CU-2RE15MBE

CU-2RE18MBE

Service Manual Air Conditioner



Indoor Unit CS-MRE7MKE CS-MRE9MKE CS-MRE12MKE

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

▲ PRECAUTION OF LOW TEMPERATURE

In order to avoid frostbite, be assured of no refrigerant leakage during the installation or repairing of refrigeration circuit.

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1 Safety Precautions

- Read the following "SAFETY PRECAUTIONS" carefully before perform any servicing.
- Electrical work must be installed or serviced by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model installed.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each
 indication used is as below. Incorrect installation or servicing due to ignoring of the instruction will cause harm or damage, and
 the seriousness is classified by the following indications.

	This indication shows the possibility of causing death or serious injury.			
	This indication shows the possibility of causing injury or damage to properties.			
The items to be followed are classified by the symbols:				

\bigcirc	This symbol denotes item that is PROHIBITTED from doing.
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• Carry out test run to confirm that no abnormality occurs after the servicing. Then, explain to user the operation, care and maintenance as stated in instructions. Please remind the customer to keep the operating instructions for future reference.

1.	Do not modify the machine, part, material during repairing service.							
2.	If wiring unit is supplied as repairing part, do not repair or connect the wire even only partial wire break. Exchange the whole wiring	ng unit.						
3.	Do not wrench the fasten terminal. Pull it out or insert it straightly.							
4.	Engage authorized dealer or specialist for installation and servicing. If installation or servicing done by the user is defective, it will water leakage, electrical shock or fire.	cause						
5.	Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or fin	e.						
6.	Use the attached accessories parts and specified parts for installation and servicing. Otherwise, it will cause the set to fall, water fire or electrical shock.	eakage,						
7.	Install at a strong and firm location which is able to withstand the set's weight. If the strength is not enough or installation is not produce, the set will drop and cause injury.	operly						
8.	For electrical work, follow the local national wiring standard, regulation and the installation instruction. An independent circuit and outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fir	single e.						
9.	This equipment is strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (Otherwise, it may cause electrical shock and fire in case equipment breakdown or insulation breakdown.	RCD).						
10.	Do not use joint cable for indoor/outdoor connection cable. Use the specified indoor/outdoor connection cable, refer to installation instruction CONNECT THE CABLE TO THE INDOOR UNIT and connect tightly for indoor/outdoor connection. Clamp the cable se external force will be acted on the terminal. If connection or fixing is not perfect, it will cause heat up or fire at the connection.	that no						
11.	Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it w heat-up or fire at connection point of terminal, fire or electrical shock.	ill cause						
12.	When install or relocate air conditioner, do not let any substance other than the specified refrigerant, eg. air etc. mix into refrigeration (piping). (Mixing of air etc. will cause abnormal high pressure in refrigeration cycle and result in explosion, injury etc.).	on cycle						
13.	Do not install outdoor unit near handrail of veranda. When installing air-conditioner unit at veranda of high rise building, child may to outdoor unit and cross over the handrail and causing accident.	climb up						
14.	This equipment must be properly earthed. Earth line must not be connected to gas pipe, water pipe, earth of lightning rod and telephone. Otherwise, it may cause electrical shock in case equipment breakdown or insulation breakdown.	\bigcirc						
15.	Keep away from small children, the thin film may cling to nose and mouth and prevent breathing.	\bigcirc						
16.	Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord. Do not share the single outlet with other electrical appliances. Poor contact, poor insulation or over current will cause electrical shock or fire.	\bigcirc						
17.	Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.	\bigcirc						

 18. For R410A models, when connecting the piping, do not use any existing (R22) pipes and flare nuts. Using such same may cause abnormally high pressure in the refrigeration cycle (piping), and possibly result in explosion and injury. Use only R410A materials. Thickness of copper pipes used with R410A must be more than 0.8mm. Never use copper pipes thinner than 0.8mm. It is desirable that the amount of residual oil is less than 40 mg/10m. 	\bigcirc
19. During installation, install the refrigerant piping properly before run the compressor. (Operation of compressor without fixing refrigering and valves at opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosive etc.).	geration on, injury
20. During pump down operation, stop the compressor before remove the refrigeration piping. (Removal of refrigeration piping while compressor is operating and valves are opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle a in explosion, injury etc.).	nd result
21. After completion of installation or service, confirm there is no leakage of refrigerant gas. It may generate toxic gas when the refrigerant contacts with fire.	gerant
22. Ventilate if there is refrigerant gas leakage during operation. It may cause toxic gas when the refrigerant contacts with fire.	
23. Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.	\bigcirc

24. Must not use other parts except original parts describe in catalog and manual.

1.	Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.	\bigcirc
2.	Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and dama furniture.	age the
3.	Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the f break and cause refrigerant gas leakage.	lare may
4.	Do not touch outdoor unit air inlet and aluminium fin. It may cause injury.	\bigcirc
5.	Select an installation location which is easy for maintenance.	
6.	Pb free solder has a higher melting point than standard solder; typically the melting point is $50^{\circ}F - 70^{\circ}F$ ($30^{\circ}C - 40^{\circ}C$) higher. Plea high temperature solder iron. In case of the soldering iron with temperature control, please set it to $700 \pm 20^{\circ}F$ ($370 \pm 10^{\circ}C$). Pb free will tend to splash when heated too high (about $1100^{\circ}F / 600^{\circ}C$).	ase use a ee solder
7.	 Power supply connection to the air conditioner. Connect the power supply cord of the air conditioner to the mains using one of the methods. Power supply point shall be the place where there is ease for access for the power disconnection in case of emergency. In some of permanent connection of this room air conditioner to the power supply is prohibited. i. Power supply connection to the receptacle using a power plug. Use an approved 15/16A (3/4~1.75HP), 16A (2.0HP), 20A (2.57 (3.0HP) power plug with earth pin for the connection to the socket. ii. Power supply connection to a circuit breaker for the permanent connection. Use an approved 16A (3/4~2.0HP), 20A (2.5HP) or (3.0HP) circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.0 mm contact gap. 	following countries, 5HP) or or 25A
8.	Do not release refrigerant during piping work for installation, servicing, reinstallation and during repairing a refrigerant parts. Take care of the liquid refrigerant, it may cause frostbite.	\bigcirc
9.	Installation or servicing work: It may need two people to carry out the installation or servicing work.	
10	. Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.	\bigcirc
11.	Do not sit or step on the unit, you may fall down accidentally.	\bigcirc
12	Do not touch the sharp aluminium fins or edges of metal parts. If you are required to handle sharp parts during installation or servicing, please wear hand glove. Sharp parts may cause injury.	\bigcirc

2 Specifications

2.1. CS-MRE7MKE CS-MRE9MKE CS-MRE12MKE

MODEL			INDOOR	CS-MRE7MKE CS-MRE9MKE						
Pe	rformance Test Con	dition			EUROVENT					
Dowor Supply		Phase, Hz	Single, 50							
			V	230						
				•	Min.	Mid.	Max.	Min.	Mid.	Max.
	Canaaitu			kW	1.10	2.00	2.50	1.10	2.50	3.10
	Capacity			BTU/h	3750	6820	8530	3750	8530	10600
	Running Current			А	_	2.60	_	—	3.35	_
ling	Input Power			W	230	550	690	230	710	950
80	Annual Consumpt	ion		kWh	_	275		—	355	
Ŭ	EER			W/W	4.78	3.64	3.62	4.78	3.52	3.62
	Indoor Noiso (H / J			dB-A		40 / 29			40 / 29	
		_)		Power Level dB		56 / -			56 / -	
	Capacity			kW	0.70	3.20	4.30	0.70	3.60	5.00
	Capacity			BTU/h	2390	10900	14700	2390	12300	17100
b	Running Current			A	_	4.15	—	—	4.95	_
eatir	Input Power			W	190	940	1.35k	190	1.12k	1.66k
Ŧ	COP			W/W	3.68	3.40	3.19	3.68	3.21	3.01
	Indoor Noiso (H / I			dB-A		40 / 29			40 / 29	
	indoor Noise (H / L)		Power Level dB		56 / -			56 / -		
	Туре					Cross-flow Far	ו		Cross-flow Far	ı
	Material				ASG20K1			ASG20K1		
	Motor Type	Туре			DC (8-poles)			DC (8-poles)		
	Input Power	wer		W	47.3		47.3			
	Output Power			W	40		40			
⁻ an		10	Cool rpm			790		820		
orl	LO	Heat	rpm	790 820						
lnde	Mo	Me	Cool	rpm	880		930			
	Speed	IVIC	Heat	rpm	890		950			
	opeeu	ні	Cool	rpm	980		1050			
			Heat	rpm	990			1090		
		SHi	Cool	rpm	1080 1150					
		0111	Heat	rpm	1090		1190			
Mo	isture Removal			L/h (Pt/h)	1.3 (2.7)		1.5 (3.2)			
			Cool	m ³ /min (ft ³ /min)	7.9 (279)		7.0 (247)			
		LU	Heat	m ³ /min (ft ³ /min)	7.9 (279) 7.0 (247)		7.0 (247)			
		Cool m ³ /min (ff ³ /min)			9.0 (318)		8.6 (304)			
		Me	Heat	m ³ /min (ft ³ /min)		9.0 (318)			8.8 (311)	
Inc	loor Airflow		Cool	m ³ /min (ft ³ /min)		10.1 (357)			10.1 (357)	
		Hi	Heat	m^{3}/min (ft ³ /min)		10.3 (364)			10.4 (367)	
			Cool	m^{3}/min (ft ³ /min)		11.3 (399)			11.0 (388)	
		SHi	Heat	m^{3}/min (ft ³ /min)		11 4 (403)			11 1 (392)	
		Hoight (I		mr (inch)		(100)	200 /1	1 7/16)	(002)	
	mension		נסי	mm (inch)			290 (1	1-7/10)		
		Dopth (I/		mm (inch)			010 (3	3/JZ)		
10/2	hight		וש		204 (8-1/16)					
vve	in a	Pipe	Diameter	ry (in)			9(20)		2/0)
Ρı	bing	(Liquid /	Gas)	mm (inch)	6.3	5 (1/4) / 9.52 (3/8)	6.3	5 (1/4) / 9.52 (5/8)
Dra	ain Hose	Inner Dia	ameter	mm		16			16	
Length			mm	650		650				

MODEL		INDOOR	CS-MR	CS-MRE7MKE		CS-MRE9MKE	
	Fin Mate	erial		Aluminium	Aluminium (Pre Coat)		(Pre Coat)
Indoor Heat	Fin Type	!		Slit	Slit Fin		Fin
Exchanger	Row x S	tage x FPI		2 x 1	5 x 17	2 x 1	5 x 21
Size		x H x L)	mm	610 x 31	l5 x 25.4	610 x 31	5 x 25.4
Air Filtor	Air Filter Material Polyprop Type One-to		opelene	Polypropelene			
Air Filler				One-touch		One-touch	
Power Supply	Power Supply			Outdoor Power Supply		Outdoor Power Supply	
Power Supply Cord			A	Nil		Nil	
				Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb
Indoor Operation Range Heating		Cooling	Maximum	32	23	32	23
		Cooling	Minimum	16	11	16	11
		Heating Ma	Maximum	30	—	30	—
			Minimum	16	—	16	—

1. Cooling capacities are based on indoor temperature of 27°C Dry Bulb (80.6°F Dry Bulb), 19.0°C Wet Bulb (66.2°F Wet Bulb) and outdoor air temperature of 35°C Dry Bulb (95°F Dry Bulb), 24°C Wet Bulb (75.2°F Wet Bulb)

2. Heating capacities are based on indoor temperature of 20°C Dry Bulb (68°F Dry Bulb) and outdoor air temperature of 7°C Dry Bulb (44.6°F Dry Bulb), 6°C Wet Bulb (42.8°F Wet Bulb)

3. Heating low temperature capacity, Input Power and COP measured at 230 V, indoor temperature 20°C, outdoor 2/1°C

4. Heating extreme low temperature capacity, Input Power and COP measured at 230 V, indoor temperature 20°C, outdoor -7/-8°C

5. Specifications are subjected to change without prior notice for further improvement.

MODEL				INDOOR	CS-MRE12MKE			
Performance Test Condition			EUROVENT					
		Phase, Hz	Single, 50					
Power Supply				V		230		
					Min.	Mid.	Max.	
				kW	1.10	3.20	3.70	
	Capacity			BTU/h	3750	10900	12600	
	Running Current			A	_	4.60	_	
ing	Input Power			W	230	980	1.21k	
00	Annual Consumpti	ion		kWh	_	490	_	
0	EER			W/W	4.78	4.78 3.27 3.06		
			dB-A		44 / 32			
	Indoor Noise (H / L)			Power Level dB	60 / -			
	Conceitu			kW	0.70	4.50	5.70	
	Capacity			BTU/h	2390	15300	19400	
g	Running Current			A	_	6.15	_	
atin	Input Power			W	190	1.39k	1.78k	
Нe	COP			W/W	3.68	3.24	3.20	
		\ \		dB-A		44 / 32		
	Indoor Noise (H / I	_)		Power Level dB		60 / -		
	Туре					Cross-flow Fan		
	Material					ASG20K1		
	Motor Type					DC (8-poles)		
	Input Power			W		47.3		
	Output Power			W		40		
an		Cool		rpm		900		
or F	Me	LO Heat		rpm	900			
opu		Ma	Cool	rpm		1010		
-		Me	Heat	rpm		1080		
	Speed	Hi	Cool	rpm	1120			
			Heat	rpm	1270			
			Cool	rpm		1220		
		301	Heat	rpm	1320			
Мс	isture Removal	•	•	L/h (Pt/h)	1.8 (3.8)			
			Cool	m ³ /min (ft ³ /min)	8.0 (282)			
		Lo	LO	Heat	m ³ /min (ft ³ /min)		8.0 (282)	
			Cool	m ³ /min (ft ³ /min)		9.3 (328)		
		Me	Heat	m ³ /min (ft ³ /min)		10.4 (367)		
Inc	loor Airflow		Cool	m^{3} /min (ft ³ /min)		10.9 (385)		
		Hi –				11 4 (402)		
			neat	$m^{\circ}/min(\pi^{\circ}/min)$		11.4 (402)		
		SHi	Cool	m ³ /min (ft ³ /min)		11.3 (399)		
		_	Heat	m ³ /min (ft ³ /min)		11.8 (418)		
	Height (I/D)		mm (inch)		290 (11-7/16)			
Dir	Dimension Width (I/D) Depth (I/D)		mm (inch)		870 (34-9/32)			
			mm (inch)		204 (8-1/16)			
Weight Net (I/D)		kg (lb)		9 (20)				
Pip	Piping Pipe Diameter (Liquid / Gas)		Diameter Gas)	mm (inch)		6.35 (1/4) / 9.52 (3/8)		
Drain Hose		Inner Diameter		mm	16			
		Length		mm		650		
1		Fin Mate	rial			Aluminium (Pre Coat)		
Inc	loor Heat	Fin Type				Slit Fin		
Ex	changer	Row x S	tage x FPI			2 x 15 x 21		
[[Size (W x H x L)		mm	610 x 315 x 25.4			

