	2.62	1.67	0.64	901	2.45	1.57	0.64	952	2.36	1.51	0.64	969
29	24	2.76	1.44	0.52	935	2.59	1.35	0.52	978	2.52	1.31	0.52	999
29	26	2.90	1.16	0.40	969	2.74	1.09	0.40	1012	2.65	1.06	0.40	1033
30	18	2.35	2.16	0.92	833	2.16	1.99	0.92	884	2.08	1.91	0.92	901
30	20	2.47	1.98	0.80	867	2.30	1.84	0.80	910	2.22	1.78	0.80	935
30	22	2.62	1.78	0.68	901	2.45	1.66	0.68	952	2.36	1.61	0.68	969
30	24	2.76	1.55	0.56	935	2.59	1.45	0.56	978	2.52	1.41	0.56	999
30	26	2.90	1.28	0.44	969	2.74	1.20	0.44	1012	2.65	1.17	0.44	1033
31	18	2.35	2.26	0.96	833	2.16	2.07	0.96	884	2.08	1.99	0.96	901
31	20	2.47	2.08	0.84	867	2.30	1.94	0.84	910	2.22	1.86	0.84	935
31	22	2.62	1.88	0.72	901	2.45	1.76	0.72	952	2.36	1.70	0.72	969
31	24	2.76	1.66	0.60	935	2.59	1.56	0.60	978	2.52	1.51	0.60	999
31	26	2.90	1.39	0.48	969	2.74	1.31	0.48	1012	2.65	1.27	0.48	1033
32	18	2.35	2.35	1.00	833	2.16	2.16	1.00	884	2.08	2.08	1.00	901
32	20	2.47	2.18	0.88	867	2.30	2.03	0.88	910	2.22	1.95	0.88	935
32	22	2.62	1.99	0.76	901	2.45	1.86	0.76	952	2.36	1.80	0.76	969
32	24	2.76	1.77	0.64	935	2.59	1.66	0.64	978	2.52	1.61	0.64	999
32	26	2.90	1.51	0.52	969	2.74	1.42	0.52	1012	2.65	1.38	0.52	1033

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1(Single) : MUX-2A70VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1340(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.11	2.25	0.55	1072	3.94	2.15	0.55	1126	3.78	2.07	0.55	1179	3.64	1.99	0.55	1233
21	20	4.29	1.83	0.43	1126	4.11	1.76	0.43	1193	3.99	1.70	0.43	1219	3.85	1.64	0.43	1273
22	18	4.11	2.41	0.59	1072	3.94	2.31	0.59	1126	3.78	2.22	0.59	1179	3.64	2.14	0.59	1233
22	20	4.29	2.00	0.47	1126	4.11	1.92	0.47	1193	3.99	1.86	0.47	1219	3.85	1.80	0.47	1273
22	22	4.46	1.55	0.35	1166	4.31	1.49	0.35	1240	4.20	1.46	0.35	1273	4.03	1.40	0.35	1327
23	18	4.11	2.58	0.63	1072	3.94	2.47	0.63	1126	3.78	2.37	0.63	1179	3.64	2.28	0.63	1233
23	20	4.29	2.17	0.51	1126	4.11	2.09	0.51	1193	3.99	2.02	0.51	1219	3.85	1.95	0.51	1273
23	22	4.46	1.73	0.39	1166	4.31	1.67	0.39	1240	4.20	1.63	0.39	1273	4.03	1.56	0.39	1327
24	18	4.11	2.74	0.67	1072	3.94	2.63	0.67	1126	3.78	2.52	0.67	1179	3.64	2.43	0.67	1233
24	20	4.29	2.35	0.55	1126	4.11	2.25	0.55	1193	3.99	2.18	0.55	1219	3.85	2.11	0.55	1273
24	22	4.46	1.91	0.43	1166	4.31	1.84	0.43	1240	4.20	1.79	0.43	1273	4.03	1.72	0.43	1327
24	24	4.69	1.44	0.31	1219	4.52	1.39	0.31	1286	4.41	1.35	0.31	1327	4.27	1.31	0.31	1394
25	18	4.11	2.91	0.71	1072	3.94	2.78	0.71	1126	3.78	2.67	0.71	1179	3.64	2.57	0.71	1233
25	20	4.29	2.52	0.59	1126	4.11	2.41	0.59	1193	3.99	2.34	0.59	1219	3.85	2.26	0.59	1273
25	22	4.46	2.08	0.47	1166	4.31	2.01	0.47	1240	4.20	1.96	0.47	1273	4.03	1.88	0.47	1327
25	24	4.69	1.63	0.35	1219	4.52	1.57	0.35	1286	4.41	1.53	0.35	1327	4.27	1.48	0.35	1394
26	18	4.11	3.07	0.75	1072	3.94	2.94	0.75	1126	3.78	2.82	0.75	1179	3.64	2.72	0.75	1233
26	20	4.29	2.69	0.63	1126	4.11	2.58	0.63	1193	3.99	2.50	0.63	1219	3.85	2.41	0.63	1273
26	22	4.46	2.26	0.51	1166	4.31	2.18	0.51	1240	4.20	2.13	0.51	1273	4.03	2.04	0.51	1327
26	24	4.69	1.82	0.39	1219	4.52	1.75	0.39	1286	4.41	1.71	0.39	1327	4.27	1.65	0.39	1394
26	26	4.83	1.29	0.27	1286	4.69	1.25	0.27	1353	4.62	1.23	0.27	1394	4.48	1.20	0.27	1434
27	18	4.11	3.24	0.79	1072	3.94	3.10	0.79	1126	3.78	2.97	0.79	1179	3.64	2.86	0.79	1233
27	20	4.29	2.86	0.67	1126	4.11	2.74	0.67	1193	3.99	2.66	0.67	1219	3.85	2.57	0.67	1273
27	22	4.46	2.44	0.55	1166	4.31	2.35	0.55	1240	4.20	2.30	0.55	1273	4.03	2.20	0.55	1327
27	24	4.69	2.00	0.43	1219	4.52	1.93	0.43	1286	4.41	1.88	0.43	1327	4.27	1.82	0.43	1394
27	26	4.83	1.48	0.31	1286	4.69	1.44	0.31	1353	4.62	1.42	0.31	1394	4.48	1.38	0.31	1434
28	18	4.11	3.40	0.83	1072	3.94	3.26	0.83	1126	3.78	3.13	0.83	1179	3.64	3.01	0.83	1233
28	20	4.29	3.03	0.71	1126	4.11	2.91	0.71	1193	3.99	2.82	0.71	1219	3.85	2.72	0.71	1273
28	22	4.46	2.62	0.59	1166	4.31	2.53	0.59	1240	4.20	2.47	0.59	1273	4.03	2.36	0.59	1327
28	24	4.69	2.19	0.47	1219	4.52	2.11	0.47	1286	4.41	2.06	0.47	1327	4.27	1.99	0.47	1394
28	26	4.83	1.68	0.35	1286	4.69	1.63	0.35	1353	4.62	1.60	0.35	1394	4.48	1.55	0.35	1434
29	18	4.11	3.57	0.87	1072	3.94	3.41	0.87	1126	3.78	3.28	0.87	1179	3.64	3.16	0.87	1233
29	20	4.29	3.20	0.75	1126	4.11	3.07	0.75	1193	3.99	2.98	0.75	1219	3.85	2.88	0.75	1273
29	22	4.46	2.80	0.63	1166	4.31	2.70	0.63	1240	4.20	2.63	0.63	1273	4.03	2.52	0.63	1327
29	24	4.69	2.38	0.51	1219	4.52	2.29	0.51	1286	4.41	2.24	0.51	1327	4.27	2.16	0.51	1394
29	26	4.83	1.87	0.39	1286	4.69	1.82	0.39	1353	4.62	1.79	0.39	1394	4.48	1.73	0.39	1434
30	18	4.11	3.73	0.91	1072	3.94	3.57	0.91	1126	3.78	3.43	0.91	1179	3.64	3.30	0.91	1233
30	20	4.29	3.37	0.79	1126	4.11	3.24	0.79	1193	3.99	3.14	0.79	1219	3.85	3.03	0.79	1273
30	22	4.46	2.98	0.67	1166	4.31	2.87	0.67	1240	4.20	2.80	0.67	1273	4.03	2.68	0.67	1327
30	24	4.69	2.57	0.55	1219	4.52	2.47	0.55	1286	4.41	2.41	0.55	1327	4.27	2.34	0.55	1394
30	26	4.83	2.06	0.43	1286	4.69	2.00	0.43	1353	4.62	1.97	0.43	1394	4.48	1.91	0.43	1434
31	18	4.11	3.89	0.95	1072	3.94	3.73	0.95	1126	3.78	3.58	0.95	1179	3.64	3.45	0.95	1233
31	20	4.29	3.55	0.83	1126	4.11	3.40	0.83	1193	3.99	3.30	0.83	1219	3.85	3.18	0.83	1273
31	22	4.46	3.15	0.71	1166	4.31	3.04	0.71	1240	4.20	2.97	0.71	1273	4.03	2.85	0.71	1327
31	24	4.69	2.75	0.59	1219	4.52	2.65	0.59	1286	4.41	2.59	0.59	1327	4.27	2.51	0.59	1394
31	26	4.83	2.26	0.47	1286	4.69	2.19	0.47	1353	4.62	2.16	0.47	1394	4.48	2.09	0.47	1434
32	18	4.11	4.06	0.99	1072	3.94	3.89	0.99	1126	3.78	3.73	0.99	1179	3.64	3.59	0.99	1233
32	20	4.29	3.72	0.87	1126	4.11	3.57	0.87	1193	3.99	3.46	0.87	1219	3.85	3.34	0.87	1273
32	22	4.46	3.33	0.75	1166	4.31	3.22	0.75	1240	4.20	3.14	0.75	1273	4.03	3.01	0.75	1327
32	24	4.69	2.94	0.63	1219	4.52	2.83	0.63	1286	4.41	2.77	0.63	1327	4.27	2.68	0.63	1394
32	26	4.83	2.45	0.51	1286	4.69	2.38	0.51	1353	4.62	2.34	0.51	1394	4.48	2.27	0.51	1434

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single) : MUX-2A70VB -E1

CAPACITY : 3.5(kW) SHF : 0.73 INPUT : 1340(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.43	1.88	0.55	1313	3.15	1.72	0.55	1394	3.03	1.66	0.55	1420
21	20	3.61	1.54	0.43	1367	3.36	1.43	0.43	1434	3.24	1.38	0.43	1474
22	18	3.43	2.01	0.59	1313	3.15	1.85	0.59	1394	3.03	1.78	0.59	1420
22	20	3.61	1.68	0.47	1367	3.36	1.57	0.47	1434	3.24	1.51	0.47	1474
22	22	3.82	1.32	0.35	1420	3.57	1.24	0.35	1501	3.45	1.20	0.35	1528
23	18	3.43	2.15	0.63	1313	3.15	1.98	0.63	1394	3.03	1.90	0.63	1420
23	20	3.61	1.83	0.51	1367	3.36	1.70	0.51	1434	3.24	1.64	0.51	1474
23	22	3.82	1.48	0.39	1420	3.57	1.38	0.39	1501	3.45	1.33	0.39	1528
24	18	3.43	2.29	0.67	1313	3.15	2.10	0.67	1394	3.03	2.02	0.67	1420
24	20	3.61	1.97	0.55	1367	3.36	1.84	0.55	1434	3.24	1.77	0.55	1474
24	22	3.82	1.63	0.43	1420	3.57	1.52	0.43	1501	3.45	1.47	0.43	1528
24	24	4.03	1.24	0.31	1474	3.78	1.16	0.31	1541	3.68	1.13	0.31	1575
25	18	3.43	2.43	0.71	1313	3.15	2.23	0.71	1394	3.03	2.14	0.71	1420
25	20	3.61	2.12	0.59	1367	3.36	1.97	0.59	1434	3.24	1.90	0.59	1474
25	22	3.82	1.78	0.47	1420	3.57	1.67	0.47	1501	3.45	1.61	0.47	1528
25	24	4.03	1.40	0.35	1474	3.78	1.31	0.35	1541	3.68	1.28	0.35	1575
26	18	3.43	2.56	0.75	1313	3.15	2.35	0.75	1394	3.03	2.26	0.75	1420
26	20	3.61	2.26	0.63	1367	3.36	2.11	0.63	1434	3.24	2.03	0.63	1474
26	22	3.82	1.93	0.51	1420	3.57	1.81	0.51	1501	3.45	1.75	0.51	1528
26	24	4.03	1.56	0.39	1474	3.78	1.46	0.39	1541	3.68	1.42	0.39	1575
26	26	4.24	1.13	0.27	1528	3.99	1.07	0.27	1595	3.87	1.03	0.27	1628
27	18	3.43	2.70	0.79	1313	3.15	2.48	0.79	1394	3.03	2.38	0.79	1420
27	20	3.61	2.40	0.67	1367	3.36	2.24	0.67	1434	3.24	2.16	0.67	1474
27	22	3.82	2.09	0.55	1420	3.57	1.95	0.55	1501	3.45	1.89	0.55	1528
27	24	4.03	1.72	0.43	1474	3.78	1.61	0.43	1541	3.68	1.57	0.43	1575
27	26	4.24	1.30	0.31	1528	3.99	1.22	0.31	1595	3.87	1.19	0.31	1628
28	18	3.43	2.84	0.83	1313	3.15	2.61	0.83	1394	3.03	2.50	0.83	1420
28	20	3.61	2.55	0.71	1367	3.36	2.38	0.71	1434	3.24	2.29	0.71	1474
28	22	3.82	2.24	0.59	1420	3.57	2.10	0.59	1501	3.45	2.02	0.59	1528
28	24	4.03	1.88	0.47	1474	3.78	1.77	0.47	1541	3.68	1.72	0.47	1575
28	26	4.24	1.47	0.35	1528	3.99	1.38	0.35	1595	3.87	1.34	0.35	1628
29	18	3.43	2.97	0.87	1313	3.15	2.73	0.87	1394	3.03	2.62	0.87	1420
29	20	3.61	2.69	0.75	1367	3.36	2.51	0.75	1434	3.24	2.42	0.75	1474
29	22	3.82	2.39	0.63	1420	3.57	2.24	0.63	1501	3.45	2.16	0.63	1528
29	24	4.03	2.04	0.51	1474	3.78	1.92	0.51	1541	3.68	1.86	0.51	1575
29	26	4.24	1.64	0.39	1528	3.99	1.54	0.39	1595	3.87	1.50	0.39	1628
30	18	3.43	3.11	0.91	1313	3.15	2.86	0.91	1394	3.03	2.75	0.91	1420
30	20	3.61	2.84	0.79	1367	3.36	2.64	0.79	1434	3.24	2.55	0.79	1474
30	22	3.82	2.54	0.67	1420	3.57	2.38	0.67	1501	3.45	2.30	0.67	1528
30	24	4.03	2.20	0.55	1474	3.78	2.07	0.55	1541	3.68	2.01	0.55	1575
30	26	4.24	1.81	0.43	1528	3.99	1.70	0.43	1595	3.87	1.65	0.43	1628
31	18	3.43	3.25	0.95	1313	3.15	2.98	0.95	1394	3.03	2.87	0.95	1420
31	20	3.61	2.98	0.83	1367	3.36	2.78	0.83	1434	3.24	2.68	0.83	1474
31	22	3.82	2.70	0.71	1420	3.57	2.52	0.71	1501	3.45	2.44	0.71	1528
31	24	4.03	2.36	0.59	1474	3.78	2.22	0.59	1541	3.68	2.16	0.59	1575
31	26	4.24	1.98	0.47	1528	3.99	1.86	0.47	1595	3.87	1.81	0.47	1628
32	18	3.43	3.39	0.99	1313	3.15	3.11	0.99	1394	3.03	2.99	0.99	1420
32	20	3.61	3.13	0.87	1367	3.36	2.91	0.87	1434	3.24	2.81	0.87	1474
32	22	3.82	2.85	0.75	1420	3.57	2.67	0.75	1501	3.45	2.58	0.75	1528
32	24	4.03	2.52	0.63	1474	3.78	2.37	0.63	1541	3.68	2.30	0.63	1575
32	26	4.24	2.15	0.51	1528	3.99	2.02	0.51	1595	3.87	1.96	0.51	1628