MODEL			INDOOR	CS-MRE12MKE		
Air Filtor	Material			Polypropelene		
Туре				One-touch		
Power Supply	·			Outdoor Power Supply		
Power Supply Cord			A	Nil		
				Dry Bulb Wet Bulb		
	6		Maximum	32	23	
Indoor Operation Range		Cooling	Minimum	16	11	
		Heating	Maximum	30	—	
		neating	Minimum	16	_	

^{1.} Cooling capacities are based on indoor temperature of 27°C Dry Bulb (80.6°F Dry Bulb), 19.0°C Wet Bulb (66.2°F Wet Bulb) and outdoor air temperature of 35°C Dry Bulb (95°F Dry Bulb), 24°C Wet Bulb (75.2°F Wet Bulb)

2. Heating capacities are based on indoor temperature of 20°C Dry Bulb (68°F Dry Bulb) and outdoor air temperature of 7°C Dry Bulb (44.6°F Dry Bulb), 6°C Wet Bulb (42.8°F Wet Bulb)

3. Heating low temperature capacity, Input Power and COP measured at 230 V, indoor temperature 20°C, outdoor 2/1°C

4. Heating extreme low temperature capacity, Input Power and COP measured at 230 V, indoor temperature 20°C, outdoor -7/-8°C

5. Specifications are subjected to change without prior notice for further improvement.

2.2. CU-2RE15MBE

Index Unit Combination Z.0KW + 2.0KW Power Source 1 Phase, 230V, 50+C (Power supply from outdoor unit) Registry 1 Phase, 230V, 50+C (Power supply from outdoor unit) Cooling Operation Electrical Power Factor A Data Power input Power Factor % Power Input KW Maximum Current KW Noise Sound Pressure Level dB (HL) Power Input KW Noise Sound Pressure Level dB (HL) Resting Operation Sound Pressure Level dB (HL) Maximum Input Power Sound Pressure Level dB (HL) Concenteret A 6.10 Maximum Input Power A <td< th=""><th></th><th>ltem</th><th></th><th>Unit</th><th>OUTDOOR UNIT</th></td<>		ltem		Unit	OUTDOOR UNIT
Power Source Image: Capacity Image: Capac	Indoor Unit Combination				2.0kW + 2.0kW
Kill Capacity KW 4.4 ((.15 - 4.6) Cooling Operation BTU/h 15000 (512 - 16400) BTU/h 15000 (512 - 16400) Cooling Operation Electrical Data Power Input KW 1.30 (0.27 - 1.52) Electrical Data Electrical Power Factor % 9.3 3.6 (5.6 - 3.16) Power Factor % 9.3 Annual Consumption KW 4.8 (1.1 - 6.5) Sund Pressure Level dB (.1/L) 4.7 (Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level Maximum run unum num true Pressure Level dB (.1/L) 6.6 (.1 - 6.5) Sund Pressure Level Maximu Pres	Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)
Cooling Operation Filth 15000 (5120 ~ 16400) Electrical Data Running Ourrent A 6.10 Power Input KW 1.30 (0.27 ~ 1.52) EER W/W 3.88 (56 ~ 3.16) Power Factor % 93 Annual Consumption W/N 6500 Noise Sound Power Level dB (HL) 47.7 Sound Power Level dB (HL) 62.7 Sound Power Level dB (HL) 62.7 BTU/h 164000 (3750 - 22200) 16.00 Bata Coper Input BTU/h 164000 (3750 - 22200) Noise Sound Power Level dB (HU) 64.7 Maximum Ourrent KW 1.00 (45.8 - 3.89) Power Factor % 96 Sound Power Level dB (HU) 64.1 Maximum Input Power X 120 Starting Current A 6.10 Circuit Breaker Capacity Y Y Connection Cable Y Y Connection Cable <td< td=""><td></td><td>Conacity</td><td></td><td>kW</td><td>4.4 (1.5 ~ 4.8)</td></td<>		Conacity		kW	4.4 (1.5 ~ 4.8)
Cooling OperationRunning Current Detain Detained Detained Detained Detained Detained Detained Detained Detained 		Сарасну		BTU/h	15000 (5120 ~ 16400)
Cooling Operation Power Input KW 1.30 (0.27 - 1.52) EER WW 3.38 (5.56 - 3.16) Power Iactor % 93 Power Iaput % 93 93 93 Annual Consumption Wth 650 338 (5.56 - 3.16) Power Iaput 4W 650 Annual Consumption Wth 650 520 650 53 Annual Consumption KW 4.8 (1.1 - 6.5) 621 621 621 Electrical Data Coper MUM 4.8 (1.1 - 6.5) 621			Running Current	A	6.10
		Flootricol	Power Input	kW	1.30 (0.27 ~ 1.52)
$ \begin{array}{ c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Cooling Operation	Data	EER	W/W	3.38 (5.56 ~ 3.16)
$ \begin{array}{ c c c c } & \begin{tabular}{ c c c c c c c c } & \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		544	Power Factor	%	93
Noise Sound Pressure Level dB A(HL) 47 / Sound Power Level dB (HL) 62 /- Heating Operation $Running Current$ A 5.35 Power Input kW 4.8(1.1 ~ 6.5) BTU/h Identify Constraints A 5.35 Power Input kW 1.20k (0.24 - 1.67k) Data Power Factor % 98 Sound Pressure Level dB (HL) 64 /- Maximum Current A 1.20 Maximum Input Power Sound Pressure Level dB (HL) 64 /- Maximum Input Power W 2.73k Stating Current Circuit Breaker Capacity A 16 Stating Current Circuit Breaker Capacity Kg 38 Stating Current Net Weight mm 540 Stating Current Kg Net Weight mm 540 Stating Current Stating Current Refrigerant Pipe Diameter Kg 38 Stating Current Stating Current Refrigerant Pipe Diame			Annual Consumption	kWh	650
NotseSound Power LeveldB (HL)62 /Heating Operation $Capacity$ KW4.8 (1.1 ~ 6.5)BTU/h16400 (3750 ~ 2200)BTU/h16400 (3750 ~ 2200)Data Cop W/W120k (024 - 1.67k)DataCOPW/W4.00 (4.58 - 3.89)Power Factor%98Sound Pressure LeveldB A (HL)40 / -Maximum CurrentKW20k (024 - 1.67k)Maximum CurrentSound Pressure LeveldB A (HL)Maximum Due PowerSound Pressure LeveldB A (HL)Maximum Input PowerKW2.7 3kStarting CurrentA12.0Circuit Breaker CapacityA6.10Circuit Breaker CapacityA6.10UimensionWidthmm780 (+70)DimensionWidthmm780 (+70)Net Weightmm3.9Net Weightmm3.9Net Weightm3.0Refrigerant Pipe Length Rong (1 room)m3.0Maximum Pipe Length (Total Room)m3.0Refrigerant Pipe DiameterMotor Typemm (inch)Air CirculationTypeV1.20kAir CirculationMotor TypePropeller FanAir CirculationMotor TypePropeller FanAir CirculationHigh (Cocing / Heating)RPMAir CirculationHigh (Cocing / Heating)RPMAir CirculationHigh (Cocing / Heating)RPMAir CirculationHigh (Coci		Noise	Sound Pressure Level	dB-A (H/L)	47 / -
KW 4.8 (1.1 ~ 6.5) Heating Operation Electrical Data Running Current A 5.35 Power Input KW 1.20k (0.24 ~ 1.67k) CO Noise Power Input KW 1.20k (0.24 ~ 1.67k) Noise Sound Pressure Level dB.A (HL) 49.7 Maximum Current A 1.20 44.7 Maximum Input Power A 1.2.0 44.7 Maximum Input Power A 1.2.0 44.7 Maximum Input Power A 1.2.0 44.7 Maximum Input Power A 1.6 6.10 Circuit Breaker Capacity M 1.6 6.10 Dimension Height mm 2.89 Net Weight kg 38 6.00 Dimension Width mm 2.89 Net Weight kg 3.8 6.10 Compressor Maximum Pipe Length (Total Room) m 3.20 Compressor Maximum Pipe Length (Total Room) m 3.63		NUISC	Sound Power Level	dB (H/L)	62 / -
Heating Operation Running Current A 5.35 Heating Operation Running Current A 5.35 Data Power Input KW 1.20k (0.24 ~ 1.67k) Operation With W 1.20k (0.24 ~ 1.67k) Noise Sound Pressure Level dBA. (H/L) 49 / - Maximum Current Sound Pressure Level dBA. (H/L) 49 / - Maximum Input Power Sound Pressure Level dBA. (H/L) 49 / - Maximum Input Power A 1.2.0 Maximum Starting Current A 6.10 Circuit Breaker Capacity A 6.10 Dimension Height mm 730 (70) Maximum 780 (470) Maximum 780 (470) Dimension Width mm 780 (470) Maximum 780 (470) Pipe Length Range (1 room) m 3 + 1 (carth) # 15 mm² Maximum 780 (470) Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (14) Gars Gio mm (inch) 9.52 (38) Maximum 7980 (470) Refrigerant Pipe Di		Canacity		kW	4.8 (1.1 ~ 6.5)
Heating Operation Running Current Data A 5.35 Heating Operation Power Input KW 1.20k (0.24 - 1.67k) Data COP WW 4.00 (4.58 - 3.89) Power Factor % 98 Noise Sound Pressure Level dB-A (H/L) 49 / - Maximum Current A 12.0 49 / - Maximum Input Power A 12.0 44 / - Starting Current A 6.10 5.10 Circuit Breaker Capacity A 16 - Dimension Width mm 540 - Dimension Width mm 738 - Connection Cable Pipe Length Range (1 room) m 3 + 1 (Earth) e1.5 mm ² Pipe Length Range (1 room) m 3 - 20 - Maximum Pipe Length Rotor m 3 - 20 - Maximum Pipe Length Rotor mm (inch) 6.55 (1/4) - Gas Side mm (inch) 9.52 (3/8) - - <t< td=""><td></td><td>Capacity</td><td></td><td>BTU/h</td><td>16400 (3750 ~ 22200)</td></t<>		Capacity		BTU/h	16400 (3750 ~ 22200)
Heating OperationElectrical Down InputkW $120k (0.24 + 1.67k)$ Data OP W/W $4.00 (4.58 - 3.89)$ Power Factor%98NoiseSound Pressure LeveldB (H/L) $49 / \cdot$ Maximum CurrentA12.0Maximum Input PowerW $2.73k$ Starting CurrentA6.10Circuit Breaker CapacityA6.16Circuit Breaker CapacityA16Widthmm540DimensionWidthmmVerify the set of the			Running Current	A	5.35
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Heating Operation	Electrical	Power Input	kW	1.20k (0.24 ~ 1.67k)
	Healing Operation	Data	COP	W/W	4.00 (4.58 ~ 3.89)
$\begin{tabular}{ c c c c c } \hline Noise & Sound Pressure Level & dB.A (H/L) & 49 / - \\ \hline Sound Power Level & dB (H/L) & 64 / - \\ \hline Maximum Input Power & A & 12.0 \\ \hline Maximum Input Power & W & 2.73k \\ \hline Maximum Input Power & A & 6.10 \\ \hline Circuit Breaker Capacity & A & 6.10 \\ \hline Circuit Breaker Capacity & A & 16 \\ \hline & & & & & & & & & & & & & & & & & &$			Power Factor	%	98
NoticeSound Power LeveldB (H/L)64 / -Maximum lout Power A 12.0Maximum Input Power W 2.73kStarting Current A 6.10Circuit Breaker Capacity A 6.10DimensionWidthmmWidthmm540DimensionWidthmmVerghtkg38Connection CableDepthmmPipe Length Range (1 room)m3-20Maximum Pipe Length (Total Room)m3-20Maximum Pipe DiameterLiquid Sidemm (inch)CompressorTypeHermetic MotorAir CirculationMotor TypeBrushless (4-poles)Air CirculationMotor TypeDC Motor (8-poles)Air CirculationMotor TypeDC Motor (8-poles)Fin SpeedHigh (Cooling / Heating)RPMAke OutputW40Fan SpeedHigh (Cooling / Heating)RPMAir VolumeHigh (Cooling / Heating)m³/minAir CirculationCopperFinFin MaterialCopperFin MaterialMotor TypeFin MaterialAluminum (Pre Coat) <td></td> <td>Noise</td> <td>Sound Pressure Level</td> <td>dB-A (H/L)</td> <td>49 / -</td>		Noise	Sound Pressure Level	dB-A (H/L)	49 / -
Maximum Current A 12.0 Maximum Input Power W 2.73k Starting Current A 6.10 Circuit Breaker Capacity A 16 Dimension Width mm 540 Dimension Width mm 289 Net Weight kg 38 Connection Cable 8 3 + 1 (Earth) Ø1.5 mm² Pipe Length Range (1 room) m 3 - 20 Maximum Pipe Length (Total Room) m 3 - 20 Maximum Pipe Longth (Total Room) m 3 - 20 Refrigerant Pipe Diameter Liquid Side mm (inch) Gas Side mm (inch) 9.52 (3/8) Compressor Type Brushiess (4-poles) Rated Output W 1.20k Type Propeller Fan Air Circulation Motor Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM Heat Exchanger Type Plate fin configuration forced draf		INDISC	Sound Power Level	dB (H/L)	64 / -
Maximum Input Power W 2.73k Starting Current A 6.10 Circuit Breaker Capacity A 16 Circuit Breaker Capacity A 16 Dimension Width mm 540 Dimension Width mm 289 Net Weight kg 38 Connection Cable 3 + 1 (Earth) ø1.5 mm² Pipe Length Range (1 room) m 30 Maximum Pipe Length (Total Room) m 30 Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) 120k Compressor Motor Type Brushless (4-poles) 120k Rated Output W 1.20k 120k Air Circulation Type Dropeller Fan 120k Rated Output W 40 120k Fan Speed High (Cooling / Heating) RPM 860 / 820 Heat Exchanger Type Plate fin configuration forced draft type T	Maximum Current			A	12.0
Starting Current A 6.10 Circuit Breaker Capacity A 16 Dimension Height mm 540 Dimension Width mm 780 (+70) Depth mm 289 Net Weight kg 38 Connection Cable 3 + 1 (Earth) ø1.5 mm² Pipe Length Range (1 room) m 3 ~ 20 Maximum Pipe Length (Total Room) m 30 Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) 120k Compressor Motor Type Brushless (4-poles) Rated Output W 1.20k Air Circulation Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM Air Volume High (Cooling / Heating) RPM Refrigerant Control Device Tube Material Copper Fin Material Aluminum (Pre Coat) Refrigerant Oil	Maximum Input Power			W	2.73k
Circuit Breaker Capacity A 16 Dimension Height mm 540 Dimension Width mm 780 (+70) Depth mm 289 Net Weight kg 38 Connection Cable 3 + 1 (Earth) ø1.5 mm² Pipe Length Range (1 room) m 3 ~ 20 Maximum Pipe Length (Total Room) m 3 ~ 20 Maximum Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) 1 Refrigerant Pipe Diameter Type Hermetic Motor 120k Compressor Motor Type Brushless (4-poles) 120k Air Circulation Motor Type DC Motor (8-poles) 120k Air Circulation Motor Type DC Motor (8-poles) 120k Heat Exchanger Type DC Motor (8-poles) 120k Heat Exchanger Fin Material Copper 120k Heat Exchanger Fin Material Aluminum (Pre Coat) Row / Stage 2	Starting Current			A	6.10
Height mm 540 Dimension Width mm 780 (+70) Depth mm 289 Net Weight kg 38 Connection Cable 3 + 1 (Earth) ø1.5 mm² Pipe Length Range (1 room) m 3 ~ 20 Maximum Pipe Length (Total Room) m 30 Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) 120k Compressor Type Hermetic Motor Rated Output W 1.20k 120k Air Circulation Type Brushless (4-poles) 1.20k Rated Output W 1.20k 1.20k 1.20k Fan Speed High (Cooling / Heating) RPM 860 / 820 1.20k Heat Exchanger Type Plate fin configuration forced draft type 1.20k Heat Exchanger Type Plate fin configuration forced draft type 1.20k Heat Exchanger Type Plate fin configuration forced draft type 1.20k	Circuit Breaker Capacity			A	16
Dimension Width mm 780 (+70) Depth mm 289 Net Weight kg 38 Connection Cable 3 + 1 (Earth) ø1.5 mm² Pipe Length Range (1 room) m 3 ~ 20 Maximum Pipe Length (Total Room) m 30 Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) 120k Compressor Type Hermetic Motor Motor Type Brushiess (4-poles) 120k Rated Output W 1.20k 120k Type Propeller Fan 120k 120k Rated Output W 40 40 40 Fan Speed High (Cooling / Heating) RPM 860 / 820 120k Heat Exchanger Type Plate fin configuration forced draft type 120k 120k Heat Exchanger Fin Material Aluminum (Pre Coat) 2 / 20 2 / 20 145k Air Volume High (Cooling / Heating) m³/min		Height		mm	540
Depthmm289Net Weightkg38Connection Cable $3 + 1 (Earth) ø1.5 mm^2$ Pipe Length Range (1 room)m $3 \sim 20$ Maximum Pipe Length (Total Room)m $3 \sim 20$ Refrigerant Pipe DiameterLiquid Sidemm (inch)Gas Sidemm (inch) $6.35 (1/4)$ Gas Sidemm (inch) $9.52 (3/8)$ TypeHermetic MotorMotor TypeBrushless (4-poles)Rated OutputW $1.20k$ Air CirculationTypeDC Motor (8-poles)Rated OutputW 40 Fan SpeedHigh (Cooling / Heating)RPMHeat ExchangerTypePlate fin configuration forced draft typeHeat ExchangerFin MaterialCopperAir VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilmm³/minRefrigerant Oilm³/minRB68A / Freol Alpha68M (350)	Dimension	Width		mm	780 (+70)
Net Weight kg 38 Connection Cable $3 + 1 (Earth) \nota 1.5 mm^2$ Pipe Length Range (1 room) m $3 \sim 20$ Maximum Pipe Length (Total Room) m $3 \sim 20$ Refrigerant Pipe Diameter Liquid Side mm (inch) $6.35 (1/4)$ Gas Side mm (inch) $9.52 (3/8)$ Type Compressor Motor Type Brushless (4-poles) Rated Output W $1.20k$ Air Circulation Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM Aire Circulation Type Plate fin configuration forced draft type Heat Exchanger Type Plate fin configuration forced draft type Heat Exchanger Fin Material Copper Fin Material Aluminum (Pre Coat) Rew / Stage Air Volume High (Cooling / Heating) m³/min $33.3 / 28.5$ Refrigerant Control Device Expansion Valve Refragerant Oil Expansion Valve		Depth	BTU/h Running Current A Power Input kW COP W/W Power Factor % Sound Pressure Level dB-A (H/I Sound Power Level dB (H/L A W Q A Mm Mm mm mm mm mm mm mm e mm (incl e mm (incl	mm	289
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Net Weight	!		kg	38
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Connection Cable				3 + 1 (Earth) ø1.5 mm ²
Maximum Pipe Length (Total Room) m 30 Refrigerant Pipe Diameter Liquid Side mm (inch) 6.35 (1/4) Gas Side mm (inch) 9.52 (3/8) Compressor Type Hermetic Motor Motor Type Brushless (4-poles) Rated Output W 1.20k Air Circulation Type Propeller Fan Motor Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM Heat Exchanger Type Plate fin configuration forced draft type Tube Material Copper Copper Fin Material Aluminum (Pre Coat) Rew / Stage FPI 19 19 Air Volume High (Cooling / Heating) m³/min 33.3 / 28.5 Refrigerant Control Device Expansion Valve Expansion Valve Refrigerant Coll Com³ RB68A / Freol Alpha68M (350)	Pipe Length Range (1 room)			m	3 ~ 20
Refrigerant Pipe DiameterLiquid Sidemm (inch)6.35 (1/4)Gas Sidemm (inch)9.52 (3/8)TypeHermetic MotorCompressorMotor TypeBrushless (4-poles)Rated OutputW1.20kAir CirculationMotor TypeDC Motor (8-poles)Air CirculationMotor TypeDC Motor (8-poles)Rated OutputW40Fan SpeedHigh (Cooling / Heating)RPMHeat ExchangerTypePlate fin configuration forced draft typeTube MaterialCopperFin MaterialCopperFin Material2 / 20FPI19Air VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)To the top (Cooling / Heating)Air VolumeHigh (Cooling / Heating)To the top (Cooling / Heating)Air VolumeHigh (Cooling / He	Maximum Pipe Length (Total Rod	om)		m	30
Refrigerant Pipe DiameterGas Sidemm (inch)9.52 (3/8)CompressorTypeHermetic MotorMotor TypeBrushless (4-poles)Rated OutputW1.20kAir CirculationMotor TypePropeller FanMotor TypeDC Motor (8-poles)Rated OutputW40Fan SpeedHigh (Cooling / Heating)RPMHeat ExchangerTypePlate fin configuration forced draft typeTube MaterialCopperFin MaterialCopperFin Material19Air VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilcm³RB68A / Freol Alpha68M (350)Refrigerant Oiln145k	D. Classest Dire Diemeter	Liquid Side	3	mm (inch)	6.35 (1/4)
CompressorTypeHermetic MotorMotor TypeBrushless (4-poles)Rated OutputWAir CirculationTypeMotor TypeDC Motor (8-poles)Rated OutputWAir CirculationMotor TypeMotor TypeDC Motor (8-poles)Rated OutputWFan SpeedHigh (Cooling / Heating)Heat ExchangerTypeHeat ExchangerTypeFin MaterialCopperFin MaterialCopperFin MaterialAluminum (Pre Coat)Row / Stage2 / 20FPI19Air VolumeHigh (Cooling / Heating)Refrigerant Control DeviceExpansion ValveRefrigerant Oilcm³Refrigerant Oilcm³Refrigerant Oilcm³Refrigerant (B410A)q	Retrigerant Pipe Diameter	Gas Side		mm (inch)	9.52 (3/8)
CompressorMotor TypeBrushless (4-poles)Rated OutputW1.20kAir CirculationTypePropeller FanMotor TypeDC Motor (8-poles)Rated OutputW40Fan SpeedHigh (Cooling / Heating)RPMPlate fin configuration forced draft typeTube MaterialHeat ExchangerFin MaterialCopperFin MaterialCopperFin Material19Air VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilcm³RB68A / Freol Alpha68M (350)Refrigerant (R410A)nn		Туре			Hermetic Motor
Rated OutputW1.20kAir CirculationTypePropeller FanMotor TypeDC Motor (8-poles)Rated OutputW40Fan SpeedHigh (Cooling / Heating)RPMMater ExchangerTypePlate fin configuration forced draft typeHeat ExchangerFin MaterialCopperFin Material19Air VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minAir VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilcm³RB68A / Freol Alpha68M (350)Refrigerant (R410A)nnRefrigerant (R410A)n	Compressor	Motor Type	3		Brushless (4-poles)
Air Circulation Type Propeller Fan Motor Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM 860 / 820 Heat Exchanger Type Plate fin configuration forced draft type Tube Material Copper Fin Material Aluminum (Pre Coat) Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m ³ /min Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (B410A) q 145k		Rated Out	put	W	1.20k
Air Circulation Motor Type DC Motor (8-poles) Rated Output W 40 Fan Speed High (Cooling / Heating) RPM 860 / 820 Fan Speed High (Cooling / Heating) RPM 860 / 820 Heat Exchanger Type Plate fin configuration forced draft type Heat Exchanger Fin Material Copper Fin Material Aluminum (Pre Coat) Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m³/min Refrigerant Control Device Expansion Valve Refrigerant Oil cm³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k		Туре			Propeller Fan
Rated OutputW40Fan SpeedHigh (Cooling / Heating)RPM860 / 820Fan SpeedTypePlate fin configuration forced draft typeHeat ExchangerTube MaterialCopperFin MaterialAluminum (Pre Coat)Row / Stage2 / 20FPI19Air VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilcm³RB68A / Freol Alpha68M (350)Refrigerant (R410A)q145k	Air Circulation	Motor Type	9		DC Motor (8-poles)
Fan SpeedHigh (Cooling / Heating)RPM860 / 820Heat ExchangerTypePlate fin configuration forced draft typeHeat ExchangerTube MaterialCopperFin MaterialAluminum (Pre Coat)Row / Stage2 / 20FPI19Air VolumeHigh (Cooling / Heating)m³/minRefrigerant Control DeviceExpansion ValveRefrigerant Oilcm³RB68A / Freol Alpha68M (350)Refrigerant (R410A)00145k		Rated Out	Running Current A 5.35 Power Input kW 1.20k (0.24 ~ 1.67k) COP W/W 4.00 (4.58 ~ 3.89) Power Factor % 98 Joise Sound Pressure Level dB-A (H/L) 49 / - Sound Power Level dB (H/L) 64 / - A 12.0 49 / - W 2.73k 6 Sound Power Level dB (H/L) 64 / - A 16.0 4 ght mm 540 th mm 780 (+70) th mm 289 kg 38 3 + 1 (Earth) ø1.5 mm² m 3 ~ 20 3 + 1 (Earth) ø1.5 mm² m 30 3 + 1 (Earth) ø1.5 mm² side mm (inch) 9.52 (3/8) e Hermetic Motor tor Type Brushless (4-poles) ed Output W 1.20k e Propeller Fan tor Type DC Motor (8-poles) ed Output <	40	
Type Plate fin configuration forced draft type Heat Exchanger Tube Material Copper Fin Material Aluminum (Pre Coat) Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m ³ /min Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k	Fan Speed	High (Cool	ing / Heating)	RPM	860 / 820
Heat Exchanger Tube Material Copper Fin Material Aluminum (Pre Coat) Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m ³ /min Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k		Туре			Plate fin configuration forced draft type
Heat Exchanger Fin Material Aluminum (Pre Coat) Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m³/min Refrigerant Control Device Expansion Valve Refrigerant Oil cm³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k		Tube Mate	rial		Copper
Row / Stage 2 / 20 FPI 19 Air Volume High (Cooling / Heating) m ³ /min Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k	Heat Exchanger	Fin Materia	al		Aluminum (Pre Coat)
FPI 19 Air Volume High (Cooling / Heating) m ³ /min 33.3 / 28.5 Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 145k		Row / Stage	e		2 / 20
Air Volume High (Cooling / Heating) m ³ /min 33.3 / 28.5 Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 1.45k		FPI			19
Refrigerant Control Device Expansion Valve Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 1 45k	Air Volume	High (Cool	ing / Heating)	m ³ /min	33.3 / 28.5
Refrigerant Oil cm ³ RB68A / Freol Alpha68M (350) Refrigerant (R410A) q 1.45k	Refrigerant Control Device		0 2.		Expansion Valve
Refrigerant (R410A)	Refrigerant Oil	-		cm ³	RB68A / Freol Alpha68M (350)
	Refrigerant (R410A)				1 45k

lt	em		Unit	OUTDO	OR UNIT	
			•	Dry Bulb	Wet Bulb	
	Cooling	Maximum		32	23	
Indeer Operation Range	Cooling	Minimum		16	11	
Indoor Operation Range	Heating	Maximum		30	—	
	rieating	Minimum		16	—	
	Cooling	Maximum		43	26	
Outdoor Operation Range	Cooling	Minimum		16	11	
Culubor Operation Range	Heating	Maximum		24	18	
	ricating	Minimum		-10	-11	

Note

• Specifications are subject to change without notice for further improvement.

2.3. CU-2RE18MBE

	ltem		Unit	OUTDOOR UNIT
Indoor Unit Combination				3.2kW + 3.2kW
Power Source				1 Phase, 230V, 50Hz (Power supply from outdoor unit)
	Capacity		kW	4.8 (1.5 ~ 5.0)
	Сарасну		BTU/h	16400 (5120 ~ 17100)
		Running Current	A	6.95
	Floatriag	Power Input	kW	1.49 (0.27 ~ 1.58)
Cooling Operation	Data	EER	W/W	3.22 (5.56 ~ 3.16)
	2400	Power Factor	%	93
		Annual Consumption	kWh	745
	Noise	Sound Pressure Level	dB-A (H/L)	49 / -
	Tioloc	Sound Power Level	dB (H/L)	64 / -
	Canacity		kW	5.2 (1.1 ~ 6.7)
	Capacity		BTU/h	17700 (3750 ~ 22800)
		Running Current	A	5.75
Heating Operation	Electrical	Power Input	kW	1.30k (0.24 ~ 1.70k)
Healing Operation	Data	COP	W/W	4.00 (4.58 ~ 3.94)
		Power Factor	%	98
	Noise	Sound Pressure Level	dB-A (H/L)	51 / -
	110136	Sound Power Level	dB (H/L)	66 / -
Maximum Current			A	12.0
Maximum Input Power			W	2.73k
Starting Current			A	6.95
Circuit Breaker Capacity			A	16
	Height		mm	540
Dimension	Width		mm	780 (+70)
	Depth		mm	289
Net Weight			kg	38
Connection Cable				3 + 1 (Earth) ø1.5 mm ²
Pipe Length Range (1 room)			m	3 ~ 20
Maximum Pipe Length (Total R	oom)		m	30
D. C Disc. Discussion	Liquid Side	,	mm (inch)	6.35 (1/4)
Refrigerant Pipe Diameter	Gas Side		mm (inch)	9.52 (3/8)
	Туре			Hermetic Motor
Compressor	Motor Type	3		Brushless (4-poles)
	Rated Outr	put	W	1.50k
	Туре		1	Propeller Fan
Air Circulation	Motor Type	3	1	DC Motor (8-poles)
	Rated Out	put	W	40
Fan Speed	High (Cool	ing / Heating)	RPM	890 / 890
	Туре			Plate fin configuration forced draft type
	Tube Mate	rial		Copper
Heat Exchanger	Fin Materia	al		Aluminum (Pre Coat)
	Row / Stag	e		2 / 20
	FPI		1	19
Air Volume	High (Cool	ing / Heating)	m ³ /min	33.3 / 28.5
Refrigerant Control Device		<u> </u>		Expansion Valve
Refrigerant Oil			cm ³	RB68A / Freol Alpha68M (350)
Pefrigerant (R410A)	<u> </u>		- n	1 45k
rteingerunt (rt+rort)			9	1.400

lt	em		Unit	OUTDO	OR UNIT	
				Dry Bulb	Wet Bulb	
	Cooling	Maximum		32	23	
Indeer Operation Range	Cooling	Minimum		16	11	
Indoor Operation Range	Hosting	Maximum		30	—	
	rieating	Minimum		16	—	
	Cooling	Maximum		43	26	
Outdoor Operation Range	Cooling	Minimum		16	11	
Outdoor Operation Range	Heating	Maximum		24	18	
	ricating	Minimum		-10	-11	

Note

• Specifications are subject to change without notice for further improvement.