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1 (Single : Room C) : MUX-4A73VB -E1

CAPACITY : 2.75(kW) SHF :0.73 INPUT : 1050(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.23	1.76	0.55	840	3.09	1.69	0.55	882	2.97	1.62	0.55	924	2.86	1.56	0.55	966
21	20	3.37	1.43	0.43	882	3.23	1.37	0.43	935	3.14	1.33	0.43	956	3.03	1.29	0.43	998
22	18	3.23	1.89	0.59	840	3.09	1.81	0.59	882	2.97	1.74	0.59	924	2.86	1.67	0.59	966
22	20	3.37	1.57	0.47	882	3.23	1.50	0.47	935	3.14	1.46	0.47	956	3.03	1.41	0.47	998
22	22	3.51	1.21	0.35	914	3.38	1.17	0.35	971	3.30	1.14	0.35	998	3.16	1.09	0.35	1040
23	18	3.23	2.02	0.63	840	3.09	1.93	0.63	882	2.97	1.86	0.63	924	2.86	1.79	0.63	966
23	20	3.37	1.70	0.51	882	3.23	1.63	0.51	935	3.14	1.58	0.51	956	3.03	1.53	0.51	998
23	22	3.51	1.35	0.39	914	3.38	1.30	0.39	971	3.30	1.27	0.39	998	3.16	1.22	0.39	1040
24	18	3.23	2.15	0.67	840	3.09	2.06	0.67	882	2.97	1.98	0.67	924	2.86	1.90	0.67	966
24	20	3.37	1.84	0.55	882	3.23	1.76	0.55	935	3.14	1.71	0.55	956	3.03	1.65	0.55	998
24	22	3.51	1.49	0.43	914	3.38	1.44	0.43	971	3.30	1.40	0.43	998	3.16	1.34	0.43	1040
24	24	3.69	1.12	0.31	956	3.55	1.08	0.31	1008	3.47	1.06	0.31	1040	3.36	1.02	0.31	1092
25	18	3.23	2.28	0.71	840	3.09	2.18	0.71	882	2.97	2.09	0.71	924	2.86	2.02	0.71	966
25	20	3.37	1.97	0.59	882	3.23	1.89	0.59	935	3.14	1.83	0.59	956	3.03	1.77	0.59	998
25	22	3.51	1.63	0.47	914	3.38	1.57	0.47	971	3.30	1.53	0.47	998	3.16	1.47	0.47	1040
25	24	3.69	1.27	0.35	956	3.55	1.22	0.35	1008	3.47	1.20	0.35	1040	3.36	1.16	0.35	1092
26	18	3.23	2.41	0.75	840	3.09	2.30	0.75	882	2.97	2.21	0.75	924	2.86	2.13	0.75	966
26	20	3.37	2.11	0.63	882	3.23	2.02	0.63	935	3.14	1.96	0.63	956	3.03	1.89	0.63	998
26	22	3.51	1.77	0.51	914	3.38	1.71	0.51	971	3.30	1.67	0.51	998	3.16	1.60	0.51	1040
26	24	3.69	1.42	0.39	956	3.55	1.37	0.39	1008	3.47	1.33	0.39	1040	3.36	1.29	0.39	1092
26	26	3.80	1.01	0.27	1008	3.69	0.98	0.27	1061	3.63	0.96	0.27	1092	3.52	0.93	0.27	1124
27	18	3.23	2.54	0.79	840	3.09	2.43	0.79	882	2.97	2.33	0.79	924	2.86	2.25	0.79	966
27	20	3.37	2.24	0.67	882	3.23	2.15	0.67	935	3.14	2.08	0.67	956	3.03	2.01	0.67	998
27	22	3.51	1.91	0.55	914	3.38	1.84	0.55	971	3.30	1.80	0.55	998	3.16	1.72	0.55	1040
27	24	3.69	1.57	0.43	956	3.55	1.51	0.43	1008	3.47	1.47	0.43	1040	3.36	1.43	0.43	1092
27	26	3.80	1.16	0.31	1008	3.69	1.12	0.31	1061	3.63	1.11	0.31	1092	3.52	1.07	0.31	1124
28	18	3.23	2.67	0.83	840	3.09	2.55	0.83	882	2.97	2.45	0.83	924	2.86	2.36	0.83	966
28	20	3.37	2.37	0.71	882	3.23	2.28	0.71	935	3.14	2.21	0.71	956	3.03	2.13	0.71	998
28	22	3.51	2.05	0.59	914	3.38	1.98	0.59	971	3.30	1.93	0.59	998	3.16	1.85	0.59	1040
28	24	3.69	1.71	0.47	956	3.55	1.65	0.47	1008	3.47	1.61	0.47	1040	3.36	1.56	0.47	1092
28	26	3.80	1.31	0.35	1008	3.69	1.27	0.35	1061	3.63	1.25	0.35	1092	3.52	1.21	0.35	1124
29	18	3.23	2.80	0.87	840	3.09	2.68	0.87	882	2.97	2.57	0.87	924	2.86	2.47	0.87	966
29	20	3.37	2.51	0.75	882	3.23	2.41	0.75	935	3.14	2.34	0.75	956	3.03	2.25	0.75	998
29	22	3.51	2.19	0.63	914	3.38	2.11	0.63	971	3.30	2.06	0.63	998	3.16	1.98	0.63	1040
29	24	3.69	1.86	0.51	956	3.55	1.79	0.51	1008	3.47	1.75	0.51	1040	3.36	1.69	0.51	1092
29	26	3.80	1.46	0.39	1008	3.69	1.42	0.39	1061	3.63	1.40	0.39	1092	3.52	1.36	0.39	1124
30	18	3.23	2.92	0.91	840	3.09	2.80	0.91	882	2.97	2.69	0.91	924	2.86	2.59	0.91	966
30	20	3.37	2.64	0.79	882	3.23	2.54	0.79	935	3.14	2.46	0.79	956	3.03	2.37	0.79	998
30	22	3.51	2.33	0.67	914	3.38	2.25	0.67	971	3.30	2.19	0.67	998	3.16	2.10	0.67	1040
30	24	3.69	2.01	0.55	956	3.55	1.93	0.55	1008	3.47	1.89	0.55	1040	3.36	1.83	0.55	1092
30	26	3.80	1.61	0.43	1008	3.69	1.57	0.43	1061	3.63	1.54	0.43	1092	3.52	1.50	0.43	1124
31	18	3.23	3.05	0.95	840	3.09	2.92	0.95	882	2.97	2.81	0.95	924	2.86	2.70	0.95	966
31	20	3.37	2.78	0.83	882	3.23	2.67	0.83	935	3.14	2.59	0.83	956	3.03	2.50	0.83	998
31	22	3.51	2.47	0.71	914	3.38	2.38	0.71	971	3.30	2.33	0.71	998	3.16	2.23	0.71	1040
31	24	3.69	2.16	0.59	956	3.55	2.08	0.59	1008	3.47	2.03	0.59	1040	3.36	1.96	0.59	1092
31	26	3.80	1.76	0.47	1008	3.69	1.71	0.47	1061	3.63	1.69	0.47	1092	3.52	1.64	0.47	1124
32	18	3.23	3.18	0.99	840	3.09	3.05	0.99	882	2.97	2.93	0.99	924	2.86	2.82	0.99	966
32	20	3.37	2.91	0.87	882	3.23	2.80	0.87	935	3.14	2.71	0.87	956	3.03	2.62	0.87	998
32	22	3.51	2.61	0.75	914	3.38	2.52	0.75	971	3.30	2.46	0.75	998	3.16	2.36	0.75	1040
32	24	3.69	2.30	0.63	956	3.55	2.22	0.63	1008	3.47	2.17	0.63	1040	3.36	2.10	0.63	1092
32	26	3.80	1.92	0.51	1008	3.69	1.86	0.51	1061	3.63	1.83	0.51	1092	3.52	1.78	0.51	1124

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA25VB -E1 MSC-GA25VB -E1 (Single : Room C) : MUX-4A73VB -E1

CAPACITY : 2.75(kW) SHF : 0.73 INPUT : 1050(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.70	1.47	0.55	1029	2.48	1.35	0.55	1092	2.38	1.30	0.55	1113
21	20	2.83	1.20	0.43	1071	2.64	1.12	0.43	1124	2.54	1.08	0.43	1155
22	18	2.70	1.58	0.59	1029	2.48	1.45	0.59	1092	2.38	1.39	0.59	1113
22	20	2.83	1.32	0.47	1071	2.64	1.23	0.47	1124	2.54	1.18	0.47	1155
22	22	3.00	1.03	0.35	1113	2.81	0.97	0.35	1176	2.71	0.93	0.35	1197
23	18	2.70	1.68	0.63	1029	2.48	1.55	0.63	1092	2.38	1.49	0.63	1113
23	20	2.83	1.43	0.51	1071	2.64	1.33	0.51	1124	2.54	1.28	0.51	1155
23	22	3.00	1.15	0.39	1113	2.81	1.08	0.39	1176	2.71	1.04	0.39	1197
24	18	2.70	1.79	0.67	1029	2.48	1.65	0.67	1092	2.38	1.58	0.67	1113
24	20	2.83	1.54	0.55	1071	2.64	1.44	0.55	1124	2.54	1.39	0.55	1155
24	22	3.00	1.27	0.43	1113	2.81	1.19	0.43	1176	2.71	1.15	0.43	1197
24	24	3.16	0.96	0.31	1155	2.97	0.91	0.31	1208	2.89	0.88	0.31	1234
25	18	2.70	1.90	0.71	1029	2.48	1.74	0.71	1092	2.38	1.68	0.71	1113
25	20	2.83	1.66	0.59	1071	2.64	1.54	0.59	1124	2.54	1.49	0.59	1155
25	22	3.00	1.39	0.47	1113	2.81	1.30	0.47	1176	2.71	1.26	0.47	1197
25	24	3.16	1.09	0.35	1155	2.97	1.02	0.35	1208	2.89	1.00	0.35	1234
26	18	2.70	2.01	0.75	1029	2.48	1.84	0.75	1092	2.38	1.77	0.75	1113
26	20	2.83	1.77	0.63	1071	2.64	1.65	0.63	1124	2.54	1.59	0.63	1155
26	22	3.00	1.51	0.51	1113	2.81	1.42	0.51	1176	2.71	1.37	0.51	1197
26	24	3.16	1.22	0.39	1155	2.97	1.14	0.39	1208	2.89	1.11	0.39	1234
26	26	3.33	0.88	0.27	1197	3.14	0.83	0.27	1250	3.04	0.81	0.27	1276
27	18	2.70	2.12	0.79	1029	2.48	1.94	0.79	1092	2.38	1.87	0.79	1113
27	20	2.83	1.88	0.67	1071	2.64	1.76	0.67	1124	2.54	1.69	0.67	1155
27	22	3.00	1.63	0.55	1113	2.81	1.53	0.55	1176	2.71	1.48	0.55	1197
27	24	3.16	1.34	0.43	1155	2.97	1.26	0.43	1208	2.89	1.23	0.43	1234
27	26	3.33	1.01	0.31	1197	3.14	0.96	0.31	1250	3.04	0.93	0.31	1276
28	18	2.70	2.22	0.83	1029	2.48	2.04	0.83	1092	2.38	1.96	0.83	1113
28	20	2.83	2.00	0.71	1071	2.64	1.86	0.71	1124	2.54	1.79	0.71	1155
28	22	3.00	1.75	0.59	1113	2.81	1.64	0.59	1176	2.71	1.58	0.59	1197
28	24	3.16	1.47	0.47	1155	2.97	1.38	0.47	1208	2.89	1.34	0.47	1234
28	26	3.33	1.15	0.35	1197	3.14	1.08	0.35	1250	3.04	1.05	0.35	1276
29	18	2.70	2.33	0.87	1029	2.48	2.14	0.87	1092	2.38	2.06	0.87	1113
29	20	2.83	2.11	0.75	1071	2.64	1.97	0.75	1124	2.54	1.90	0.75	1155
29	22	3.00	1.87	0.63	1113	2.81	1.75	0.63	1176	2.71	1.69	0.63	1197
29	24	3.16	1.60	0.51	1155	2.97	1.50	0.51	1208	2.89	1.46	0.51	1234
29	26	3.33	1.28	0.39	1197	3.14	1.21	0.39	1250	3.04	1.17	0.39	1276
30	18	2.70	2.44	0.91	1029	2.48	2.24	0.91	1092	2.38	2.15	0.91	1113
30	20	2.83	2.22	0.79	1071	2.64	2.07	0.79	1124	2.54	2.00	0.79	1155
30	22	3.00	1.99	0.67	1113	2.81	1.87	0.67	1176	2.71	1.80	0.67	1197
30	24	3.16	1.72	0.55	1155	2.97	1.62	0.55	1208	2.89	1.57	0.55	1234
30	26	3.33	1.41	0.43	1197	3.14	1.33	0.43	1250	3.04	1.29	0.43	1276
31	18	2.70	2.55	0.95	1029	2.48	2.34	0.95	1092	2.38	2.25	0.95	1113
31	20	2.83	2.34	0.83	1071	2.64	2.18	0.83	1124	2.54	2.10	0.83	1155
31	22	3.00	2.11	0.71	1113	2.81	1.98	0.71	1176	2.71	1.91	0.71	1197
31	24	3.16	1.85	0.59	1155	2.97	1.74	0.59	1208	2.89	1.69	0.59	1234
31	26	3.33	1.55	0.47	1197	3.14	1.46	0.47	1250	3.04	1.41	0.47	1276
32	18	2.70	2.65	0.99	1029	2.48	2.44	0.99	1092	2.38	2.34	0.99	1113
32	20	2.83	2.45	0.87	1071	2.64	2.28	0.87	1124	2.54	2.20	0.87	1155
32	22	3.00	2.23	0.75	1113	2.81	2.09	0.75	1176	2.71	2.02	0.75	1197
32	24	3.16	1.98	0.63	1155	2.97	1.86	0.63	1208	2.89	1.80	0.63	1234
32	26	3.33	1.68	0.51	1197	3.14	1.58	0.51	1250	3.04	1.53	0.51	1276