• Multi Split Combination Possibility:

- A single outdoor unit enables air conditioning of up to two separate rooms for CU-2RE15MBE, CU-2RE18MBE.

					OUTDO	OR UNIT			
CONN				CU-2RE	E15MBE	CU-2RE	E18MBE		
Туре			ROOM	А	В	A	В		
		2.0kW	CS-MRE7MKE	•	•	•	•		
Wall 2.		2.5kW	CS-MRE9MKE	•	•	•	•		
	3.2kW CS-		CS-MRE12MKE	•	•	•	•		
Capac	Capacity range of connectable indoor units				.0kW to kW	From 4 6.4	From 4.0kW to 6.4kW		
	1-roo	om maximu	um pipe length (m)	2	:0	20			
	Allov	vable eleva	ation (m)	1	0	1	10		
Pipe	Tota	l allowable	pipe length (m)	3	0	30			
length	Tota char	l pipe lengi geless leng	th for maximum gth (m)	2	0	20			
	Addi char	tional gas geless leng	amount over gth (g/m)	2	0	2	0		
						Note: "	: Available		

Remarks for CU-2RE15MBE / CU-2RE18MBE

1. At least two indoor units must be connected.

2. The total nominal cooling capacity of indoor units that will be connected to outdoor unit must be within connectable capacity range of indoor unit.

(as shown in the table above)

Example: The indoor units' combination below is possible to connect to

CU-2RE15MBE. (Total nominal capacity of indoor units is between 4.0kW to 5.6kW)

 Two CS-MRE7MKE only (Total nominal cooling capacity is 4.0kW)
 One CS-MRE7MKE and one CS-MRE9MKE. (Total nominal cooling capacity is 4.5kW)

Outdoor Unit : CU-2RE15MBE

	Indoor unit capacity	T-+-1			Coolin	g Capacity	y(kW)			Inj	put Pow	er (V)	E	ER	ANNUAL ENERGY	Current,	MOISTURE REMOVAL VOLUME
	Cooling	lotar	Room A	Room B		Te	otal	min	\sim max	Rating	min	\sim	max	W/W	CLASS	CONSUMPTION (kWh)	230V (A)	1/h
	20	20	2.00			2.	. 00	1.1	~ 2.5	550	230	\sim	690	3.64	A	275	2.60	1.3
1	25	25	2,50			2.	. 50	1.1	~ 3.1	710	230	\sim	950	3.52	A	355	3.35	1.5
Room	32	32	3.20			3.	. 20	1.1	~ 3.7	980	230	\sim	1210	3.27	A	490	4.60	1.8
	20 + 20	40	2.00	2.00		4.	. 00	1.5	~ 4.6	1170	270	\sim	1340	3.42	A	585	5.45	1.3 + 1.3
2	20 + 25	45	1.95	2.45		4.	. 40	1.5	~ 4.8	1300	270	~	1520	3.38	A	650	6.10	1.3 + 1.5
Room	20 + 32	52	1.70	2.70		4.	. 40	1.5	~ 4.8	1300	270	~	1520	3.38	A	650	6.10	1.1 + 1.6
	25 + 25	50	2.20	2.20		4.	. 40	1.5	~ 4.8	1300	270	\sim	1520	3.38	A	650	6.10	1.4 + 1.4
	Indoor unit capacity	T + 1			Heatin	g Capacity	y(kW)			Inp	out Pow	er (V)	0	OP	ANNUAL ENERGY	Current,	MOISTURE REMOVAL VOLUME
	Heating	lotal	Room A	Room B		To	otal	min	\sim max	Rating	min	\sim	max	W/W	CLASS	CONSUMPTION (kWh)	230V (A)	1/h
	20	20	3.20			3.	. 20	0.7	~ 4.3	940	190	\sim	1350	3.40	B	470	4.15	
	25	25	3.60			3.	. 60	0.7	~ 5.0	1120	190	\sim	1660	3.21	C	560	4.95	
Room	32	32	4.50			4.	. 50	0.7	~ 5.7	1390	190	\sim	1780	3.24	C	695	6.15	
	20 + 20	40	2.40	2.40		4.	. 80	1.1	~ 6.3	1200	240	\sim	1610	4.00	A	600	5.35	
2	20 + 25	45	2.15	2.65		4.	80	1.1	~ 6.3	1200	240	\sim	1610	4.00	A	600	5.35	
Room	20 + 32	52	1.85	2.95		4.	. 80	1.1	~ 6.5	1200	240	\sim	1670	4.00	A	600	5.35	
	25 + 25	50	2.40	2.40		4.	80	1.1	~ 6.5	1200	240	\sim	1670	4.00	A	600	5.35	

Outdoor Unit : CU-2RE18MBE

	Indoon unit concoity	1			Cooling Come	ai + 17 (1-W)			Tm	aut Dor	on (1	<i>v</i>)	F	CD	ANNUAL ENERGY	Current	MOTOTUDE DEMOVAL VOLUME
	Indoor unit capacity	Total	D 4	D D	cooring capac	T (1	· · ·		D. 47	JUL FOW	er (i	1/	E tr	CLACC	CONCUMPTION (LWL)	current,	MOISTORE REMOVAL VOLUME
	Looling		ROOM A	ROOM B		lotal	min	$\sim \max$	Kating	min	\sim	max	W/W	CLASS	CONSUMPTION (KWII)	230V (A)	1/h
1	20	20	2.00			2.00	1.1	~ 2.5	550	230	~	690	3.64	<u>A</u>	275	2.60	1. 3
Room	25	25	2.50			2.50	1.1	~ 3.1	710	230	\sim	950	3. 52	A	355	3. 35	1.5
Roon	32	32	3.20			3.20	1.1	~ 3.7	980	230	\sim	1210	3.27	A	490	4.60	1.8
	20 + 20	40	2.00	2.00		4.00	1.5	~ 4.6	1160	270	\sim	1340	3.45	A	580	5.45	1.3 + 1.3
	20 + 25	45	2.00	2.50		4.50	1.5	~ 4.8	1310	270	\sim	1510	3.44	A	655	6.10	1.3 + 1.5
2	20 + 32	52	1.85	2.95		4.80	1.5	~ 4.9	1400	270	\sim	1530	3.43	A	700	6.50	1.2 + 1.7
Room	1 25 + 25	50	2.35	2, 35		4.70	1.5	\sim 4.8	1370	270	\sim	1510	3.43	A	685	6.40	1.5 + 1.5
	25 + 32	57	2.10	2.70		4.80	1.5	~ 5.0	1490	270	\sim	1560	3.22	A	745	6.95	1.4 + 1.6
	32 + 32	64	2.40	2.40		4.80	1.5	~ 5.0	1490	270	\sim	1580	3.22	A	745	6.95	1.5 + 1.5
	Indoor unit capacity	Tatal			Heating Capac	city(kW)			Ing	out Pow	er (V	V)	C	0P	ANNUAL ENERGY	Current,	MOISTURE REMOVAL VOLUME
	Heating	lotar	Room A	Room B		Total	min	\sim max	Rating	min	\sim	max	W/W	CLASS	CONSUMPTION (kWh)	230V (A)	1/h
1	20	20	3.20			3.20	0.7	~ 4.3	940	190	~	1350	3.40	В	470	4.15	
D	25	25	3.60			3.60	0.7	~ 5.0	1120	190	\sim	1660	3.21	C	560	4.95	
ROOI	32	32	4.50			4.50	0.7	~ 5.7	1390	190	\sim	1780	3.24	C	695	6.15	
	20 + 20	40	2 60	2 60		5 20	1 1	~ 6.3	1300	240	\sim	1610	4.00	A	650	5.80	
			2.00	2.00		0.20	1.1.1	0.0	1000	240					000	0.00	
	20 + 25	45	2.30	2.90		5.20	1.1	~ 6.3	1300	240	~	1610	4.00	A	650	5.80	
2	20 + 25 20 + 32	45 52	2.30	2.90 3.20		5. 20	1.1	~ 6.3 ~ 6.7	1300 1320	240 240 240	\sim	1610 1720	4.00 3.94	A	650 660	5. 80 5. 85	
2 Room	20 + 25 20 + 32 25 + 25	45 52 50	2. 00 2. 30 2. 00 2. 60	2.90 2.90 3.20 2.60		5. 20 5. 20 5. 20 5. 20	1.1 1.1 1.1 1.1	~ 6.3 ~ 6.7 ~ 6.7 ~ 6.7	1300 1320 1340	240 240 240 240	~ ~ ~	1610 1720 1740	4.00 3.94 3.88	A A A	650 660 670	5.80 5.85 5.95	
2 Room	20 + 25 20 + 32 25 + 25 25 + 32	45 52 50 57	2. 30 2. 00 2. 60 2. 30	2.90 3.20 2.60 2.95		5. 20 5. 20 5. 20 5. 20 5. 20 5. 20	$ 1.1 \\ 1.1 \\ 1.1 \\ 1.1 \\ 1.1 $	~ 6.3 ~ 6.7 ~ 6.7 ~ 6.7 ~ 6.7	1300 1320 1340 1320	240 240 240 240 240	~ ~ ~ ~	1610 1720 1740 1720	4.00 3.94 3.88 3.94	A A A A	650 660 670 660	5.80 5.85 5.95 5.85	

3 Features

Inverter Technology

- Wider output power range
- Energy saving
- Quick Cooling
- Quick Heating
- More precise temperature control

Environment Protection

- Non-ozone depletion substances refrigerant (R410A)

Long Installation Piping

- Long piping up to 15 meters (0.75 ~ 1.75HP) during single split connection only

Easy to use remote control

Quality Improvement

- Random auto restart after power failure for safety restart operation
- Gas leakage protection
- Prevent compressor reverse cycle
- Inner protector to protect Compressor
- Noise prevention during soft dry operation

Operation Improvement

- 24-hour timer setting

Serviceability Improvement

- Breakdown Self Diagnosis function

4 Location of Controls and Components

4.1. Indoor Unit



4.2. Outdoor Unit



4.3. Remote Control



5 Dimensions

5.1. Indoor Unit

<Top View>



<Side View>





<Bottom View>





<Remote Control>



<Remote Control Holder>



<Rear View>



Relative position between the indoor unit and the installation plate <Front View>



5.2. Outdoor Unit





<Side View>



6 Refrigeration Cycle Diagram



7 Block Diagram



8 Wiring Connection Diagram

8.1. Indoor Unit



8.2. Outdoor Unit





9 Electronic Circuit Diagram

9.1. Indoor Unit



9.2. Outdoor Unit



10 Printed Circuit Board

- 10.1. Indoor Unit
- 10.1.1. Main Printed Circuit Board



10.1.2. Power Printed Circuit Board



10.1.3. Indicator Printed Circuit Board



10.2. Outdoor Unit



11 Installation Information

11.1. CU-2RE15MBE

11.1.1. Check Points



11.1.2. The Shapes of the 3-Way Valve Caps of the Outdoor Unit Have Been Changed

- Accompanying the changes in the shapes of the 3-way valve caps, the tightening method has also been changed.
- Firmly tighten the 3-way valve caps by hand, and then tighten them up by another 30 degrees or so (one-twelfth of a full turn) using a spanner or adjustable spanner.

11.2. CU-2RE18MBE

11.2.1. Check Points

11.2.2. The Shapes of the 3-Way Valve Caps of the Outdoor Unit Have Been Changed

- Accompanying the changes in the shapes of the 3-way valve caps, the tightening method has also been changed.
- Firmly tighten the 3-way valve caps by hand, and then tighten them up by another 30 degrees or so (one-twelfth of a full turn) using a spanner or adjustable spanner.

After having firmly tightened the caps by hand, Approx. 30 degrees tighten them up further using a spanner or adjustable spanner. Caution: Do not use all your strength to tighten up the caps. Doing so may break the caps.

12 Installation Instruction

12.1. Select the Best Location

12.1.1. Indoor Unit

- Do not install the unit in excessive oil fume area such as kitchen, workshop and etc.
- There should not be any heat source or steam near the unit.
- There should not be any obstacles blocking the air circulation.
- A place where air circulation in the room is good.
- A place where drainage can be easily done.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, fence or other obstacles.
- Recommended installation height for indoor unit shall be at least 2.5 m.

12.1.2. Outdoor Unit

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
- There should not be any animal or plant which could be affected by hot air discharged.
- Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.
- Do not place any obstacles which may cause a short circuit of the discharged air.
- If piping length is over the [piping length for additional gas], additional refrigerant should be added as shown in the table.

PIPE	size	Standard	Min,	Max.	Max.	Additional gas			
Gas	Liquid	Length (m)	Length (m)	total Length (m)	Elevation (m)	charge amount (g/m)			
9.52mm (3/8")	6.35mm (1/4")	5 m/ Indoor unit	5 m/ 3 m/ Indoor Indoor unit unit		10	20			
Note: (1)	Note: (1) It is possible to extent the piping length of one unit up to 20 meters. However, the total piping length must not exceed 30 meters.								
(2)	(2) If the piping length exceeds 20 meters, refrigerant of 20 g per meter must be added.								

12.1.3. Indoor/Outdoor Unit Installation Diagram

12.2. Indoor Unit

12.2.1. How to Fix Installation Plate

The mounting wall shall be strong and solid enough to prevent it from the vibration.

Model	Dimension								
	1	2	3	4	5	6			
CS-MRE7*** CS-MRE9*** CS-MRE12***	485 mm	82 mm	165 mm	158 mm	43 mm	95 mm			

The center of installation plate should be at more than at right and left of the wall.

The distance from installation plate edge to ceiling should more than 2.

From installation plate left edge to unit's left side is ③.