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-4A73VB -E1

CAPACITY : 3.4(kW) SHF : 0.77 INPUT : 1220(W)

		OUTDOOR DB(℃)															
INDOOR DB(℃)	INDOOR WB(℃)	21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.00	2.37	0.59	976	3.83	2.27	0.59	1025	3.67	2.18	0.59	1074	3.54	2.10	0.59	1122
21	20	4.17	1.97	0.47	1025	4.00	1.89	0.47	1086	3.88	1.83	0.47	1110	3.74	1.77	0.47	1159
22	18	4.00	2.53	0.63	976	3.83	2.42	0.63	1025	3.67	2.32	0.63	1074	3.54	2.24	0.63	1122
22	20	4.17	2.14	0.51	1025	4.00	2.05	0.51	1086	3.88	1.99	0.51	1110	3.74	1.92	0.51	1159
22	22	4.34	1.70	0.39	1061	4.18	1.64	0.39	1129	4.08	1.60	0.39	1159	3.91	1.54	0.39	1208
23	18	4.00	2.69	0.67	976	3.83	2.57	0.67	1025	3.67	2.47	0.67	1074	3.54	2.38	0.67	1122
23	20	4.17	2.30	0.55	1025	4.00	2.21	0.55	1086	3.88	2.14	0.55	1110	3.74	2.07	0.55	1159
23	22	4.34	1.88	0.43	1061	4.18	1.81	0.43	1129	4.08	1.77	0.43	1159	3.91	1.69	0.43	1208
24	18	4.00	2.85	0.71	976	3.83	2.73	0.71	1025	3.67	2.62	0.71	1074	3.54	2.52	0.71	1122
24	20	4.17	2.47	0.59	1025	4.00	2.37	0.59	1086	3.88	2.30	0.59	1110	3.74	2.22	0.59	1159
24	22	4.34	2.05	0.47	1061	4.18	1.98	0.47	1129	4.08	1.93	0.47	1159	3.91	1.85	0.47	1208
24	24	4.56	1.61	0.35	1110	4.39	1.55	0.35	1171	4.28	1.51	0.35	1208	4.15	1.46	0.35	1269
25	18	4.00	3.01	0.75	976	3.83	2.88	0.75	1025	3.67	2.77	0.75	1074	3.54	2.66	0.75	1122
25	20	4.17	2.64	0.63	1025	4.00	2.53	0.63	1086	3.88	2.45	0.63	1110	3.74	2.37	0.63	1159
25	22	4.34	2.22	0.51	1061	4.18	2.15	0.51	1129	4.08	2.09	0.51	1159	3.91	2.01	0.51	1208
25	24	4.56	1.79	0.39	1110	4.39	1.72	0.39	1171	4.28	1.68	0.39	1208	4.15	1.63	0.39	1269
26	18	4.00	3.17	0.79	976	3.83	3.03	0.79	1025	3.67	2.91	0.79	1074	3.54	2.80	0.79	1122
26	20	4.17	2.80	0.67	1025	4.00	2.69	0.67	1086	3.88	2.61	0.67	1110	3.74	2.52	0.67	1159
26	22	4.34	2.40	0.55	1061	4.18	2.31	0.55	1129	4.08	2.26	0.55	1159	3.91	2.16	0.55	1208
26	24	4.56	1.97	0.43	1110	4.39	1.90	0.43	1171	4.28	1.85	0.43	1208	4.15	1.80	0.43	1269
26	26	4.69	1.47	0.31	1171	4.56	1.43	0.31	1232	4.49	1.40	0.31	1269	4.35	1.36	0.31	1305
27	18	4.00	3.33	0.83	976	3.83	3.19	0.83	1025	3.67	3.06	0.83	1074	3.54	2.95	0.83	1122
27	20	4.17	2.97	0.71	1025	4.00	2.85	0.71	1086	3.88	2.76	0.71	1110	3.74	2.67	0.71	1159
27	22	4.34	2.57	0.59	1061	4.18	2.48	0.59	1129	4.08	2.42	0.59	1159	3.91	2.32	0.59	1208
27	24	4.56	2.15	0.47	1110	4.39	2.07	0.47	1171	4.28	2.03	0.47	1208	4.15	1.96	0.47	1269
27	26	4.69	1.66	0.35	1171	4.56	1.61	0.35	1232	4.49	1.58	0.35	1269	4.35	1.54	0.35	1305
28	18	4.00	3.49	0.87	976	3.83	3.34	0.87	1025	3.67	3.21	0.87	1074	3.54	3.09	0.87	1122
28	20	4.17	3.14	0.75	1025	4.00	3.01	0.75	1086	3.88	2.92	0.75	1110	3.74	2.82	0.75	1159
28	22	4.34	2.74	0.63	1061	4.18	2.65	0.63	1129	4.08	2.58	0.63	1159	3.91	2.48	0.63	1208
28	24	4.56	2.34	0.51	1110	4.39	2.25	0.51	1171	4.28	2.20	0.51	1208	4.15	2.13	0.51	1269
28	26	4.69	1.84	0.39	1171	4.56	1.79	0.39	1232	4.49	1.76	0.39	1269	4.35	1.71	0.39	1305
29	18	4.00	3.65	0.91	976	3.83	3.49	0.91	1025	3.67	3.35	0.91	1074	3.54	3.23	0.91	1122
29	20	4.17	3.30	0.79	1025	4.00	3.17	0.79	1086	3.88	3.07	0.79	1110	3.74	2.97	0.79	1159
29	22	4.34	2.92	0.67	1061	4.18	2.81	0.67	1129	4.08	2.75	0.67	1159	3.91	2.63	0.67	1208
29	24	4.56	2.52	0.55	1110	4.39	2.43	0.55	1171	4.28	2.37	0.55	1208	4.15	2.29	0.55	1269
29	26	4.69	2.03	0.43	1171	4.56	1.97	0.43	1232	4.49	1.94	0.43	1269	4.35	1.88	0.43	1305
30	18	4.00	3.81	0.95	976	3.83	3.65	0.95	1025	3.67	3.50	0.95	1074	3.54	3.37	0.95	1122
30	20	4.17	3.47	0.83	1025	4.00	3.33	0.83	1086	3.88	3.23	0.83	1110	3.74	3.12	0.83	1159
30	22	4.34	3.09	0.71	1061	4.18	2.98	0.71	1129	4.08	2.91	0.71	1159	3.91	2.79	0.71	1208
30	24	4.56	2.70	0.59	1110	4.39	2.60	0.59	1171	4.28	2.54	0.59	1208	4.15	2.46	0.59	1269
30	26	4.69	2.22	0.47	1171	4.56	2.15	0.47	1232	4.49	2.12	0.47	1269	4.35	2.06	0.47	1305
31	18	4.00	3.97	0.99	976	3.83	3.80	0.99	1025	3.67	3.65	0.99	1074	3.54	3.51	0.99	1122
31	20	4.17	3.64	0.87	1025	4.00	3.49	0.87	1086	3.88	3.38	0.87	1110	3.74	3.27	0.87	1159
31	22	4.34	3.26	0.75	1061	4.18	3.15	0.75	1129	4.08	3.07	0.75	1159	3.91	2.94	0.75	1208
31	24	4.56	2.88	0.63	1110	4.39	2.78	0.63	1171	4.28	2.71	0.63	1208	4.15	2.63	0.63	1269
31	26	4.69	2.41	0.51	1171	4.56	2.34	0.51	1232	4.49	2.30	0.51	1269	4.35	2.23	0.51	1305
32	18	4.00	4.13	1.03	976	3.83	3.95	1.03	1025	3.67	3.79	1.03	1074	3.54	3.65	1.03	1122
32	20	4.17	3.80	0.91	1025	4.00	3.65	0.91	1086	3.88	3.54	0.91	1110	3.74	3.41	0.91	1159
32	22	4.34	3.44	0.79	1061	4.18	3.32	0.79	1129	4.08	3.24	0.79	1159	3.91	3.10	0.79	1208
32	24	4.56	3.07	0.67	1110	4.39	2.95	0.67	1171	4.28	2.88	0.67	1208	4.15	2.79	0.67	1269
32	26	4.69	2.59	0.55	1171	4.56	2.52	0.55	1232	4.49	2.48	0.55	1269	4.35	2.41	0.55	1305

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

PERFORMANCE DATA
COOL operation (230V)

MSC-CA35VB -E1 MSC-GA35VB -E1 (Single : Room A) : MUX-4A73VB -E1

CAPACITY : 3.4(kW) SHF : 0.77 INPUT : 1220(W)