From installation plate right edge to unit's right is ④.

- B : For left side piping, piping connection for liquid should be about (5) from this line.
 - : For left side piping, piping connection for gas should be about (6) from this line.
 - 1. Mount the installation plate on the wall with 5 screws or more (at least 5 screws).

(If mounting the unit on the concrete wall, consider using anchor bolts.)

- Always mount the installation plate horizontally by aligning the marking-off line with the thread and using a level gauge.
- 2. Drill the piping plate hole with ø70 mm hole-core drill.
- Line according to the left and right side of the installation plate. The meeting point of the extended line is the center of the hole. Another method is by putting measuring tape at position as shown in the diagram above. The hole center is obtained by measuring the distance namely 128 mm for left and right hole respectively.
- Drill the piping hole at either the right or the left and the hole should be slightly slanting to the outdoor side.

12.2.2. To Drill a Hole in the Wall and Install a Sleeve of Piping

- 1. Insert the piping sleeve to the hole.
- 2. Fix the bushing to the sleeve.
- 3. Cut the sleeve until it extrudes about 15 mm from the wall.

4. Finish by sealing the sleeve with putty or caulking compound at the final stage.

12.2.3. Indoor Unit Installation

1. For the right rear piping

2. For the right and right bottom piping

3. For the embedded piping

Step-1	Replace the drain hose
➡	
Step-2	Bend the embedded piping
₽	• Use a spring bender or equivalent to bend the piping so that the piping is not crushed.
Step-3	Pull the connection cable into Indoor Unit
₽	• The inside and outside connection cable can be connected without removing the front grille.
Step-4	Cut and flare the embedded piping
➡	 When determining the dimensions of the piping, slide the unit all the way to the left on the installation plate. Refer to the section "Cutting and flaring the piping".
Step-5	Install the Indoor Unit
Step-6	Connect the piping
	Please refer to "Connecting the piping" column in outdoor unit section. (Below steps are done after connecting the outdoor piping and gas-leakage confirmation.)
Step-7	Insulate and finish the piping
•	Please refer to "Piping and finishing" column of outdoor section and "Insulation of piping connection" column as mentioned in indoor/outdoor unit installation.
Step-8	Secure the Indoor Unit

(This can be used for left rear piping and bottom piping also.)

12.2.4. Connect the Cable to the Indoor Unit

- 1. The inside and outside connection cable can be connected without removing the front grille.
- 2. **Connection cable** between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm² flexible cord, type designation 245 IEC 57 or heavier cord.
- 3. Bind all the indoor and outdoor connection cable with tape and route the connection cable via the escapement.
- 4. Remove the tapes and connect the connection cable between indoor unit and outdoor unit according to the diagram below.

- 5. Secure the connection cable onto the control board with the holder (clamper).
 - Ensure the colour of wires of outdoor unit and the terminal Nos. are the same to the indoor's respectively.
 - Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires for safety reason.

CUTTING AND FLARING THE PIPING

- 1. Please cut using pipe cutter and then remove the burrs.
- 2. Remove the burrs by using reamer. If burrs is not removed, gas leakage may be caused. Turn the piping end down to avoid the metal powder entering the pipe.
- 3. Please make flare after inserting the flare nut onto the copper pipes.

1. To cut

3. To flare

When properly flared, the internal surface of the flare will evenly shine and be of even thickness. Since the flare part comes into contact with the connections, carefully check the flare finish.

12.3. Outdoor Unit

12.3.1. Install the Outdoor Unit

- After selecting the best location, start installation according to Indoor/Outdoor Unit Installation Diagram.
- 1. Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut (ø10 mm).
- 2. When installing at roof, please consider strong wind and earthquake. Please fasten the installation stand firmly with bolt or nails.

12.3.2. Connect the Piping

Connecting the Piping to Indoor

Please make flare after inserting flare nut (locate at joint portion of tube assembly) onto the copper pipe.

(In case of using long piping)

Connect the piping

- Align the center of piping and sufficiently tighten the flare nut with fingers.
- Further tighten the flare nut with torque wrench in specified torque as stated in the table.

Connecting the Piping to Outdoor

Decide piping length and then cut by using pipe cutter. Remove burrs from cut edge. Make flare after inserting the flare nut (located at valve) onto the copper pipe.

Align center of piping to valve and then tighten with torque wrench to the specified torque as stated in the table.

Do not overtighten, overtightening cause gas leakage. Piping Size Torque 6.35 mm (1/4") [18 N•m (1.8 kgf.m)] 9.52 mm (3/8") [42 N•m (4.3 kgf.m)] 12.7 mm (1/2") [55 N•m (5.6 kgf.m)] 15.88 mm (5/8") [65 N•m (6.6 kgf.m)] 19.05 mm (3/4") [100 N•m (10.2 kgf.m)]

12.3.3. Evacuation of the Equipment

WHEN INSTALLING AN AIR CONDITIONER, BE SURE TO EVACUATE THE AIR INSIDE THE INDOOR UNIT AND PIPES in the following procedure.

- 1. Connect a charging hose with a push pin to the Low side of a charging set and the service port of the 3-way valve.
- Be sure to connect the end of the charging hose with the push pin to the service port.
- 2. Connect the center hose of the charging set to a vacuum pump.
- 3. Turn on the power switch of the vacuum pump and make sure that the needle in the gauge moves from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa). Then evacuate the air approximately ten minutes.
- 4. Close the Low side valve of the charging set and turn off the vacuum pump. Make sure that the needle in the gauge does not move after approximately five minutes.

Note: BE SURE TO TAKE THIS PROCEDURE IN ORDER TO AVOID REFRIGERANT GAS LEAKAGE.

5. Disconnect the charging hose from the vacuum pump and from the service port of the 3-way valve.

- 6. Tighten the service port caps of the 3-way valve at a torque of 18 N•m with a torque wrench.
- 7. Remove the valve caps of both of the 2-way valve and 3-way valve. Position both of the valves to "OPEN" using a hexagonal wrench (4 mm).
- 8. Mount valve caps onto the 2-way valve and the 3-way valve.
 - Be sure to check for gas leakage.
 - If gauge needle does not move from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa), in step ③ above take the following measure:
 - If the leak stops when the piping connections are tightened further, continue working from step ③.
 - If the leak does not stop when the connections are retightened, repair the location of leak.
 - Do not release refrigerant during piping work for installation and reinstallation.
 - Take care of the liquid refrigerant, it may cause frostbite.

12.3.4. Connect the Cable to the Outdoor Unit

- 1. Remove the control board cover from the unit by loosening the screw.
- 2. Cable connection to the power supply through Isolating Devices (Disconnecting means).
 - Connect approved type polychloroprene sheathed **power supply cord** 3 x 1.5 mm² type designation 245 IEC 57 or heavier cord to the terminal board, and connect the others end of the cord to Isolating Devices (Disconnecting means).
- 3. **Connection cable** between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm² flexible cord, type designation 245 IEC 57 or heavier cord.
- 4. Connect the power supply cord and connection cable between indoor unit and outdoor unit according to the diagram below.

- 5. Secure the power supply cord and connection cable onto the control board with the holder.
- 6. Attach the control board cover back to the original position with screw.
- 7. For wire stripping and connection requirement, refer to instruction (5) of indoor unit.

- Note: Isolating Devices (Disconnecting means) should have minimum 3.0 mm contact gap.
- Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires for safety reason.

12.3.5. Piping Insulation

- 1. Please carry out insulation at pipe connection portion as mentioned in Indoor/Outdoor Unit Installation Diagram. Please wrap the insulated piping end to prevent water from going inside the piping.
- 2. If drain hose or connecting piping is in the room (where dew may form), please increase the insulation by using POLY-E FOAM with thickness 6 mm or above.

13 Operation and Control

13.1. Basic Function

Inverter control, which equipped with a microcomputer in determining the most suitable operating mode as time passes, automatically adjusts output power for maximum comfort always. In order to achieve the suitable operating mode, the microcomputer maintains the set temperature by measuring the temperature of the environment and performing temperature shifting. The compressor at outdoor unit is operating following the frequency instructed by the microcomputer at indoor unit that judging the condition according to internal setting temperature and intake air temperature.

13.1.1. Internal Setting Temperature

Once the operation starts, remote control setting temperature will be taken as base value for temperature shifting processes. These shifting processes are depending on the air conditioner settings and the operation environment. The final shifted value will be used as internal setting temperature and it is updated continuously whenever the electrical power is supplied to the unit.

13.1.2. Cooling Operation

13.1.2.1. Thermostat control

- Capability supply to indoor unit is OFF (Expansion valve closed) when Intake Air Temperature Internal setting temperature < -2.0° C
- Capability resume supply to indoor unit after waiting for 3 minutes, if the Intake Air temperature Internal setting temperature > Capability supply OFF point.

13.1.3. Soft Dry Operation

13.1.3.1. Thermostat control

- Capability supply to indoor unit is OFF (Expansion valve closed) when Intake Air Temperature Internal setting temperature
 -3.0°C
- Capability resume to indoor unit after waiting for 3 minutes, if the Intake Air temperature Internal setting temperature > Capability supply OFF point.

13.1.4. Heating Operation

13.1.4.1. Thermostat control

- Capability supply to indoor unit is OFF (Expansion valve closed) when Intake Air Temperature Internal setting temperature > +1.0°C
- During this condition, the indoor fan is stopped if compressor is ON.
- Capability resume supply to indoor unit after waiting for 3 minutes, if the Intake Air Temperature Internal setting temperature < Capability supply OFF point.
13.1.4.2. Temperature Sampling Control

- Temperature sampling is controlled by outdoor unit where room temperature for all power supply ON indoor unit could be obtained.
- When capability supply to the indoor unit is OFF and the compressor is ON, the indoor fan motor is stopped. During this condition, 15 seconds after sampling signal from outdoor unit is received, the indoor fan start operation at low fan speed.
- However, within first 4 minutes of capability stopped supply to the indoor unit, even sampling signal is received, the sampling control is cancelled.

13.1.5. Automatic Operation

- This mode can be set using remote control and the operation is decided by remote control setting temperature, remote control operation mode, indoor intake and outdoor air temperature.
- During operation mode judgment, indoor fan motor (with speed of -Lo) and outdoor fan motor are running for 30 seconds to detect the indoor intake and outdoor air temperature. The operation mode is decided based on below chart.



• Every 180 minutes, the indoor and outdoor temperature is judge. Based on remote control setting temperature, the value of T1 will increase up to 10°C, T2 will decrease by 3°C and T3 will decrease up to 8°C.

13.2. Indoor Fan Motor Operation

A. Basic Rotation Speed (rpm)

i. Manual Fan Speed

[Cooling, Dry]

• Fan motor's number of rotation is determined according to remote control setting.

Remote Control	0	0	0	0	0
Tab	Hi	Me+	Me	Me-	Lo

[Heating]

· Fan motor's number of rotation is determined according to remote control setting.

Remote Control	0	0	0	0	0
Tab	SHi	Me+	Me	Me-	Lo

ii. Auto Fan Speed

[Cooling, Dry]

• According to room temperature and setting temperature, indoor fan speed is determined automatically.

• The indoor fan will operate according to pattern below.



[Heating]

• According to indoor pipe temperature, automatic heating fan speed is determined as follows.



B. Feedback control

- Immediately after the fan motor started, feedback control is performed once every second.
- During fan motor on, if fan motor feedback ≥ 2550 rpm or < 50 rpm continue for 10 seconds, then fan motor error counter increase, fan motor is then stop and restart. If the fan motor counter becomes 7 times, then H19 fan motor error is detected. Operation stops and cannot on back.

13.3. Indoor Fan Motor Operation

13.3.1. Residual Heat Removal Control

• To prevent high pressure at indoor unit, when heating mode thermostat-off condition or power supply OFF, indoor fan continue to operate at controlled fan speed for maximum 30 seconds then stop.

13.4. Outdoor Fan Motor Operation

Outdoor fan motor is operated with one fan speed only. It starts when compressor starts operation and it stops 30 seconds after compressor stops operation.



13.5. Airflow Direction

- 1. There are two types of airflow, vertical airflow (directed by horizontal vane) and horizontal airflow (directed by vertical vanes).
- 2. Control of airflow direction can be automatic (angles of direction is determined by operation mode, heat exchanger temperature and intake air temperature) and manual (angles of direction can be adjusted using remote control).

13.5.1. Vertical Airflow

Operation Mode	Airflow Direction			Vane Angle (°)						
			1	2	3	4	5			
Heating	Auto with Heat Exchanger	A		20						
	Temperature	В	57							
		C	32							
	Manual	20	32	45	57	68				
Cooling and Ion	Auto	20 ~ 45								
	Manual	20	26	32	37	45				
Soft Dry	Auto			20 ~ 45						
	Manual	20	26	32	37	45				

1. Automatic vertical airflow direction can be set using remote control; the vane swings up and down within the angles as stated above. For heating mode operation, the angle of the vane depands on the indoor heat exchanger temperature as Figure 1 below. It does not swing during fan motor stop. When the air conditioner is stopped using remote control, the vane will shift to close position.

2. Manual vertical airflow direction can be set using remote control; the angles of the vane are as stated above and the positions of the vane are as Figure 2 below. When the air conditioner is stopped using remote control, the vane will shift to close position.



13.6. Timer Control

13.6.1. ON Timer Control

- ON timer can be set using remote control, the unit with timer set will start operate earlier than the setting time. This is to provide a comfortable environment when reaching the set ON time.
- 60 minutes before the set time, indoor (at fan speed of Lo-) and outdoor fan motor start operate for 30 seconds to determine the indoor intake air temperature and outdoor air temperature in order to judge the operation starting time.
- From the above judgment, the decided operation will start operate earlier than the set time as shown below.



13.6.2. OFF Timer Control

OFF timer can be set using remote control, the unit with timer set will stop operate at set time.

13.7. Auto Restart Control

- When the power supply is cut off during the operation of air conditioner, the compressor will re-operate between three to four minutes (10 patterns to be selected randomly) after power resume.
- During multi split connection, Indoor unit will resume previous mode, include unit standby mode.

13.8. Indication Panel

LED	POWER	TIMER
Color	Green	Orange
Light ON	Operation ON	Timer Setting ON
Light OFF	Operation OFF	Timer Setting OFF

Note:

- If POWER LED is blinking (0.5 seconds ON, 0.5 second OFF), the possible operation of the unit are during Indoor Residual Heat Removal, Hot Start, during Deice operation, operation mode judgment, or ON timer sampling.
- If POWER LED is blinking (2.5 seconds ON, 0.5 second OFF), the unit is in standby mode.
- If TIMER LED is blinking, there is an abnormality operation occurs.

14 Operation Control

14.1. Compressor Operation Frequency

- The compressor operation frequency is determined by room temperature, capacity, and model type.
 - When operation is started after the air conditioner has been stopped for more than one hour, the air conditioner operates at a high frequency which lowers the room temperature quickly for cooling (or raises it quickly for heating).
 - If two or more indoor units are operating simultaneously, the thermostat is set to OFF in one room; the automatic expansion valve is closed to adjust the flow of refrigerant so as to control the room temperature.
 - When the thermostat is set to OFF during 1-room operation, the compressor and fan of the outdoor unit are stopped. (The outdoor unit fan is stopped 30 seconds after the compressor stops).
 - It takes about 180 seconds to restart operation when the compressor has been stopped (Time delay safety control)



14.2. Deice Operation

• During Heating operation, the deice operation judgment method:

novation Chavastavistic

- According to outdoor heat exchanger temperature, operation time and outdoor air temperature.
- Deice operation
 - The outdoor heat exchanger temperature falls below 3°C continuously for 3 minutes
 - During deice operation; the 4-way valve is switched to cooling cycle to melt the frost.
 - Deice operation ends about 12 minutes of operation or the temperature of heat exchanger rises above 25°C.

Jeice operation characteristic								
		Deicing start						
Elapsed time	40 min.	12 min.						
	(outdoor air	(outdoor air	(outdoor air	(outdoor air				
	temperature	temperature	temperature	temperature				
	below -3°C)	above -3°C)	above -1°C)	above -1°C)				
Operating time	-11°C	-9°C	-7°C	-6°C	25°C			
temperature of								
heat exchanger								
Fuzzy control makes it increasingly harder to initiate the deice operation as the outdoor								
emperature drops.								

Deice operation

4-way valve	Outdoor unit fan	Indoor unit fan
Cooling cycle	Stopped	Stopped

15 Protection Control

15.1. Time delay safety control

• The compressor does not restart for 3 minutes after stop of compressor.

15.2. Total running current control

- When the air conditioner has been operated at the capacity designated by the indoor unit and the total running current exceeds setting I1, the operating frequency of the compressor is reduced. Conversely, when the total current drops below setting I1, it is increased (but only up to the capacity designated by the indoor unit).
- The compressor is stopped as soon as the total current exceeds setting I2.
- If the compressor is stop by the total running current control on 3 occasions in a 20-minutes period, the "F98" error is displayed.

Model	Setting	CU-2RE15MBE	CU-2RE18MBE
Dry Cooling	l1	9.0A	9.0A
Dry-Cooling	12	15.0A	15.0A
Heating	l1	12.5A	12.5A
Heating	12	-	17.0A

15.3. IPM (Power transistor) prevention control

Overheating prevention control

- The compressor is stopped when the overheating protection circuit inside the IPM has been activated. It restarts after 3 minutes.
- Activation temperature: 110°C
 Reset temperature: 95°C

DC peak current control

- When the inverter load current (DC peak current) exceeds the setting value (22.5A), the compressor is stopped immediately. If this happens within 30 seconds after it started operating, it will restart one minute later; if it happens after 30 seconds have elapsed since it started operating, it will restart 3 minutes later.
- If the DC peak current exceeds the setting value on 7 consecutive occasions within 30 seconds after the compressor started operating, the "F99" error is displayed, and the unit operation is stopped.

15.4. Compressor Overheating Prevention Control

• When the compressor discharge temperature exceeds 105°C, compressor frequency control (including expansion valve control) is conducted.



• If the compressor stops when compressor discharge temperature exceeds 112°C for 3 occasions within 30 minutes, TIMER LED blinks (F97: Compressor overheat).

15.5. Low Pressure Prevention Control (Gas Leakage Detection)

- Control start conditions
 - For 5 minutes, the compressor continuously operates and outdoor total current is between 1.5A and 1.88A.
 - During Cooling and Soft Dry operations:
 - Indoor heat exchanger temperature is above 20°C.
 - During heating operations:
 - Indoor heat exchanger temperature is below 25°C.
- Control contents
 - Compressor stops (and restart after 3 minutes).
 - If the conditions above happen 2 times within 20 minutes, the unit will:
 - Stop operation
 - Timer LED blinks and "F91" indicated (Refrigeration cycle abnormality).

15.6. 4-Way Valve Failure Protection Control

During Cooling operation

- 4 minutes after compressor started, if the temperature of the indoor unit heat exchanger exceeds 45°C, the compressor stops (After 3 minutes, Time delay safety control starts).
- If this situation occurs 4 times within 30 minutes, TIMER LED blinks (F11 error)
- During Heating operation
 - 4 minutes after compressor started, if the temperature of the indoor unit heat exchanger drops below 5°C, the compressor stops (After 3 minutes, Time delay safety control starts).
 - If this situation occurs 4 times within 30 minutes, TIMER LED blinks (F11 error)

15.7. Protection Control for Cooling & Soft Dry Operation

15.7.1. Cooling overload control

• Detects the outdoor pipe temperature and carry below restriction/ limitation (limit the compressor operation frequency).

- If the outdoor heat exchanger temperature exceeds 52°C during cooling / dry operation, the compressor frequency is restricted.
- If the compressor if outdoor pipe temperature exceeds 62°C.
- If the compressor stops 4 times within 20 minutes, TIMER LED blinks (F95: outdoor high pressure rise protection)



15.7.2. Outdoor air temperature control

• The compressor operating frequency is regulated in accordance to the outdoor air temperature as shown in the diagram below. This control will begin 1 minute after the compressor starts.



15.7.3. Abnormal Wiring or Piping Connection Checking Control

- 3 minutes after forced cooling operation was conducted for one room during the initial operation after power was turned on. The abnormal wiring or piping connection control activates when:
 - The outdoor gas piping temperature (connected to non operating indoor unit) drops by more than 5°C to 5°C or below 3 minutes after compressor started.
 - The non operating indoor unit pipe temperature where outdoor air temperature above 5°C has dropped by more than 20°C to 5°C or lower.
 - When above conditions are satisfied, the Timer LED blinks. (H41 error)

15.8. Protection Control for Heating Operation

15.8.1. Overload Protection Control

• The compressor operating frequency is regulated in accordance to indoor heat exchanger temperature as shown in below figures.



15.8.2. Intake Air Temperature Control

· Compressor operating frequency changes in accordance to the outdoor air temperature.



• This control is not applicable during minimum frequency operation protection control, deice operation, pump down operation.

16 Servicing Mode

16.1. Auto OFF/ON Button



1. AUTO OPERATION MODE

The Auto operation will be activated immediately once the Auto OFF/ON button is pressed. This operation can be used to operate air conditioner with limited function if remote control is misplaced or malfunction.

2. TEST RUN OPERATION (FOR PUMP DOWN/SERVICING PURPOSE)

The Test Run operation will be activated if the Auto OFF/ON button is pressed continuously for more than 5 seconds. A "beep" sound will heard at the fifth seconds, in order to identify the starting of Test Run operation (Forced cooling operation). Within 5 minutes after Forced cooling operation start, the Auto OFF/ON button is pressed for more than 5 seconds. A 2 "beep" sounds will heard at the fifth seconds, in order to identify the starting of Forced heating operation.

The Auto OFF/ON button may be used together with remote control to set / change the advance setting of air conditioner operation.

A	uto OFF/ON button pressed			Main unit always continue	Test Run (forced cooling) ope	ration	
	7	5 sec	8 sec		11 sec	16 sec	7
	Auto Operation	Test Run Operation (Forced Cooling Operation)		Test Run Operation (Forced Heating Operation)	Remote Control Number Switch Mode	Remote Control Receiving Sound OFF/ON	
		Веер	Веер	x 2	Beep x 3 Press "AC RESET", then any key at remote control	Beep x 4	_

3. REMOTE CONTROL NUMBER SWITCH MODE

The Remote Control Number Switch Mode will be activated if the Auto OFF/ON button is pressed continuously for more than 11 seconds (3 "beep" sounds will occur at 11th seconds to identify the Remote Control Number Switch Mode is in standby condition) and press "AC RESET" button and then press any button at remote control to transmit and store the desired transmission code to the EEPROM.

There are 4 types of remote control transmission code could be selected and stored in EEPROM of indoor unit. The indoor unit will only operate when received signal with same transmission code from remote control. This could prevent signal interference when there are 2 or more indoor units installed nearby together.

To change remote control transmission code, short or open jumpers at the remote control printed circuit board.

	Remote	Control Printed Circu	iit Board
ੂੰ ™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™™	Jumper A (J1)	Jumper B (D2)	Remote Control No.
	Short	Open	A (Default)
ĨŢĨġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġ	Open	Open	В
▞ [▓] ▖ ▌▕▌▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖▖ ▋	Short	Short	С
	Open	Short	D

• During Remote Control Number Switch Mode, press any button at remote control to transmit and store the transmission code to the EEPROM.

4. REMOTE CONTROL RECEIVING SOUND OFF/ON MODE

The Remote Control Receiving Sound OFF/ON Mode will be activated if the Auto OFF/ON button is pressed continuously for more than 16 seconds (4 "beep" sounds will occur at 16th seconds to identify the Remote Control Receiving Sound Off/On Mode is in standby condition) and press "AC Reset" button at remote control.

Press "Auto OFF/ON button" to toggle remote control receiving sound.

- Short "beep": Turn OFF remote control receiving sound.

- Long "beep": Turn ON remote control receiving sound.

After Auto OFF/ON Button is pressed, the 20 seconds counter for Remote Control Receiving Sound OFF/ON Mode is restarted.

16.2. Remote Control Button

16.2.1. SET BUTTON

• To check remote control transmission code and store the transmission code to EEPROM

- Press "SET" button continuously for 10 seconds by using pointer.
- Press "TIMER SET" button until a "beep" sound is heard as confirmation of transmission code changed.
- To change the air quality sensor sensitivity
 - Press and release by using pointer.
 - Press the Timer Decrement button to select sensitivity:
 - 1. Low Sensitivity
 - 2. Standard (Default)
 - 3. Hi Sensitivity
 - Confirm setting by pressing Timer Set button, a "Beep" sound will be heard. LCD returns to original display after 2 seconds.
 - LCD returns to original display if remote control does not operate for 30 seconds.

16.2.2. RESET (RC)

- To clear and restore the remote control setting to factory default
 - Press once to clear the memory.

16.2.3. RESET (AC)

- · To restore the unit's setting to factory default
 - Press once to restore the unit's setting.

16.2.4. TIMER 🔺

To change indoor unit indicator's LED intensity
 Press continuously for 5 seconds.

16.2.5. TIMER ▼

- To change remote control display from Degree Celsius (°C) to Degree Fahrenheit (°F).
 - Press continuously for 10 seconds.

17 Troubleshooting Guide

17.1. Refrigeration Cycle System

In order to diagnose malfunctions, make sure that there are no electrical problems before inspecting the refrigeration cycle. Such problems include insufficient insulation, problem with the power source, malfunction of a compressor and a fan. The normal outlet air temperature and pressure of the refrigeration cycle depends on various conditions, the standard values for them are shown in the table on the right.

Normal Pressure and Outlet Air Temperature (Standard)

	Gas pressure MPa (kg/cm²G)	Outlet air temperature (°C)		
Cooling Mode	0.9 ~ 1.2 (9 ~ 12)	12 ~ 16		
Heating Mode	2.3 ~ 2.9 (23 ~ 29)	36 ~ 45		

★ Condition: • Indoor fan speed; High

- Outdoor temperature 35°C at cooling mode and 7°C at heating mode.
- Compressor operates at rated frequency



17.1.1. Relationship between the condition of the air conditioner and pressure and electric current

		Cooling Mode		Heating Mode			
Condition of the air conditioner	Low Pressure	High Pressure	Electric current during operating	Low Pressure	High Pressure	Electric current during operating	
Insufficient refrigerant (gas leakage)	1	1	1	1	1	1	
Clogged capillary tube or Strainer	1	1	1	-	-	-	
Short circuit in the indoor unit	1	1	1	-	-	-	
Heat radiation deficiency of the outdoor unit	~	-	-	*	*	1	
Inefficient compression	~	•	•	~	*	•	

• Carry out the measurements of pressure, electric current, and temperature fifteen minutes after an operation is started.

17.2. Breakdown Self Diagnosis Function

17.2.1. Self Diagnosis Function (Three Digits Alphanumeric Code)

- Once abnormality has occurred during operation, the unit will stop its operation, and Timer LED blinks.
- Although Timer LED goes off when power supply is turned off, if the unit is operated under a breakdown condition, the LED will light up again.
- In operation after breakdown repair, the Timer LED will no more blink. The last error code (abnormality) will be stored in IC memory.

To make a diagnosis

- 1. Timer LED start to blink and the unit automatically stops the operation.
- 2. Press the CHECK button on the remote controller continuously for 5 seconds.
- 3. "- -" will be displayed on the remote controller display. Note: Display only for "- -". (No transmitting signal, no receiving sound and no Power LED blinking.)
- Press the "TIMER" ▲ or ▼ button on the remote controller. The code "H00" (no abnormality) will be displayed and signal will be transmitted to the main unit.
- 5. Every press of the button (up or down) will increase abnormality numbers and transmit abnormality code signal to the main unit.
- 6. When the latest abnormality code on the main unit and code transmitted from the remote controller are matched, power LED will light up for 30 seconds and a beep sound (continuously for 4 seconds) will be heard. If no codes are matched, power LED will light up for 0.5 seconds and no sound will be heard.
- 7. The breakdown diagnosis mode will be canceled unless pressing the CHECK button continuously for 5 seconds or operating the unit for 30 seconds.
- 8. The LED will be off if the unit is turned off or the RESET button on the main unit is pressed.

To display memorized error (Protective operation) status

- 1. Turn power on.
- 2. Press the CHECK button on the remote controller continuously for 5 seconds.
- 3. "- -" will be displayed on the remote controller display. Note: Display only for "- -". (No transmitting signal, no receiving sound and no Power LED blinking.)
- 4. Press the "TIMER" ▲ or ▼ button on the remote controller. The code "H00" (no abnormality) will be displayed and signal will be transmitted to the main unit. The power LED lights up. If no abnormality is stored in the memory, three beeps sound will be heard.
- 5. Every press of the button (up or down) will increase abnormality numbers and transmit abnormality code signal to the main unit.
- 6. When the latest abnormality code on the main unit and code transmitted from the remote controller are matched, power LED will light up for 30 seconds and a beep sound (continuously for 4 seconds) will be heard. If no codes are matched, power LED will light up for 0.5 seconds and no sound will be heard.

- 7. The breakdown diagnosis mode will be canceled unless pressing the CHECK button continuously for 5 seconds or operating the unit for 30 seconds.
- 8. The same diagnosis can be repeated by turning power on again.



• To clear memorized error (Protective operation) status after repair:

- 1. Turn power on (in standby condition).
- 2. Press the AUTO button for 5 seconds (A beep receiving sound) on the main unit to operate the unit at Forced Cooling Operation modes.
- Press the CHECK button on the remote controller for about 1 second with a pointed object to transmit signal to main unit. A beep sound is heard from main unit and the data is cleared.