		OUTDOOR DB(℃)											
INDOOR DB(℃)	INDOOR WB(℃)	35				40				43			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.33	1.98	0.59	1196	3.06	1.81	0.59	1269	2.94	1.74	0.59	1293
21	20	3.50	1.66	0.47	1244	3.26	1.54	0.47	1305	3.15	1.49	0.47	1342
22	18	3.33	2.11	0.63	1196	3.06	1.94	0.63	1269	2.94	1.86	0.63	1293
22	20	3.50	1.80	0.51	1244	3.26	1.67	0.51	1305	3.15	1.61	0.51	1342
22	22	3.71	1.46	0.39	1293	3.47	1.36	0.39	1366	3.35	1.32	0.39	1391
23	18	3.33	2.24	0.67	1196	3.06	2.06	0.67	1269	2.94	1.98	0.67	1293
23	20	3.50	1.94	0.55	1244	3.26	1.80	0.55	1305	3.15	1.74	0.55	1342
23	22	3.71	1.60	0.43	1293	3.47	1.50	0.43	1366	3.35	1.45	0.43	1391
24	18	3.33	2.38	0.71	1196	3.06	2.18	0.71	1269	2.94	2.10	0.71	1293
24	20	3.50	2.08	0.59	1244	3.26	1.94	0.59	1305	3.15	1.86	0.59	1342
24	22	3.71	1.75	0.47	1293	3.47	1.64	0.47	1366	3.35	1.58	0.47	1391
24	24	3.91	1.38	0.35	1342	3.67	1.30	0.35	1403	3.57	1.26	0.35	1434
25	18	3.33	2.51	0.75	1196	3.06	2.30	0.75	1269	2.94	2.21	0.75	1293
25	20	3.50	2.22	0.63	1244	3.26	2.07	0.63	1305	3.15	1.99	0.63	1342
25	22	3.71	1.90	0.51	1293	3.47	1.78	0.51	1366	3.35	1.72	0.51	1391
25	24	3.91	1.54	0.39	1342	3.67	1.44	0.39	1403	3.57	1.40	0.39	1434
26	18	3.33	2.64	0.79	1196	3.06	2.43	0.79	1269	2.94	2.33	0.79	1293
26	20	3.50	2.36	0.67	1244	3.26	2.20	0.67	1305	3.15	2.12	0.67	1342
26	22	3.71	2.05	0.55	1293	3.47	1.92	0.55	1366	3.35	1.85	0.55	1391
26	24	3.91	1.69	0.43	1342	3.67	1.59	0.43	1403	3.57	1.55	0.43	1434
26	26	4.11	1.29	0.31	1391	3.88	1.21	0.31	1452	3.76	1.18	0.31	1482
27	18	3.33	2.78	0.83	1196	3.06	2.55	0.83	1269	2.94	2.45	0.83	1293
27	20	3.50	2.50	0.71	1244	3.26	2.33	0.71	1305	3.15	2.24	0.71	1342
27	22	3.71	2.20	0.59	1293	3.47	2.06	0.59	1366	3.35	1.99	0.59	1391
27	24	3.91	1.85	0.47	1342	3.67	1.74	0.47	1403	3.57	1.69	0.47	1434
27	26	4.11	1.45	0.35	1391	3.88	1.37	0.35	1452	3.76	1.33	0.35	1482
28	18	3.33	2.91	0.87	1196	3.06	2.67	0.87	1269	2.94	2.57	0.87	1293
28	20	3.50	2.64	0.75	1244	3.26	2.46	0.75	1305	3.15	2.37	0.75	1342
28	22	3.71	2.35	0.63	1293	3.47	2.20	0.63	1366	3.35	2.12	0.63	1391
28	24	3.91	2.01	0.51	1342	3.67	1.88	0.51	1403	3.57	1.83	0.51	1434
28	26	4.11	1.62	0.39	1391	3.88	1.52	0.39	1452	3.76	1.48	0.39	1482
29	18	3.33	3.04	0.91	1196	3.06	2.79	0.91	1269	2.94	2.69	0.91	1293
29	20	3.50	2.78	0.79	1244	3.26	2.59	0.79	1305	3.15	2.49	0.79	1342
29	22	3.71	2.49	0.67	1293	3.47	2.33	0.67	1366	3.35	2.25	0.67	1391
29	24	3.91	2.16	0.55	1342	3.67	2.03	0.55	1403	3.57	1.97	0.55	1434
29	26	4.11	1.78	0.43	1391	3.88	1.68	0.43	1452	3.76	1.63	0.43	1482
30	18	3.33	3.18	0.95	1196	3.06	2.92	0.95	1269	2.94	2.80	0.95	1293
30	20	3.50	2.92	0.83	1244	3.26	2.72	0.83	1305	3.15	2.62	0.83	1342
30	22	3.71	2.64	0.71	1293	3.47	2.47	0.71	1366	3.35	2.39	0.71	1391
30	24	3.91	2.32	0.59	1342	3.67	2.18	0.59	1403	3.57	2.12	0.59	1434
30	26	4.11	1.95	0.47	1391	3.88	1.83	0.47	1452	3.76	1.78	0.47	1482
31	18	3.33	3.31	0.99	1196	3.06	3.04	0.99	1269	2.94	2.92	0.99	1293
31	20	3.50	3.06	0.87	1244	3.26	2.85	0.87	1305	3.15	2.75	0.87	1342
31	22	3.71	2.79	0.75	1293	3.47	2.61	0.75	1366	3.35	2.52	0.75	1391
31	24	3.91	2.48	0.63	1342	3.67	2.32	0.63	1403	3.57	2.26	0.63	1434
31	26	4.11	2.11	0.51	1391	3.88	1.99	0.51	1452	3.76	1.93	0.51	1482
32	18	3.33	3.44	1.03	1196	3.06	3.16	1.03	1269	2.94	3.04	1.03	1293
32	20	3.50	3.20	0.91	1244	3.26	2.98	0.91	1305	3.15	2.87	0.91	1342
32	22	3.71	2.94	0.79	1293	3.47	2.75	0.79	1366	3.35	2.66	0.79	1391
32	24	3.91	2.63	0.67	1342	3.67	2.47	0.67	1403	3.57	2.40	0.67	1434
32	26	4.11	2.28	0.55	1391	3.88	2.14	0.55	1452	3.76	2.08	0.55	1482

NOTE Q :Total capacity (kW) SHF :Sensible heat factor DB :Dry-bulb temperature
SHC :Sensible heat capacity (kW) INPUT :Total power input (W) WB :Wet-bulb temperature

10 ACTUATOR CONTROL

OUTDOOR UNIT ACTUATOR CONTROL

MUX-2A28VB -E1

ACTUATOR \ INDOOR UNIT			A	B
COMPRE-SSOR	MC	ON	ON	ON
			ON	OFF
			OFF	ON
		OFF	OFF	OFF
OUTDOOR FAN MOTOR	MF	ON	ANY UNIT ON	
		OFF	OFF	OFF
SOLENOID VALVE	21R (BALANCE)	ON (CLOSE)	ON	ON
			ON	OFF
			OFF	ON
		OFF (OPEN)	OFF	OFF
	21R1	ON (OPEN)	ON	–
		OFF (CLOSE)	OFF	–
	21R2	ON (OPEN)	–	ON
		OFF (CLOSE)	–	OFF

MUX-3A60VB -E1 MUX-3A63VB -E1

ACTUATOR \ INDOOR UNIT			A	B	C
COMPRE-SSOR	MC1	ON	ON	–	–
		OFF	OFF	–	–
	MC2	ON	–	ON	ON
			–	ON	OFF
			–	OFF	ON
		OFF	–	OFF	OFF
OUTDOOR FAN MOTOR	MF61	ON	ANY UNIT ON		
		OFF	OFF	OFF	OFF
SOLENOID VALVE	21R3	ON (OPEN)	–	ON	–
		OFF (CLOSE)	–	OFF	–
	21R4	ON (OPEN)	–	–	ON
		OFF (CLOSE)	–	–	OFF
	21RB	ON (CLOSE)	–	ON	ON
			–	ON	OFF
			–	OFF	ON
		OFF (OPEN)	–	OFF	OFF

MUX-2A59VB -E1 MUX-2A70VB -E1

ACTUATOR \ INDOOR UNIT			A	B
COMPRE-SSOR	MC1	ON	ON	–
		OFF	OFF	–
	MC2	ON	–	ON
		OFF	–	OFF
OUTDOOR FAN MOTOR	MF61	ON	ANY UNIT ON	
		OFF	OFF	OFF

MUX-4A73VB -E1

ACTUATOR \ INDOOR UNIT			A	B	C	D
COMPRE-SSOR	MC1	ON	ON	ON	–	–
			ON	OFF	–	–
			OFF	ON	–	–
		OFF	OFF	OFF	–	–
	MC2	ON	–	–	ON	ON
			–	–	ON	OFF
			–	–	OFF	ON
		OFF	–	–	OFF	OFF
OUTDOOR FAN MOTOR	MF61	ON	ANY UNIT ON			
		OFF	OFF	OFF	OFF	OFF
SOLENOID VALVE	21R1	ON (OPEN)	ON	–	–	–
		OFF (CLOSE)	OFF	–	–	–
	21R2	ON (OPEN)	–	ON	–	–
		OFF (CLOSE)	–	OFF	–	–
	21R3	ON (OPEN)	–	–	ON	–
		OFF (CLOSE)	–	–	OFF	–
	21R4	ON (OPEN)	–	–	–	ON
		OFF (CLOSE)	–	–	–	OFF
	21RA (BALANCE)	ON (CLOSE)	ON	ON	–	–
			ON	OFF	–	–
			OFF	ON	–	–
		OFF (OPEN)	OFF	OFF	–	–
	21RB (BALANCE)	ON (CLOSE)	–	–	ON	ON
			–	–	ON	OFF
			–	–	OFF	ON
		OFF (OPEN)	–	–	OFF	OFF

"–" means that the indoor unit is not related to the control of actuator.

11 TROUBLESHOOTING

MUX-2A28VB -E1 MUX-3A63VB -E1
MUX-2A59VB -E1 MUX-2A70VB -E1
MUX-3A60VB -E1 MUX-4A73VB -E1

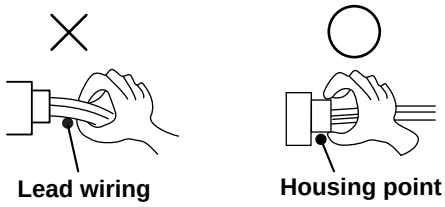
11-1. Cautions on troubleshooting

1. Before troubleshooting, check the following:

1) Check the power supply voltage.
2) Check the indoor/outdoor connecting wire for mis-wiring.

2. Take care the following during servicing.

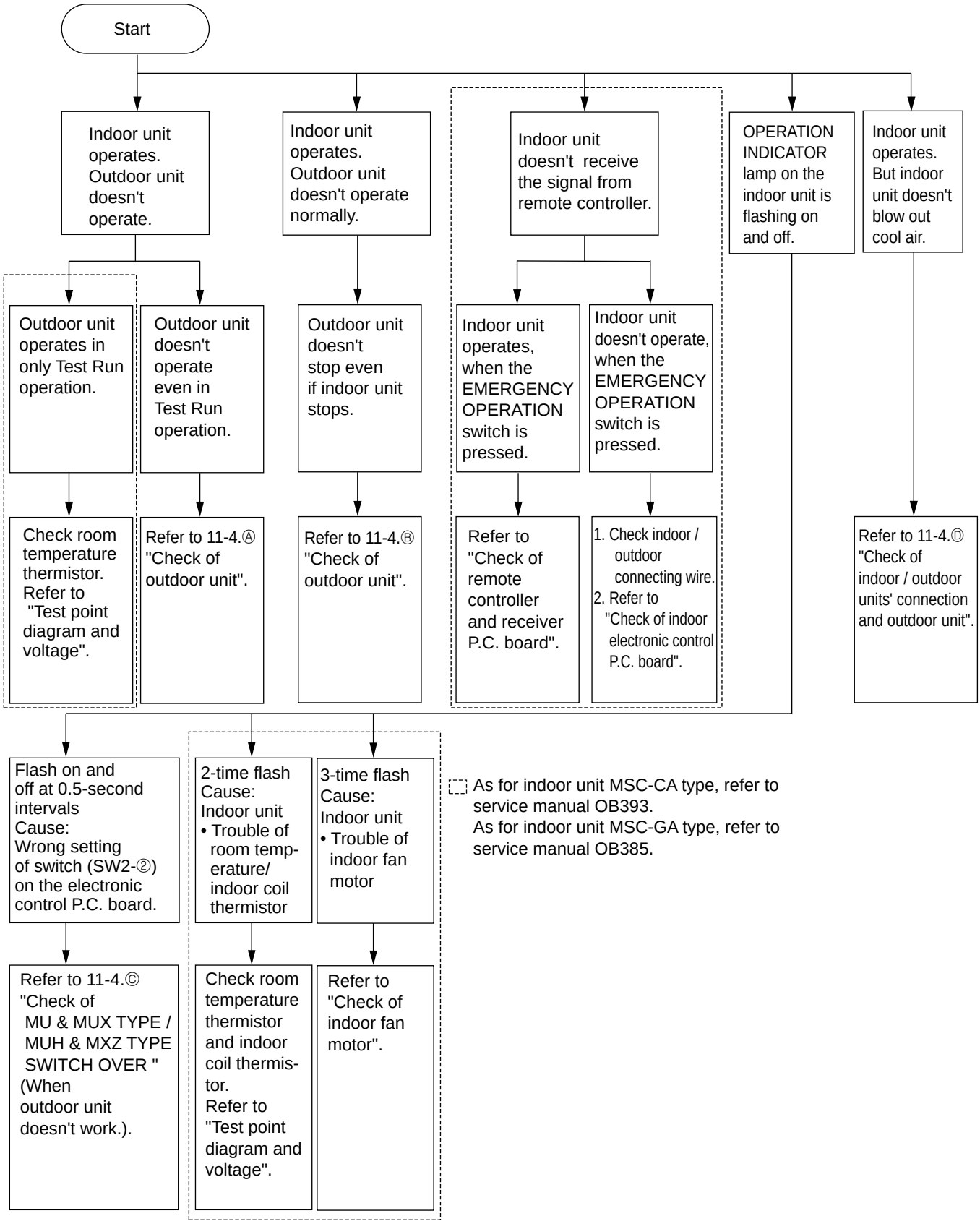
1) Before servicing the air conditioner, be sure to turn off the main unit first with the remote controller, and then after confirming the horizontal vane is closed, turn off the breaker and / or disconnect the power plug.
2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the electronic control P.C. board.
3) When removing the electrical parts, be careful to the residual voltage of smoothing capacitor.
4) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.
5) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.



3. Troubleshooting procedure

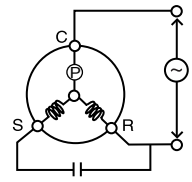
1) First, check if the OPERATION INDICATOR lamp on the indoor unit is flashing on and off to indicate an abnormality. To make sure, check how many times the abnormality indication is flashing on and off before starting service work.
2) Before servicing check that the connector and terminal are connected properly.
3) If the electronic control P.C. board is supposed to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
4) When troubleshooting, refer to 11-2.

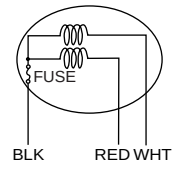
11-2. Instruction of troubleshooting

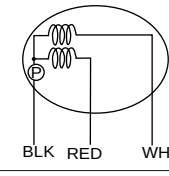


11-3. Trouble criterion of main parts

MUX-2A28VB -E1 MUX-2A59VB -E1 MUX-3A60VB -E1 MUX-3A63VB -E1 MUX-2A70VB -E1 MUX-4A73VB -E1

<table>
<tr><th>Part name</th><th>Check method and criterion</th><th>Figure</th></tr>
<tr><td>Compressor
(MC, MC1, MC2)
INNER PROTECTOR
150°C OPEN
90°C CLOSE</td><td>
Measure the resistance between the terminals with a tester.
(Coil wiring temperature-10°C ~ 40°C)
<table>
<tr><td rowspan="2"></td><td colspan="5">Normal</td><td rowspan="2">Abnormal</td></tr>
<tr><td>MUX-2A28VB</td><td colspan="2">MUX-2A59VB, MUX-3A63VB</td><td colspan="2">MUX-3A60VB</td></tr>
<tr><td></td><td>RN092VHSHT</td><td>RN145VHSHT</td><td>RN092VHSHT</td><td>RN099VHSHT</td><td>RN125VHSHT</td><td>Open or short-circuit</td></tr>
<tr><td>C-R</td><td>3.41 ~ 4.18Ω</td><td>2.14 ~ 2.63Ω</td><td>3.41 ~ 4.18Ω</td><td>2.99 ~ 3.67Ω</td><td>2.52 ~ 3.09Ω</td><td></td></tr>
<tr><td>C-S</td><td>5.41 ~ 6.63Ω</td><td>3.35 ~ 4.11Ω</td><td>5.41 ~ 6.63Ω</td><td>4.02 ~ 4.39Ω</td><td>5.04 ~ 6.18Ω</td><td></td></tr>
</table>
<table>
<tr><td rowspan="2"></td><td colspan="4">Normal</td><td rowspan="2">Abnormal</td></tr>
<tr><td colspan="2">MUX-2A70VB</td><td colspan="2">MUX-4A73VB</td></tr>
<tr><td></td><td>RN145VHSHT</td><td>RN145VHSHT</td><td>RN145VHSHT</td><td>RN125VHSHT</td><td>Open or short-circuit</td></tr>
<tr><td>C-R</td><td>2.14 ~ 2.63Ω</td><td>2.14 ~ 2.63Ω</td><td>2.14 ~ 2.63Ω</td><td>2.52 ~ 3.09Ω</td><td></td></tr>
<tr><td>C-S</td><td>3.35 ~ 4.11Ω</td><td>3.35 ~ 4.11Ω</td><td>3.35 ~ 4.11Ω</td><td>5.04 ~ 6.18Ω</td><td></td></tr>
</table>
</td><td> 
</td></tr>
<tr><td>Outdoor fan motor
(MF, MF61)
INNER FUSE
MUX-2A28VB
145°C OPEN

INNER PROTECTOR
MUX-2A59/3A60/ 3A63/2A70/ 4A73VB
145±8°C OPEN</td><td>
Measure the resistance between the terminals with a tester.
(Coil wiring temperature -10°C ~ 40°C)
<table>
<tr><td rowspan="2">Color of lead wire</td><td colspan="3">Normal</td><td>Abnormal</td></tr>
<tr><td>MUX-2A28VB</td><td>MUX-2A59VB</td><td>MUX-3A60VB</td><td>Open or short-circuit</td></tr>
<tr><td>WHT-BLK</td><td>196 ~ 241Ω</td><td>79 ~ 98Ω</td><td>79 ~ 98Ω</td><td></td></tr>
<tr><td>BLK-RED</td><td>208 ~ 246Ω</td><td>129 ~ 158Ω</td><td>129 ~ 158Ω</td><td></td></tr>
</table>
Measure the resistance between the terminals with a tester.
(Coil wiring temperature -10°C ~ 40°C)
<table>
<tr><td rowspan="2"></td><td colspan="3">Normal</td><td>Abnormal</td></tr>
<tr><td>MUX-3A63VB</td><td>MUX-2A70VB</td><td>MUX-4A73VB</td><td>Open or short-circuit</td></tr>
<tr><td>WHT-BLK</td><td>79 ~ 98Ω</td><td>79 ~ 98Ω</td><td>69 ~ 85Ω</td><td></td></tr>
<tr><td>BLK-RED</td><td>129 ~ 158Ω</td><td>129 ~ 158Ω</td><td>70 ~ 86Ω</td><td></td></tr>
</table>
</td><td>MUX-2A28VB
 

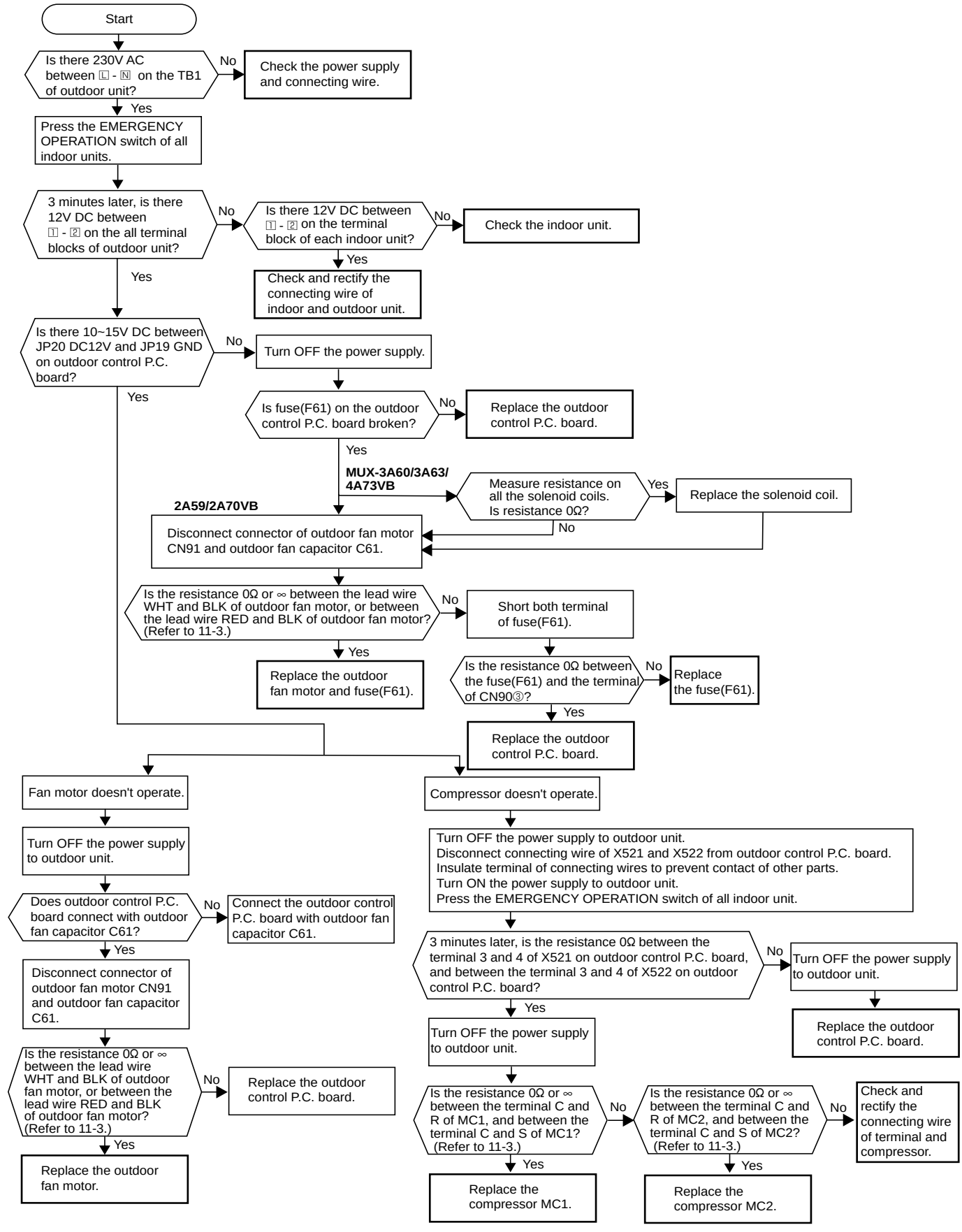
MUX-2A59/3A60/ 3A63/2A70/ 4A73VB
 
</td></tr>
<tr><td>Solenoid coil
(21R, 21RA, 21RB, 21R1, 21R2, 21R3, 21R4)</td><td>
Measure the resistance with a tester. (Part temperature -10°C ~ 40°C)
<table>
<tr><td>Normal</td><td>Abnormal</td></tr>
<tr><td>1410 ~ 1730Ω</td><td>Open or short-circuit</td></tr>
</table>
</td><td></td></tr>
</table>

(P) INNER PROTECTOR

11-4.Troubleshooting flow

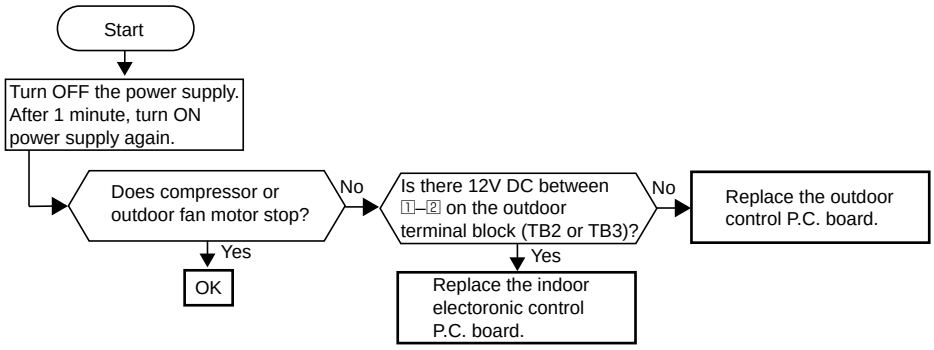
Compressor and / or outdoor fan doesn't operate.

Ⓐ Check of outdoor unit



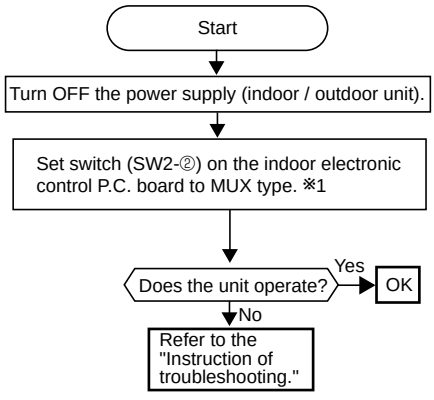
Compressor and / or outdoor fan doesn't stop.

Ⓑ Check of outdoor unit



When OPERATION INDICATOR lamp flashes 0.5-second intervals.
Outdoor unit doesn't operate.

Ⓒ Check of MU & MUX TYPE / MUH & MXZ TYPE SWITCH OVER

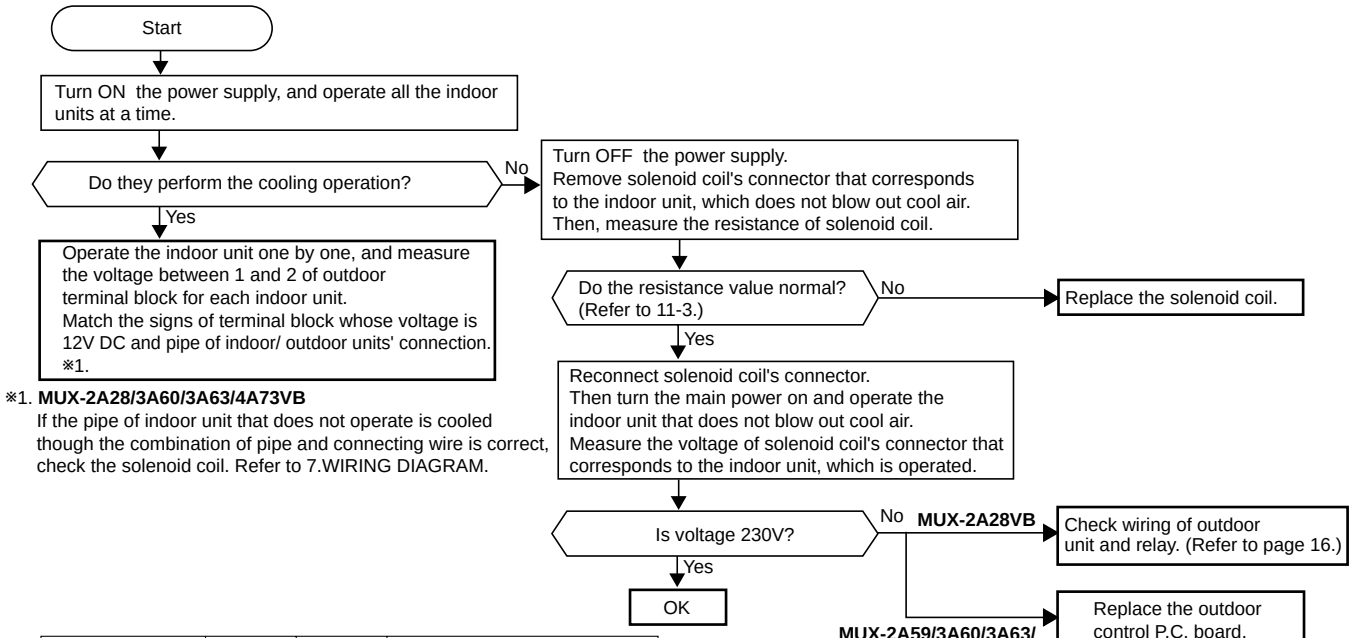


※ 1 Set the switch (SW2-②) on indoor electronic control P.C. board to MUX type, when the outdoor unit is MUX type.
If the setting is MUH or MXZ type, the unit does not work.
Refer to MU & MUX TYPE / MUH& MXZ TYPE SWITCH OVER on service manual OB393 or OB385.

Cool air does not blow out although indoor unit is operating.

Ⓓ Check of indoor/outdoor units' connection and outdoor unit

※ In case of troubleshooting, be sure to operate indoor unit by emergency operation switch.