Temporary Operation (Depending on breakdown status)

- 1. Press the AUTO button (A beep receiving sound) on the main unit to operate the unit. (Remote control will become possible.)
- 2. The unit can temporarily be used until repaired.

17.3. Self Diagnosis Function

- The display screen of wireless remote control unit and the self-diagnosis LEDs (green) on the outdoor printed circuit board in the outdoor unit can be used to identify the location of the problem.
- Refer to the table below to identify and solve the cause of the problem, and then re-start the air conditioner system.
- If the problem is solved and operation returns to normal. LED 1 illuminates and others LED are off.

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
H11	Indoor/outdoor abnormal communication						0	After operation for 1 minute	Indoor fan only operation can start by entering into force cooling operation	Indoor/outdoor communication not establish	 Indoor/outdoor wire terminal Indoor/outdoor PCB Indoor/outdoor connection wire
H12	Indoor unit capacity unmatched					0		90s after power supply	_	Total indoor capability more than maximum limit or less than minimum limit, or number of indoor unit less than two.	 Indoor/outdoor connection wire Indoor/outdoor PCB Specification and combination table in catalogue
H14	Indoor intake air temperature sensor abnormality							Continuous for 5s	_	Indoor intake air temperature sensor open or short circuit	 Indoor intake air temperature sensor lead wire and connector
H15	Compressor temperature sensor abnormality					0	0	Continuous for 5s	_	Compressor temperature sensor open or short circuit	Compressor temperature sensor lead wire and connector
H16	Outdoor current transformer (CT) abnormality				0		0	_	_	Current transformer faulty or compressor faulty	Outdoor PCB faulty or compressor faulty
H19	Indoor fan motor merchanism lock							Continuous happen for 7 times	_	Indoor fan motor lock or feedback abnormal	 Fan motor lead wire and connector Fan motor lock or block
H23	Indoor heat exchanger temperature sensor abnormality							Continuous for 5s	_	Indoor heat exchanger temperature sensor open or short circuit	 Indoor heat exchanger temperature sensor lead wire and connector
H27	Outdoor air temperature sensor abnormality				0	0		Continuous for 5s	_	Outdoor air temperature sensor open or short circuit	Outdoor air temperature sensor lead wire and connector
H28	Outdoor heat exchanger temperature sensor 1 abnormality				0	0	0	Continuous for 5s	_	Outdoor heat exchanger temperature sensor 1 open or short circuit	Outdoor heat exchanger temperature sensor 1 lead wire and connector
H32	Outdoor heat exchanger temperature sensor 2 abnormality			0				Continuous for 5s	_	Outdoor heat exchanger temperature sensor 2 open or short circuit	Outdoor heat exchanger temperature sensor 2 lead wire and connector

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
H33	Indoor / outdoor misconnection abnormality			0			0	_	_	Indoor and outdoor rated voltage different	 Indoor and outdoor units check
H36	Outdoor gas pipe temperature sensor abnormality			0		0		Continuous for 5s	Heating protection operation only	Outdoor gas pipe temperature sensor open or short circuit	Outdoor gas pipe temperature sensor lead wire and connector
H97	Outdoor fan motor mechanism lock			0	0		0	2 times happen within 30 minutes	_	Outdoor fan motor lock or feedback abnormal	 Outdoor fan motor lead wire and connector Fan motor lock or block
H98	Indoor high pressure protection			0	0	0		_	_	Indoor high pressure protection (Heating)	 Check indoor heat exchanger Air filter dirty Air circulation short circuit
H99	Indoor operating unit freeze protection			0	0	0		_	_	Indoor freeze protection (Cooling)	 Check indoor heat exchanger Air filter dirty Air circulation short circuit
F11	4-way valve switching abnormality			0	0	0	0	4 times happen within 30 minutes	_	4-way valve switching abnormal	 4-way valve Lead wire and connector.
F17	Indoor standby units freezing abnormality		0					3 times happen within 40 minutes	_	Wrong wiring and connecting pipe, expansion valve leakage, indoor heat exchanger sensor open circuit	 Check indoor/ outdoor connection wire and pipe Indoor heat exchanger sensor lead wire and connector Expansion valve lead wire and connector.
F90	Power factor correction (PFC) circuit protection		0				0	4 times happen within 10 minutes	_	Power factor correction circuit abnormal	Outdoor PCB faulty
F91	Refrigeration cycle abnormality		0			0		2 times happen within 20 minutes	_	Refrigeration cycle abnormal	 Insufficient refrigerant or valve close
F93	Compressor abnormal revolution		0			0	0	4 times happen within 20 minutes	_	Compressor abnormal revolution	 Power transistor module faulty or compressor lock
F94	Compressor discharge pressure overshoot protection		0		0			4 times happen within 30 minutes	_	Compressor discharge pressure overshoot	Check refrigeration system
F95	Outdoor cooling high pressure protection		0		0		0	4 times happen within 20 minutes	_	Cooling high pressure protection	 Check refrigeration system Outdoor air circuit

Diagnosis display	Abnormality or protection control	LED 6	LED 5	LED 4	LED 3	LED 2	LED 1	Abnormality judgement	Protection operation	Problem	Check location
F96	Power transistor module overheating protection		0		0	0		4 times happen within 30 minutes	_	Power transistor module overheat	 PCB faulty Outdoor air circuit (fan motor)
F97	Compressor overheating protection		0		0	0	0	3 times happen within 30 minutes	—	Compressor overheat	Insufficient refrigerant
F98	Total running current protection		0	0				3 times happen within 20 minutes	_	Total current protection	 Check refrigeration system Power source or compressor lock
F99	Outdoor direct current (DC) peak detection		0	0			0	Continuous happen for 7 times	_	Power transistor module current protection	 Power transistor module faulty or compressor lock

LED 1 illuminate is indicated that outdoor unit is operating normally. If the LED 1 is switched off or flashing, check the power supply and self-diagnosis indication.

● Illuminate
O Flashing
Blank OFF

17.4. Self-diagnosis Method

17.4.1. H11 (Indoor/Outdoor Abnormal Communication)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the data received from outdoor unit in indoor unit signal transmission is checked whether it is normal.

Malfunction Caused

- Faulty indoor unit PCB.
- Faulty outdoor unit PCB.
- · Indoor unit-outdoor unit signal transmission error due to wrong wiring.
- Indoor unit-outdoor unit signal transmission error due to breaking of wire in the connection wires between the indoor and outdoor units.
- Indoor unit-outdoor unit signal transmission error due to disturbed power supply waveform.

When abnormality indication starts again		
Check the indoor-outdoor units' connection wires.	Caution	For safety reason and to prevent component breakdown, always switch off the power before remove and connect the component.
Is there any wiring error?	YES	Correct the indoor-outdoor units connection wires
NO Disconnect terminal 3 wire and measure Vdc between terminal 2 & 3 from the outdoor unit.		
Is the Vdc fluctuate between 20-70Vdc?	NO	Replace outdoor PCB
Reconnect terminal 3 wire and measure Vdc between terminal 2 & 3 from the outdoor unit.		
Is the Vdc fluctuate between 20-50Vdc?	NO	Replace indoor unit PCB.

17.4.2. H12 (Indoor/Outdoor Capacity Rank Mismatched)

Malfunction Decision Conditions

During startup, error code appears when different types of indoor and outdoor units are interconnected.

Malfunction Caused

- Wrong models interconnected.
- Wrong indoor unit or outdoor unit PCBs mounted.
- Indoor unit or outdoor unit PCBs defective.
- Indoor-outdoor unit signal transmission error due to wrong wiring.
- Indoor-outdoor unit signal transmission error due to breaking of wire 3 in the connection wires between the indoor and outdoor units.



17.4.3. H14 (Indoor Intake Air Temperature Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the indoor intake air temperature sensor are used to determine sensor errors.

Malfunction Caused

- · Faulty connector connection.
- · Faulty sensor.
- · Faulty PCB.

Troubleshooting

40 30 20 10 0 -10 0 10 20 30 40 50

Temperature (°C)



17.4.4. H15 (Compressor Temperature Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the outdoor compressor temperature sensor are used to determine sensor errors.

Malfunction Caused

• Faulty connector connection.

Temperature (°C)

- Faulty sensor.
- Faulty PCB.



17.4.5. H16 (Outdoor Current Transformer Open Circuit)

Malfunction Decision Conditions

A current transformer (CT) is detected by checking the compressor running frequency (≥ rated frequency) and CT detected input current (less than 0.65A) for continuously 20 seconds.

Malfunction Caused

- CT defective
- Outdoor PCB defective
- · Compressor defective (low compression)

When abnormality indication starts again			
Turn off the power, check 2/3 way valve.		Caution	For safety reason and to prevent component breakdown, always switch off the power before remove and connect the component.
Is the 2/3 way valve closed?	YES	•Open the	e 2/3 way valve.
Check for gas leakage]		
Oil oozing out from 2/3 way valve?		•Repair th •Reclaim :	e pipe flare or union nuts and recharge refrigerant
Force heating operation and measure the current from the outdoor LIVE terminal.			
Is the current less than 1A?		•Defect in •Replace	CT the outdoor unit PCB
While system running force heating, check the discharge pressure.]		
Is the pressure unchanged (same as when compressor stops)?		•Replace	the outdoor PCB.
NO While system running force heating, check by touching to confirm the compressor for low compression: •Compressor discharge pipe is cold •Compressor body is warm]	•Replace	the compressor.
	•		

17.4.6. H19 (Indoor Fan Motor - DC Motor Mechanism Locked)

Malfunction Decision Conditions

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor (feedback of rotation > 2550rpm or < 50rpm)

Malfunction Caused

- Operation stops due to short circuit inside the fan motor winding.
- Operation stops due to breaking of wire inside the fan motor.
- Operation stops due to breaking of fan motor lead wires.
- Operation stops due to Hall IC malfunction.
- Operation error due to faulty indoor unit PCB.



17.4.7. H23 (Indoor Pipe Temperature Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the indoor heat exchanger temperature sensor are used to determine sensor errors.

Malfunction Caused

- Faulty connector connection.
- · Faulty sensor.
- Faulty PCB.





17.4.8. H27 (Outdoor Air Temperature Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the outdoor air temperature sensor are used to determine sensor errors.

Malfunction Caused

- Faulty connector connection.
- Faulty sensor.
- Faulty PCB.





17.4.9. H28 (Outdoor Pipe Temperature Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the outdoor pipe temperature sensor are used to determine sensor errors.

Malfunction Caused

- Faulty connector connection.
- · Faulty sensor.
- Faulty PCB.



17.4.10. H32 (Outdoor Heat Exchanger Temperature Sensor 2 Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the outdoor heat exchanger temperature sensor are used to determine sensor errors.

Malfunction Caused

- Faulty connector connection.
- Faulty sensor.
- Faulty PCB.



17.4.11. H33 (Unspecified Voltage between Indoor and Outdoor)

Malfunction Decision Conditions

The supply power is detected for its requirement by the indoor/outdoor transmission.

Malfunction Caused

- Wrong models interconnected.
- Wrong indoor unit and outdoor unit PCBs used.
- Indoor unit or outdoor unit PCB defective.



17.4.12. H36 (Outdoor Gas Pipe Sensor Abnormality)

Malfunction Decision Conditions

During startup and operation of cooling and heating, the temperatures detected by the outdoor gas pipe temperature sensor are used to determine sensor errors.

Malfunction Caused

- Faulty connector connection.
- Faulty sensor.
- Faulty PCB.



17.4.13. H97 (Outdoor Fan Motor - DC Motor Mechanism Locked)

Malfunction Decision Conditions

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor.

Malfunction Caused

- Operation stops due to short circuit inside the fan motor winding.
- Operation stops due to breaking of wire inside the fan motor.
- Operation stops due to breaking of fan motor lead wires.
- Operation stops due to Hall IC malfunction.
- Operation error due to faulty outdoor unit PCB.



17.4.14. H98 (Indoor High Pressure Protection)

Error Code will not display (no Timer LED blinking) but store in EEPROM

Malfunction Decision Conditions

During heating operation, the temperature detected by the indoor pipe temperature sensor is above 60°C.

Malfunction Caused

- Air short circuit at indoor unit
- Clogged indoor unit air filter
- · Dust accumulation on the indoor unit heat exchanger
- 2/3 way valve closed
- Faulty indoor unit fan motor
- Excessive refrigerant
- · Clogged expansion valve or strainer
- · Faulty indoor pipe temperature sensor
- · Faulty indoor unit PCB



17.4.15. H99 (Indoor Freeze Prevention Protection: Cooling or Soft Dry)

Error code will not display (no TIMER LED blinking) but store in EEPROM

Malfunction Decision Conditions

Freeze prevention control takes place (when indoor pipe temperature is lower than 2°C)

Malfunction Caused

- Air short circuit at indoor unit
- Clogged indoor unit air filter
- Dust accumulation on the indoor unit heat exchanger
- 2/3 way valve closed
- Faulty indoor unit fan motor
- Refrigerant shortage (refrigerant leakage)
- · Clogged expansion valve or strainer
- Faulty indoor pipe temperature sensor
- Faulty indoor unit PCB



17.4.16. F11 (4-way valve Abnormality)

- **Malfunction Decision Conditions**
- \bullet When heating operation, when indoor pipe temperature is below 10 $^{\circ}\text{C}$
- \bullet When cooling operation, when indoor pipe temperature is above 45°C

Malfunction Caused

- Connector in poor contact
- Faulty sensor
- · Faulty outdoor unit PCB
- 4-way valve defective



17.4.17. F17 (Indoor Standby Units Freezing Abnormality)

Malfunction Decision Conditions

 When the different between indoor intake air temperature and indoor pipe temperature is above 10°C or indoor pipe temperature is below -1.0°C

Remark:

When the indoor standby unit is freezing, the outdoor unit transfers F17 error code to the corresponding indoor unit and H39 to other indoor unit(s).

Malfunction Caused

- Wrong wiring connection
- Faulty sensor
- · Faulty expansion valve



17.4.18. F90 (Power Factor Correction Protection)

Malfunction Decision Conditions

During startup and operation of cooling and heating, when Power Factor Correction (PFC) protection circuitry at the outdoor unit main PCB senses abnormal high DC voltage level.

Malfunction Caused

- DC voltage peak due to power supply surge.
- DC voltage peak due to compressor windings not uniform.
- Faulty outdoor PCB.



17.4.19. F91 (Refrigeration Cycle Abnormality)

Malfunction Caused

- Faulty indoor intake air or pipe temperature sensor
- 2/3 way valve closed
- Refrigerant shortage (refrigerant leakage)
- Clogged expansion valve or strainer
- Faulty outdoor unit
- Poor compression of compressor



17.4.20. F93 (Compressor Rotation Failure)

Malfunction Decision Conditions

A compressor rotation failure is detected by checking the compressor running condition through the position detection circuit.