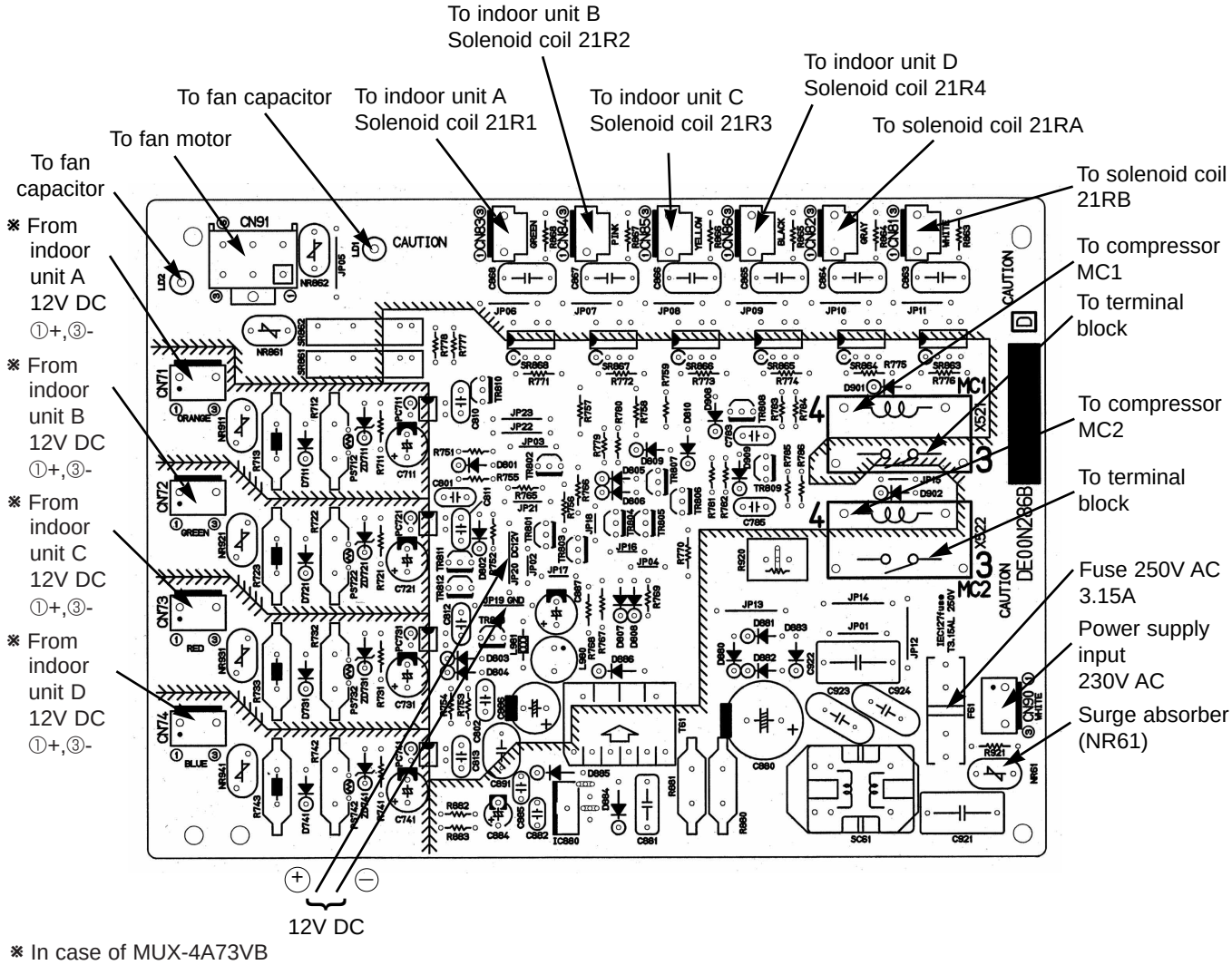
※1. **MUX-2A28/3A60/3A63/4A73VB**
If the pipe of indoor unit that does not operate is cooled though the combination of pipe and connecting wire is correct, check the solenoid coil. Refer to 7.WIRING DIAGRAM.

Model	Indoor unit	Terminal block	Connector for solenoid coil control	
MUX-2A28VB	A	TB2	21R1	21R
	B	TB2	21R2	
MUX-3A60VB MUX-3A63VB	B	TB3	21R3-CN85	21RB-CN81
	C	TB4	21R4-CN86	
MUX-4A73VB	A	TB2	21R1-CN83	21RA-CN82
	B	TB3	21R2-CN84	
	C	TB4	21R3-CN85	21RB-CN81
	D	TB5	21R4-CN86	

11-5. Test point diagram and voltage

MUX-2A59VB - E1
MUX-3A60VB - E1
MUX-3A63VB - E1
MUX-2A70VB - E1
MUX-4A73VB - E1

Outdoor control P.C. board



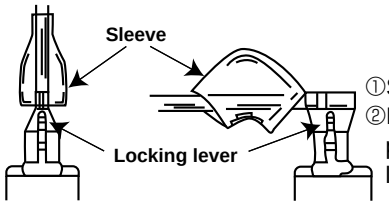
※ In case of MUX-4A73VB

12 DISASSEMBLY INSTRUCTIONS

<"Terminal with locking mechanism" Detaching points>

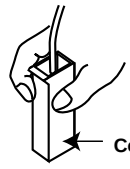
The terminal which has the locking mechanism can be detached as shown below.
There are two types (Refer to (1) and (2)) of the terminal with locking mechanism.
The terminal without locking mechanism can be detached by pulling it out.
Check the shape of the terminal before detaching.

(1) Slide the sleeve and check if there is a locking lever or not.



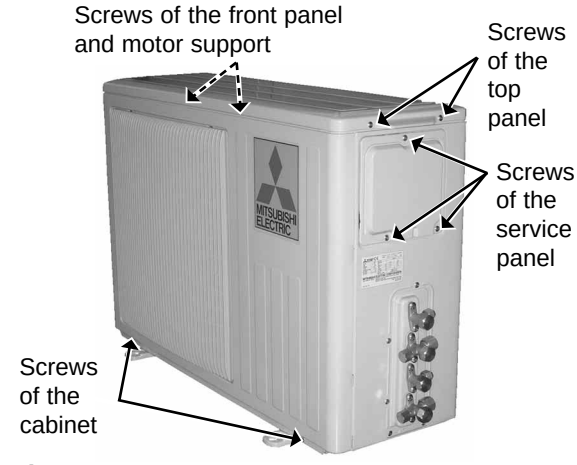
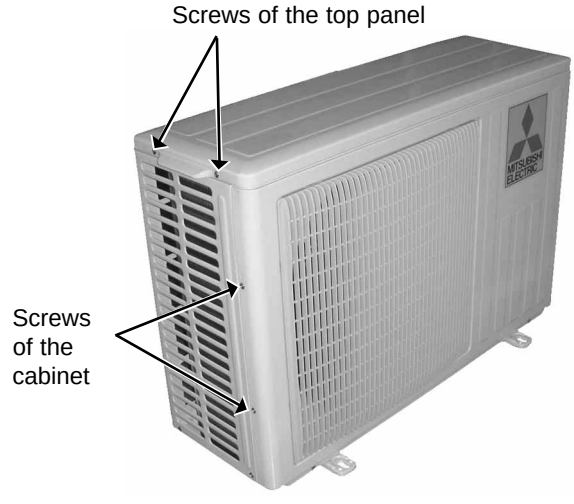
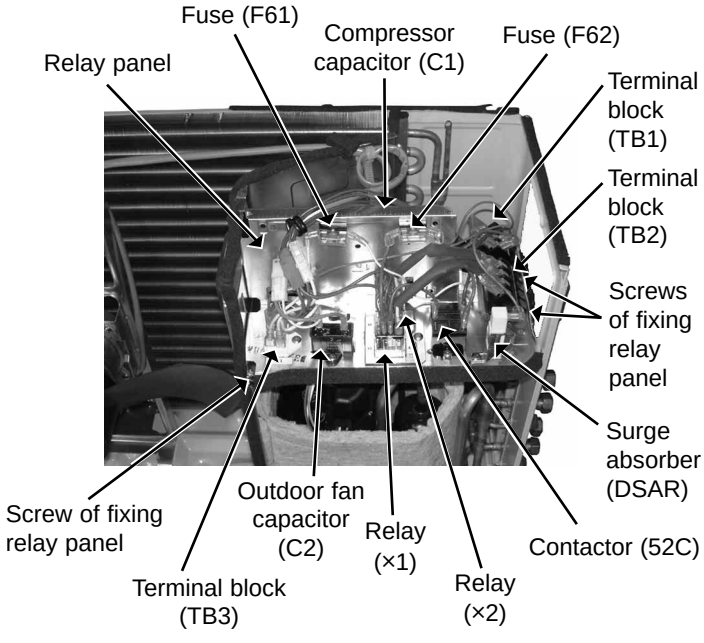
①Slide the sleeve.
②Pull the terminal while pushing the locking lever.

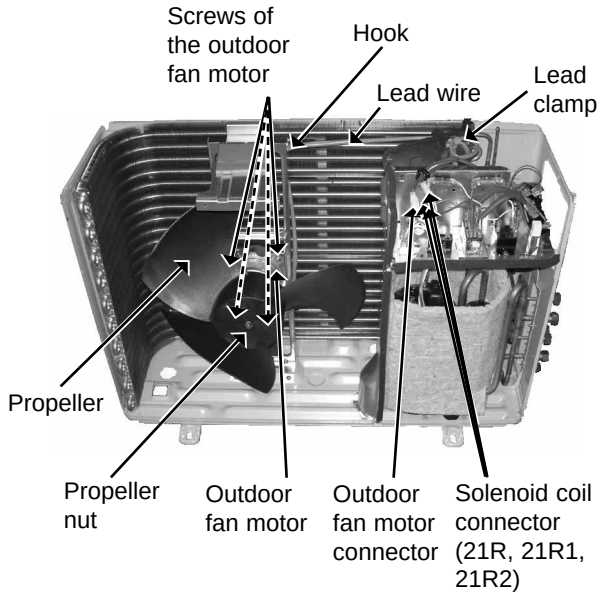
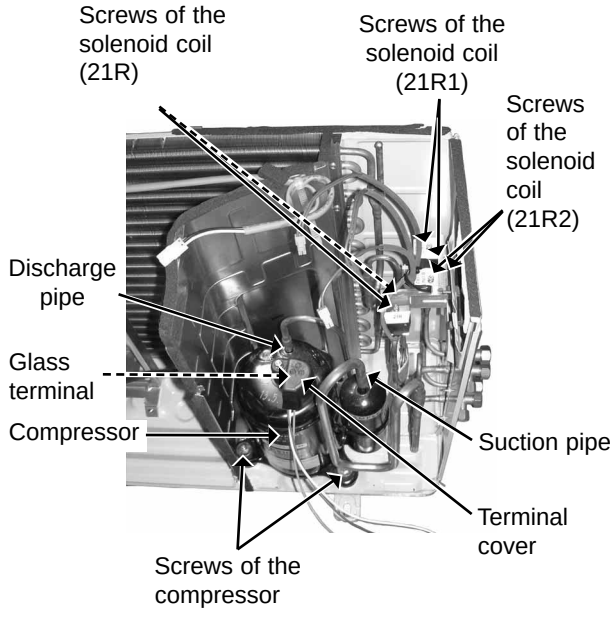
(2) The terminal with this connector has the locking mechanism.



①Hold the sleeve, and pull out the terminal slowly.

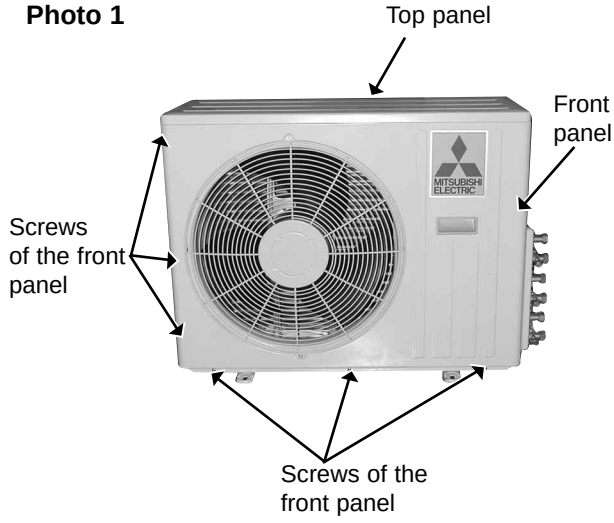
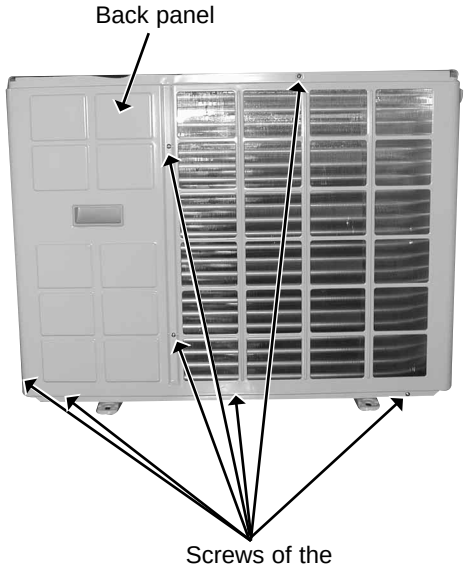
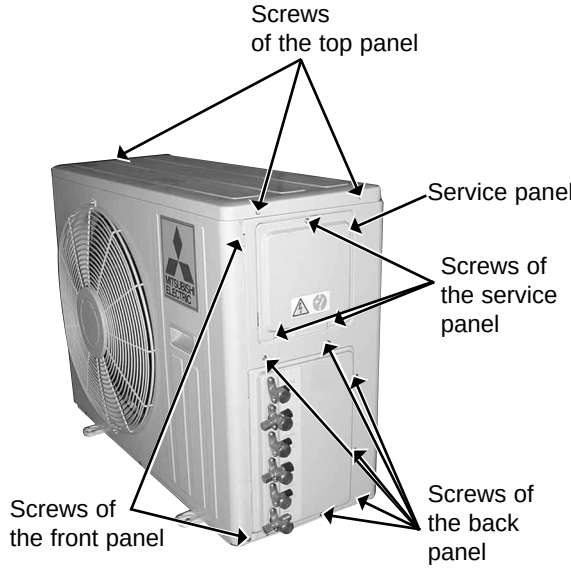
12-1. MUX-2A28VB - E1 OUTDOOR UNIT

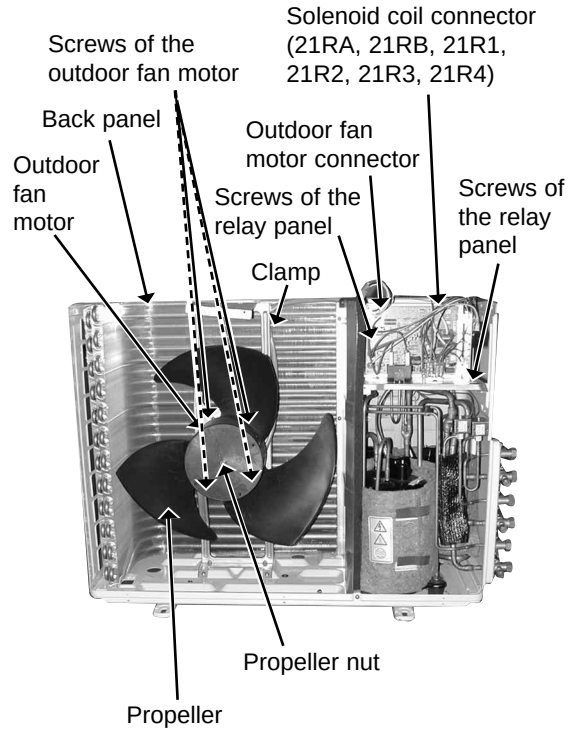
OPERATING PROCEDURE	PHOTOS
1. Removing the cabinet (1) Remove the screws of the top panel. (2) Remove the screw of the service panel. (3) Remove the screws of the cabinet. (4) Remove the screws of the front panel and motor support. (5) Remove the service panel, and remove the screw from the insides. (6) Remove the top panel. (7) Remove the cabinet.	**Photo 1**  **Photo 2** 
Photo 3  	

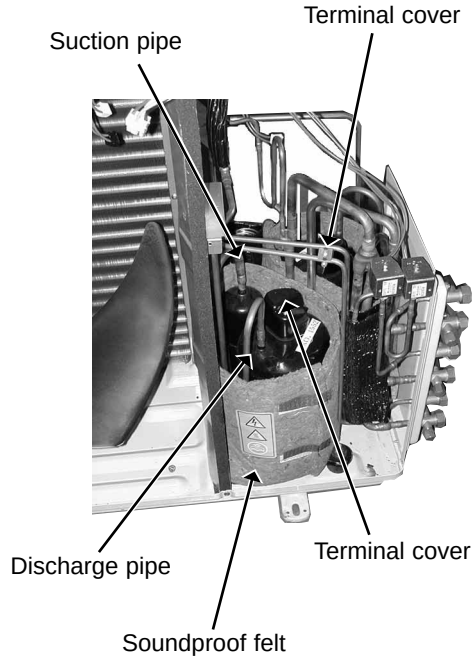
OPERATING PROCEDURE	PHOTOS
2. Removing the relay panel (1) Remove the service panel and the cabinet.(Refer to 1.) (2) Remove the following connectors. • Outdoor fan motor • Solenoid coil (21R, 21R1, 21R2)	**Photo 4** 
3. Removing the propeller and the outdoor fan motor (1) Remove the cabinet. (Refer to 1.) (2) Remove the propeller nut. (3) Remove the propeller. **NOTE : Loose the propeller in the rotating direction for removal.** When attaching the propeller, align the mark on the propeller and the motor shaft cut section. Set the propeller in position by using the cut on the shaft and the mark on the propeller. (4) Remove lead clamps and disconnect the outdoor fan motor connector. (5) Remove screws fixing the fan motor. (6) Remove the outdoor fan motor.	**Photo 5** 
4. Removing the compressor (1) Remove the cabinet. (Refer to 1.) (2) Remove the relay panel. (3) Remove the soundproof felt. (4) Remove the terminal cover on the compressor. (5) Disconnect lead wires from the glass terminal of the compressor. (6) Recover gas from the refrigerant circuit. **NOTE:**Recover gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa). (7) Disconnect the welded part of the discharge pipe. (8) Disconnect the welded part of the suction pipe. (9) Remove nuts fixing the compressor. (10) Remove the compressor.	

12-2. MUX-2A59VB -E1 MUX-3A60VB -E1 MUX-3A63VB -E1 MUX-2A70VB -E1 MUX-4A73VB -E1
OUTDOOR UNIT

NOTE : These photos are MUX-3A60VB.
Other models are almost the same as MUX-3A60VB.

OPERATING PROCEDURE	PHOTOS
1.Removing the cabinet (1) Remove the screws of the service panel. (2) Remove the screws of the top panel. (3) Remove the service panel. (4) Remove the top panel. (5) Remove the screws of the front panel. (6) Remove the front panel. (7) Remove the screws of the back panel. (8) Remove the back panel.	**Photo 1** 
Photo 3  	**Photo 2** 

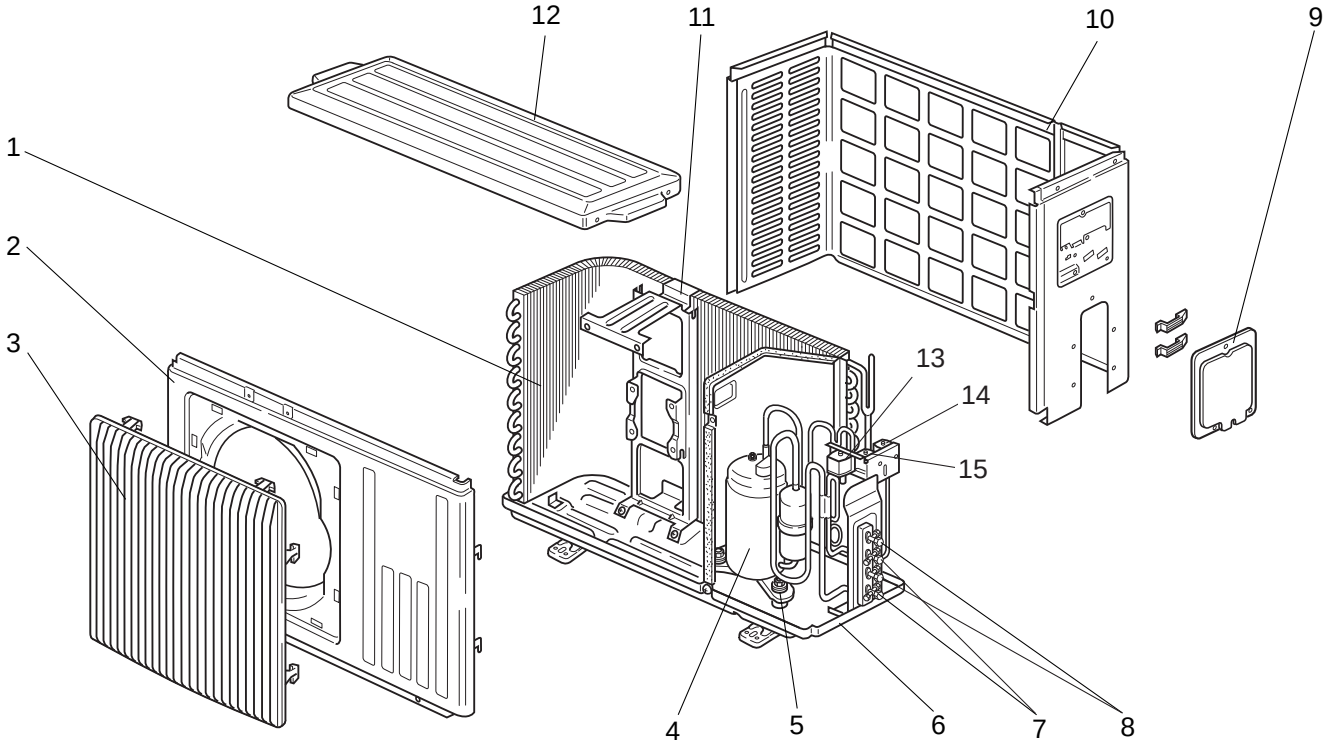
OPERATING PROCEDURE	PHOTOS
2. Removing the relay panel (1) Remove the cabinet. (Refer to 1.) (2) Disconnect the following connectors. ・Outdoor fan motor ・**Only MUX-3A60VB and MUX-3A63VB** Solenoid coil (21RB, 21R3, 21R4) ・**Only MUX-4A73VB** Solenoid coil (21RA, 21RB, 21R1, 21R2, 21R3, 21R4)	**Photo 4** 
3. Removing the propeller (1) Remove the cabinet. (Refer to 1.) (2) Remove the propeller nut. (3) Remove the propeller. **NOTE : Loose the propeller in the rotating direction for removal.** When attaching the propeller, align the mark on the propeller and the motor shaft cut section. Set the propeller in position by using the cut on the shaft and the mark on the propeller.	
4. Removing the outdoor fan motor (1) Remove the cabinet. (Refer to 1.) (2) Remove the propeller. (Refer to 3.) (3) Remove the clamp of outdoor fan motor lead wire and disconnect the outdoor fan motor connector. (4) Remove the screws fixing the outdoor fan motor. (5) Remove the outdoor fan motor.	

OPERATING PROCEDURE	PHOTOS
5. Removing the compressor (A, B) (1) Remove the cabinet. (Refer to 1.) (2) Remove the relay panel. (3) Remove the soundproof felt. (4) Remove the terminal cover on the compressor. (5) Disconnect lead wires from the compressor. (6) Recover gas from the refrigerant circuit. **NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa). (7) Disconnect the welded part of the discharge pipe. (8) Disconnect the welded part of the suction pipe. (9) Remove nuts fixing the compressor. (10) Remove the compressor.	**Photo 5** 
6. Removing the compressor (C) (1) Remove the cabinet. (Refer to 1.) (2) Remove the relay panel. (Refer to 2.) (3) Remove the screws fixing back panel. (4) Remove the back panel. (5) Remove the soundproof felt. (6) Remove the terminal cover on the compressor. (7) Disconnect lead wires from the compressor. (8) Recover gas from the refrigerant circuit. **NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa). (9) Disconnect the welded part of the discharge pipe. (10) Disconnect the welded part of the suction pipe. (11) Remove nuts fixing the compressor. (12) Remove the compressor.	

13 PARTS LIST

MUX-2A28VB -E1

13-1. OUTDOOR UNIT STRUCTURAL PARTS

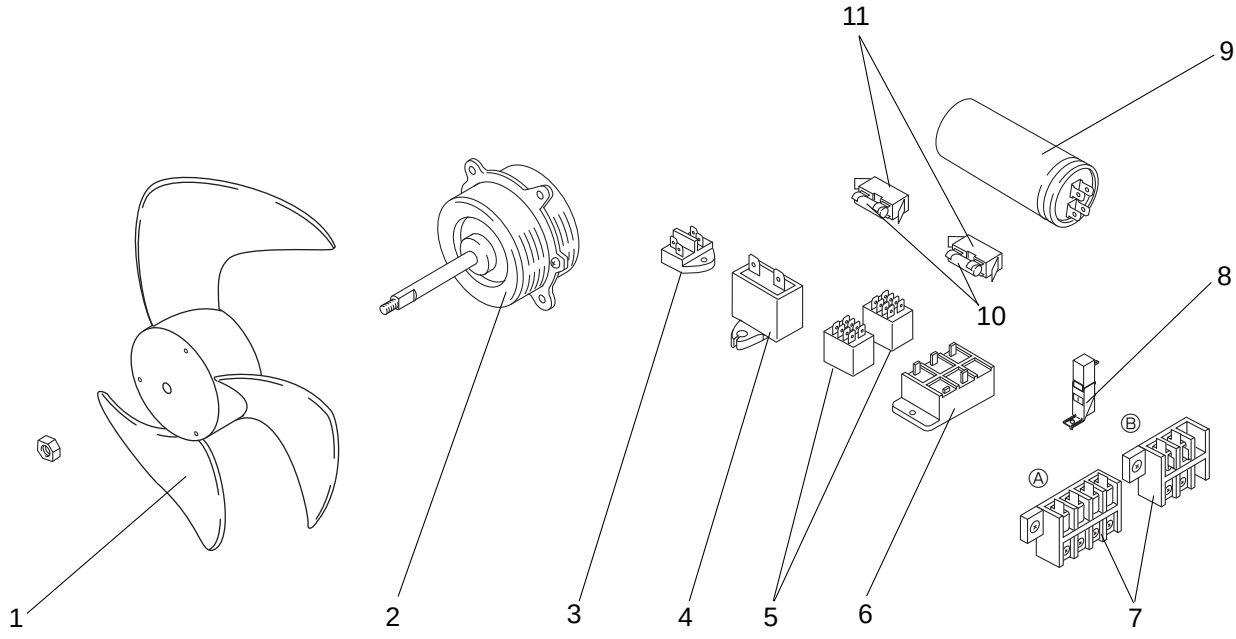


Part numbers that are circled are not shown in the illustration.

No.	Part No.	Part name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MUX-2A28VB-E1	
1	E02 755 630	OUTDOOR HEAT EXCHANGER		1	
2	E02 815 232	CABINET		1	
3	E02 815 521	GRILLE(OUT)		1	
4	E02 742 900	COMPRESSOR	MC	1	RN092VHSHT
5	E02 075 506	COMPRESSOR RUBBER SET		3	3RUBBERS/SET
6	E02 837 290	BASE		1	
7	E02 755 661	STOP VALVE(GAS)		2	ϕ9.52
8	E02 755 662	STOP VALVE(LIQUID)		2	ϕ6.35
9	E02 837 245	SERVICE PANEL		1	
10	E02 837 233	BACK PANEL		1	
11	E02 336 515	MOTOR SUPPORT		1	
12	E02 815 297	TOP PANEL		1	
13	E02 750 490	SOLENOID COIL	21R	1	
14	E02 751 490	SOLENOID COIL(A)	21R1	1	
15	E02 755 490	SOLENOID COIL(B)	21R2	1	
⑯	E02 755 492	SOLENOID VALVE(21R1,21R2)		2	
⑰	E02 759 492	SOLENOID VALVE(21R)		1	
⑱	E02 024 936	CAPILLARY TUBE		1	ϕ3.0xϕ1.4x1000
	E02 289 936	CAPILLARY TUBE		1	(A, B room) ϕ3.0xϕ1.6x900
	E02 642 936	CAPILLARY TUBE		2	(A, B room) ϕ3.0xϕ1.4x400

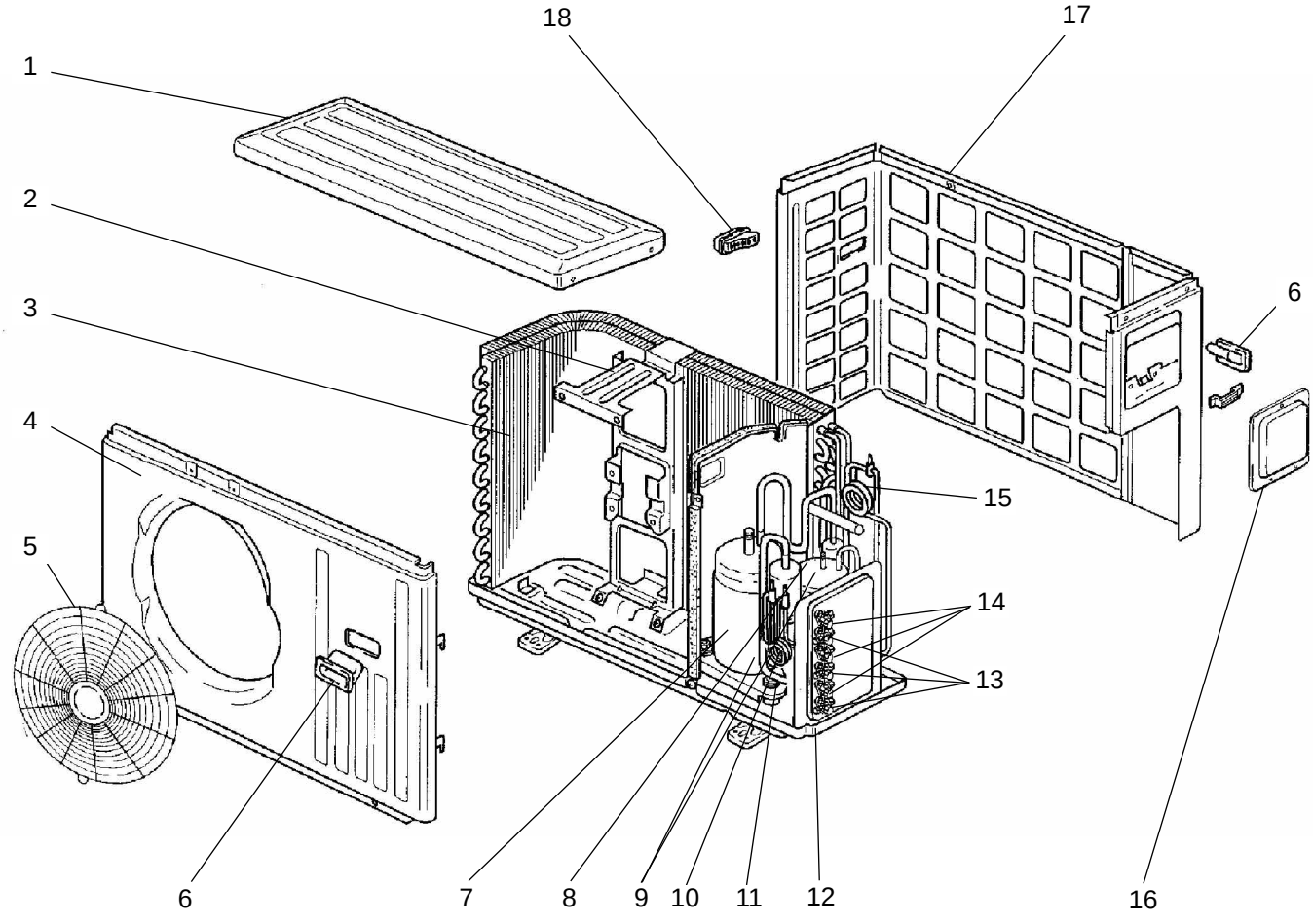
MUX-2A28VB -E1

13-2. OUTDOOR UNIT ELECTRICAL PARTS AND FUNCTIONAL PARTS



No.	Part No.	Part name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MUX-2A28VB-E1	
1	E02 665 501	PROPELLER		1	
2	E02 677 301	OUTDOOR FAN MOTOR	MF	1	RA6V33-□□
3	E07 056 374	TERMINAL BLOCK	TB3	1	
4	E02 900 351	OUTDOOR FAN CAPACITOR	C2	1	2.0μF /440V AC
5	E02 755 341	RELAY	X1,X2	2	
6	E02 755 340	COMPRESSOR CONTACTOR	52C	1	
7	E02 637 374	TERMINAL BLOCK	TB2	1	4P FIGURE Ⓐ
	E02 755 374	TERMINAL BLOCK	TB1	1	3P FIGURE Ⓑ
8	E02 890 383	SURGE ABSORBER	DSAR	1	
9	E02 742 353	COMPRESSOR CAPACITOR	C1	1	20μF /450V AC
10	E02 095 382	FUSE	F61,F62	2	250V/ 2A
11	E07 001 241	FUSE HOLDER		2	

MUX-2A59VB -E1 MUX-3A60VB -E1 MUX-2A70VB -E1 MUX-4A73VB -E1
13-3. OUTDOOR UNIT STRUCTURAL PARTS



These figures show MUX-3A60VB.

13-3. OUTDOOR UNIT STRUCTURAL PARTS

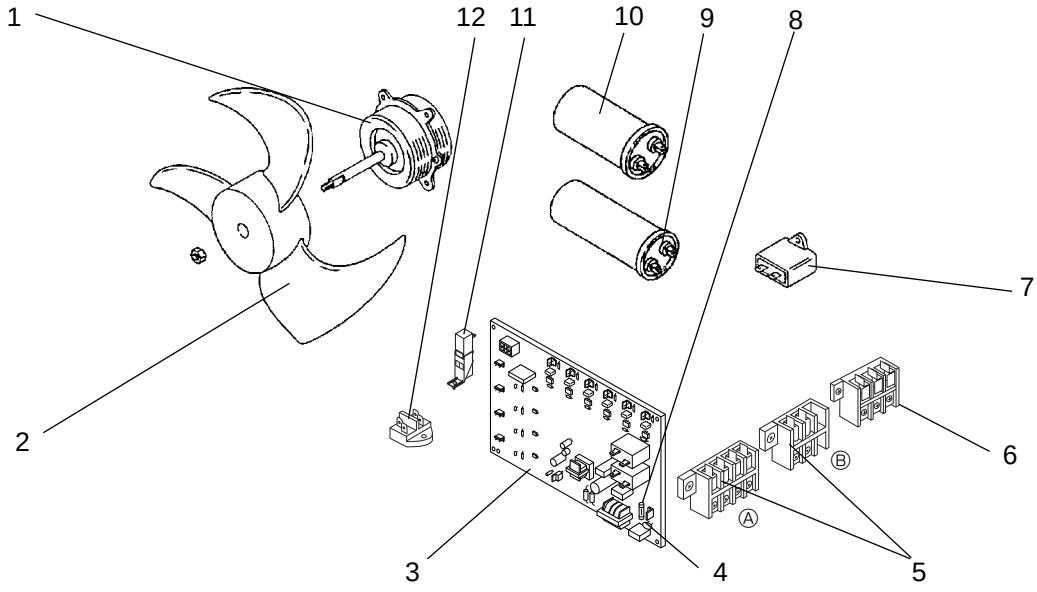
Part numbers that are circled are not shown in the illustration.

No.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty / unit					Remarks
				MUX-2A59 VB- E1	MUX-3A60 VB- E1	MUX-3A63 VB- E1	MUX-2A70 VB- E1	MUX-4A73 VB- E1	
1	E02 819 297	TOP PANEL		1	1	1	1	1	
2	E02 636 515	MOTOR SUPPORT		1	1	1	1		
	E02 726 515	MOTOR SUPPORT						1	
3	E02 922 630	OUTDOOR HEAT EXCHANGER		1					
	E02 924 630	OUTDOOR HEAT EXCHANGER			1				
	E02 925 630	OUTDOOR HEAT EXCHANGER				1			
	E02 923 630	OUTDOOR HEAT EXCHANGER					1		
	E02 926 630	OUTDOOR HEAT EXCHANGER						1	
4	E02 737 232	CABINET		1	1	1	1		
	E02 819 232	CABINET						1	
5	E02 819 521	FAN GUARD		1	1	1	1	1	
6	E02 819 009	HANDLE		2	2	2	2	2	
7	E02 742 900	COMPRESSOR	MC1,MC2	1		1			RN092VHSHT
	E02 743 900	COMPRESSOR	MC1		1				RN099VHSHT
8	E02 744 900	COMPRESSOR	MC1,MC2	1		1	2	1	RN145VHSHT
9	E02 746 900	COMPRESSOR	MC1,MC2		1			1	RN125VHSHT
10	E02 756 936	CAPILLARY TUBE		1					(B room) ϕ3.0×ϕ1.4×1100
	E02 199 936	CAPILLARY TUBE		1					(A room) ϕ3.0×ϕ1.4×850
	E02 757 936	CAPILLARY TUBE			1				(A room) ϕ3.0×ϕ1.4×950
	E02 289 936	CAPILLARY TUBE			3	3			(A, B, C room) ϕ3.0×ϕ1.6×900
	E02 134 936	CAPILLARY TUBE				1			(B, C room) ϕ3.0×ϕ1.6×700
	E02 408 936	CAPILLARY TUBE					2		(A, B room) ϕ3.0×ϕ1.4×700
	E02 140 936	CAPILLARY TUBE						1	(C, D room) ϕ3.0×ϕ1.8×800
	E02 176 937	CAPILLARY TUBE						1	(A, B room) ϕ3.0×ϕ2.0×700
	E02 077 937	CAPILLARY TUBE						2	(A, B room) ϕ3.0×ϕ1.8×700
	E02 726 936	CAPILLARY TUBE						2	(C,D room) ϕ3.0×ϕ1.6×600
11	E02 075 506	COMPRESSOR RUBBER SET		6	6	6	6	6	3RUBBERS/SET
12	E02 756 290	BASE		1	1	1	1	1	
13	E02 757 661	STOP VALVE (GAS)		2	3	3	2	4	ϕ9.52
14	E02 756 662	STOP VALVE (LIQ)		2	3	3	2	4	ϕ6.35
15	E02 024 936	CAPILLARY TUBE			1	1		2	ϕ3.0×ϕ1.4×1000
16	E02 756 245	SERVICE PANEL		1	1	1	1		
	E02 759 245	SERVICE PANEL						1	
17	E02 757 233	BACK PANEL (OUT)		1	1	1	1		
	E02 759 233	BACK PANEL (OUT)						1	
18	E02 817 009	HANDLE		1	1	1	1	1	
(19)	E02 637 490	SOLENOID COIL	21RB		1	1			
(20)	E02 652 490	SOLENOID COIL (B)	21R3		1	1			
(21)	E02 652 491	SOLENOID COIL (C)	21R4		1	1			
(22)	E02 726 490	SOLENOID COIL (BALANCE)	21RA					1	
(23)	E02 728 490	SOLENOID COIL (BALANCE)	21RB					1	
(24)	E02 729 490	SOLENOID COIL (A)	21R1					1	
(25)	E02 730 490	SOLENOID COIL (B)	21R2					1	
(26)	E02 726 491	SOLENOID COIL (C)	21R3					1	
(27)	E02 727 491	SOLENOID COIL (D)	21R4					1	
(28)	E02 755 492	SOLENOID VALVE			2	2		4	
(29)	E02 759 492	SOLENOID VALVE			1	1		2	

MUX-2A59VB -E1 MUX-3A60VB -E1 MUX-3A63VB -E1 MUX-2A70VB -E1
MUX-4A73VB -E1

13-4. OUTDOOR UNIT

FUNCTIONAL PARTS AND ELECTRICAL PARTS



No.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty / unit					Remarks
				MUX-2A59 VB- E1	MUX-3A60 VB- E1	MUX-3A63 VB- E1	MUX-2A70 VB- E1	MUX-4A73 VB- E1	
1	E02 756 301	OUTDOOR FAN MOTOR	MF61	1	1	1	1		RA6V60-□□
	E02 726 301	OUTDOOR FAN MOTOR	MF61					1	RA6V60-□□
2	E02 214 501	PROPELLER		1	1	1	1	1	
3	E02 756 444	OUTDOOR CONTROL P.C. BOARD		1					
	E02 757 444	OUTDOOR CONTROL P.C. BOARD			1	1			
	E02 758 444	OUTDOOR CONTROL P.C. BOARD					1		
	E02 759 444	OUTDOOR CONTROL P.C. BOARD						1	
4	E02 085 385	SURGE ABSORBER	NR61	1	1	1	1	1	
5	E02 637 374	TERMINAL BLOCK	TB2	1	1	1	1		4P FIGURE Ⓐ
			TB2,TB3					2	
	E02 637 377	TERMINAL BLOCK	TB3		1	1			3P FIGURE Ⓑ
6	E02 756 374	TERMINAL BLOCK	TB1	1	1	1	1	1	3P
7	E02 895 351	OUTDOOR FAN CAPACITOR	C61	1	1	1	1		3.0μF/440V AC
	E02 890 351	OUTDOOR FAN CAPACITOR	C61					1	4.0μF/440V AC
8	E02 127 382	FUSE	F61	1	1	1	1	1	250V/3.15A
9	E02 742 353	COMPRESSOR CAPACITOR	C2	1		1			20μF/450V AC
	E02 665 353	COMPRESSOR CAPACITOR	C2					1	25μF/450V AC
			C1,C2		2				
10	E02 667 353	COMPRESSOR CAPACITOR	C1	1		1		1	30μF/450V AC
			C1,C2				2		
11	E02 890 383	SURGE ABSORBER	DSAR	1	1	1	1	1	
12	E07 056 374	TERMINAL BLOCK	TB4	1	1	1	1	1	

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