Malfunction Caused

- Compressor terminal disconnect
- Faulty Outdoor PCB
- Faulty compressor


17.4.21. F95 (Cooling High Pressure Abnormality)

Malfunction Decision Conditions

During operation of cooling, when outdoor unit heat exchanger high temperature data (61°C) is detected by the outdoor pipe temperature sensor.

Malfunction Caused

- Air short circuit at indoor unit
- · Dust accumulation on the indoor unit heat exchanger
- 2/3 way valve closed
- · Faulty outdoor unit fan motor
- · Excessive refrigerant
- Clogged expansion valve or strainer
- Faulty outdoor pipe temperature sensor
- Faulty outdoor unit PCB



17.4.22. F96 (IPM Overheating)

Malfunction Decision Conditions

During operating of cooling and heating, when IPM temperature data (100°C) is detected by the IPM temperature sensor. *Multi Models Only*

- Compressor Overheating: During operation of cooling and heating, when the compressor OL is activated.
- Heat Sink Overheating: During operation of cooling and heating, when heat sink temperature data (90°C) is detected by the heat sink temperature sensor.

Malfunction Caused

- IPM overheats due to short circuit of hot discharge air flow.
- IPM overheats due to defective of outdoor fan motor.
- IPM overheats due to defective of internal circuitry of IPM.
- IPM overheats due to defective IPM temperature sensor.
 - Multi Models Only
 - Compressor OL connector poor contact.
 - Compressor OL faulty.



17.4.23. F97 (Compressor Overheating)

Malfunction Decision Conditions

During operation of cooling and heating, when compressor tank temperature data (112°C) is detected by the compressor tank temperature sensor.

Malfunction Caused

- · Faulty compressor tank temperature sensor
- 2/3 way valve closed
- Refrigerant shortage (refrigerant leakage)
- Faulty outdoor unit PCB
- Faulty compressor



17.4.24. F98 (Input Over Current Detection)

Malfunction Decision Conditions

During operation of cooling and heating, when an input over-current (X value in Total Running Current Control) is detected by checking the input current value being detected by current transforme r (CT) with the compressor running.

Malfunction Caused

- Excessive refrigerant.
- Faulty outdoor unit PCB.



17.4.25. F99 (Output Over Current Detection)

Malfunction Decision Conditions

During operation of cooling and heating, when an output over-current (DC peak current value at IPM Prevention Control) is detected by checking the current that flows in the inverter DC peak sensing circuitry.

Malfunction Caused

- Faulty outdoor unit PCB
- Faulty compressor



- Checking the power transistor
- Never touch any live parts for at least 10 minutes after turning off the circuit breaker.
- If unavoidable necessary to touch a live part, make sure the power transistor's supply voltage is below 50V using the tester.
- For the UVW, make measurement at the Faston terminal on the board of the relay connector.

Tester's negative terminal	Power transistor (+)	UVW	Power transistor (-)	UVW	
Tester's positive terminal	UVW	Power transistor (+)	UVW	Power transistor (-)	
Normal resistance	Several k Ω to several M Ω				
Abnormal resistance	0 or ∞				

18 Disassembly and Assembly Instructions



High voltages are generated in the electrical parts area by the capacitor. Ensure that the capacitor has discharged sufficiently before proceeding with repair work. Failure to heed this caution may result in electric shocks.

18.1. Indoor Electronic Controllers, Cross Flow Fan and Indoor Fan Motor Removal Procedures

18.1.1. To remove front grille





18.1.2. To remove power electronic controller



Remove the control board cover by releasing the 2 hooks.

4. Detach receiver complete and remove the eco patrol complete by screw.



18.1.3. To remove power electronic controller





electronic controller. Then pull out main

controller gently.

Figure 3





11. Detach the AC303 and CN-FM connectors from the electronic controller. Then, pull out power electronic controller gently.

CN-STM1

Figure 5



Figure 6

18.1.5. To remove control board



Figure 7

18.1.6. To remove cross flow fan and indoor fan motor







Figure 9



Figure 11

Reminder: To reinstall the cross flow fan, ensure cross flow fan is in line as

shown in figure 11.

18.2. Outdoor Unit Removal Procedure

Caution! When handling electronic controller, be careful of electrostatic discharge.

18.2.1. Removing the Cabinet Top Plate and Cabinet Front Plate

- 1. Remove the cabinet top plate (by removing the 4 screws).
- 2. Remove the 5 screws fixing the cabinet front plate, release 6 hooks and pull the cabinet front plate toward front side.



18.2.2. Removing the Control Board Cover

- 3. Remove the control board cover (remove 1 screw).
- 4. Remove the terminal cover (remove 2 screws).
- 5. Remove the terminal cover (top) and disconnect all the lead wires (3 fasten tab) inside.



18.2.3. Removing the Control Board

- 6. Remove the control board cover.
- 7. Remove the 6 screws at the positions on the control board indicated by arrows.
- 8. Disconnect the connectors and pipe sensor connected to the compressor and reactor.
- 9. Remove the control board.

When pulling the control board upward, it may not be possible to remove it because of the way in which the ground wire and other wires are routed. In this case, it is removed after the control board cover itself has been removed.



18.2.4. Removing the Propeller Fan and Fan Motor

- 1. Remove the cabinet top plate and cabinet front plate.
- 2. Remove the propeller fan by removing the nut turning clockwise at its center.
- 3. Disconnect the connector of the fan motor from the control board.
- 4. Loosen the 4 screws at the fan motor mounting then remove the fan motor.





19 Technical Data

19.1. Operation Characteristics (CU-2RE15MBE)

19.1.1. One Indoor Unit Operation

19.1.1.1. CS-MRE7MKE

• Cooling Characteristic





19.1.1.2. CS-MRE9MKE

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: High fan speed Piping length: 7.5m Compressor Freq: Fh



19.1.2. Two Indoor Unit Operation

19.1.2.1. CS-MRE7MKE x2

Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT) Operation condition: High fan speed Piping length: 7.5m Compressor Freq: Fc







19.1.2.2. CS-MRE9MKE + CS-MRE7MKE

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: High fan speed Piping length: 7.5m Compressor Freq: Fh



19.2. Operation Characteristics (CU-2RE18MBE)

19.2.1. One Indoor Unit Operation

19.2.1.1. CS-MRE7MKE

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: High fan speed Piping length: 7.5m Compressor Freq: Fh



19.2.1.2. CS-MRE9MKE

Cooling Characteristic







19.2.1.3. CS-MRE12MKE

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: High fan speed Piping length: 7.5m Compressor: Fh



19.2.2. Two Indoor Unit Operation

19.2.2.1. CS-MRE7MKE x2

Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT) Operation condition: High fan speed Piping length: 7.5m Compressor Freq: Fc



[Condition] Room temperature: 20°C (DBT) Operation condition: At high fan Piping length: 7.5m Compressor" Freq Fh



19.2.2.2. CS-MRE9MKE x2

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: At high fan Piping length: 7.5m Compressor" Freq Fh



19.2.2.3. CS-MRE12MKE x2

Cooling Characteristic



[Condition] Room temperature: 20°C (DBT) Operation condition: At high fan Piping length: 7.5m Compressor Freq: Fh



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20 Exploded View and Replacement Parts List

20.1. Indoor Unit



Note

The above exploded view is for the purpose of parts disassembly and replacement. The non-numbered parts are not kept as standard service parts.

REF NO.	PART NAME & DESCRIPTION	QTY	CS-MRE7MKE	CS-MRE9MKE	CS-MRE12MKE	REMARK
1	CHASSY COMPLETE	1	CWD50C1653	←	\leftarrow	
2	FAN MOTOR	1	ARW7628AC	\leftarrow	\leftarrow	0
3	CROSS FLOW FAN COMPLETE	1	CWH02C1076	\leftarrow	\leftarrow	
4	BEARING ASS'Y	1	CWH64K007	\leftarrow	\leftarrow	
5	SCREW - CROSS FLOW FAN	1	CWH551146	\leftarrow	\leftarrow	
6	EVAPORATOR	1	CWB30C2960	CWB30C2755	CWB30C3359	
7	FLARE NUT (LIQUID)	1	CWT251030	\leftarrow	\leftarrow	
8	FLARE NUT (GAS)	1	CWT251031	\leftarrow	\leftarrow	
9	HOLDER SENSOR	1	CWH32143	\leftarrow	\leftarrow	
10	BACK COVER CHASSIS	1	CWD933233	\leftarrow	\leftarrow	
11	CONTROL BOARD CASING	1	CWH102370	\leftarrow	\leftarrow	
12	TERMINAL BOARD COMPLETE	1	CWA28C2357	\leftarrow	\leftarrow	0
13	ELECTRONIC CONTROLLER - MAIN	1	CWA73C5473	CWA73C5474	CWA73C5475	0
14	ELECTRONIC CONTROLLER - POWER	1	CWA746253	\leftarrow	\leftarrow	0
15	ELECTRONIC CONTROLLER - INDICATOR & RECEIVER	1	CWA745300	\leftarrow	\leftarrow	0
16	INDICATOR HOLDER	1	CWD933021	\leftarrow	\leftarrow	
17	SENSOR COMPLETE	1	CWA50C2401	\leftarrow	\leftarrow	0
18	DISCHARGE GRILLE COMPLETE	1	CWE20C3168	\leftarrow	\leftarrow	
19	VERTICAL VANE	11	CWE241287	\leftarrow	\leftarrow	
20	CONNECTING BAR	1	CWE261152	\leftarrow	\leftarrow	
22	CONNECTING BAR	1	CWE261153	\leftarrow	\leftarrow	
24	CONNECTING BAR	1	CWE261154	\leftarrow	\leftarrow	
26	CONNECTING BAR	1	CWE261155	\leftarrow	\leftarrow	
27	A.S.MOTOR, DC SINGLE 12V 300 OHM	1	CWA981264	\leftarrow	\leftarrow	0
28	HORIZONTAL VANE	1	CWE24C1268	\leftarrow	\leftarrow	
29	CAP - DRAIN TRAY	1	CWH521096	\leftarrow	\leftarrow	
30	CONTROL BOARD TOP COVER	1	CWH131350	\leftarrow	\leftarrow	
31	CONTROL BOARD FRONT COVER	1	CWH13C1183	\leftarrow	\leftarrow	
32	REMOTE CONTROL COMPLETE	1	CWA75C3810	\leftarrow	\leftarrow	0
33	FRONT GRILLE COMPLETE	1	CWE11C4915	\leftarrow	\leftarrow	0
34	INTAKE GRILLE COMPLETE	1	CWE22C1508	\leftarrow	\leftarrow	
35	GRILLE DOOR	1	CWE14C1029	\leftarrow	\leftarrow	
37	AIR FILTER	2	CWD001279	\leftarrow	\leftarrow	0
39	SCREW - FRONT GRILLE	2	XTT4+16CFJ	\leftarrow	\leftarrow	
40	CAP - FRONT GRILLE	2	CWH521194	\leftarrow	\leftarrow	
41	DRAIN HOSE	1	CWH851173	\leftarrow	\leftarrow	Ì
42	BAG COMPLETE - INSTALLATION SCREW	1	CWH82C1705	\leftarrow	\leftarrow	Ì
43	INSTALLATION PLATE	1	CWH361097	\leftarrow	\leftarrow	Ì
44	FULCRUM	1	CWH621102	\leftarrow	\leftarrow	Ì
45	SUPER ALLERU BUSTER FILTER	1	CWD00C1263	\leftarrow	\leftarrow	0

(NOTE)

All parts are supplied from PHAAM, Malaysia (Vendor Code: 00029488).
"O" marked parts are recommended to be kept in stock.

20.2. Outdoor Unit



Note

The above exploded view is for the purpose of parts disassembly and replacement. The non-numbered parts are not kept as standard service parts.

REF NO.	DESCRIPTION & NAME	Q'TY	CU-2RE15MBE	CU-2RE18MBE	REMARK
1	CHASSY ASSY	1	CWD50K2058	←	
2	FAN MOTOR BRACKET	1	CWD541089	\leftarrow	
2a	SCREW - FAN MOTOR BRACKET	2	CWH551217	\leftarrow	
3	FAN MOTOR, AC 50W SINGLE	1	CWA981072	\leftarrow	0
3a	SCREW - FAN MOTOR MOUNT	4	CWH551016J	\leftarrow	
4	PROPELLER FAN	1	CWH03K1013	\leftarrow	
5	NUT - PROPELLER FAN	1	CWH561034J	\leftarrow	
6	COMPRESSOR	1	5CS102XFC	\leftarrow	0
7	ANTI - VIBRATION BUSHING	3	CWH501022	\leftarrow	
8	NUT - COMPRESSOR	3	CWH56000J	\leftarrow	
9	SOUND PROOF MATERIAL	1	CWG302138	\leftarrow	
10	SOUND PROOF MATERIAL	1	CWG302139	\leftarrow	
13	CONDENSER COMPLETE	1	CWB32C1816	\leftarrow	
14	TUBE ASS'Y (CAPPILLARY TUBE)	1	CWT01C5548	\leftarrow	
15	RECEIVER	2	CWB14013	\leftarrow	
16	TUBE ASS'Y (CAPI TUBE, MUFLER, EXP VALVE)	1	CWT01C5550	\leftarrow	
17	TUBE ASS'Y (CAPI TUBE, MUFLER, EXP VALVE)	1	CWT01C5551	\leftarrow	
18	DISCHARGE MUFFLER	2	CWB121002	\leftarrow	
19	EXPANSION VALVE	2	CWB051029	\leftarrow	0
20	4 - WAYS VALVE	1	CWB001027J	\leftarrow	0
21	STRAINER	1	CWB111004	\leftarrow	
24	V-COIL COMPLETE	1	CWA43C2433	←	0
25	V-COIL COMPLETE	1	CWA43C2434	←	0
26	V-COIL COMPLETE	1	CWA43C2212	←	0
27	SOUND - PROOF BOARD	1	CWH151032	←	
28	HOLDER - SENSOR	1	CWMH320001	←	
29	SENSOR - COMPLETE	1	CWA50C2088	←	0
30	HOLDER - SENSOR	3	CWH32138	←	
31	SENSOR - COMPLETE	1	CWA50C2089	←	0
32	SENSOR - COMPLETE	1	CWA50C2090	←	0
33	HOLDER - SENSOR	2	CWH32074	←	
34	SENSOR - COMPLETE	1	CWA50C2097	\leftarrow	0
35	NORMAL - MODE LINE CHOKE COILS	1	G0A193M00001	\leftarrow	0
36	ELECTRONIC CONTROLLER	1	CWA73C5423R	CWA73C5424R	0
37	TERMINAL BOARD ASS'Y	1	CWA28K1162	\leftarrow	0
38	TERMINAL BOARD ASS'Y	2	CWA28K1161	\leftarrow	0
39	FUSE	1	XBA2C50TR0	←	0
40	CONTROL BOARD COVER	1	CWH131116	\leftarrow	
41	TERMINAL COVER	1	CWH171001	\leftarrow	
42	RUBBER GASKET	1	CWH7070603	\leftarrow	
43	3-WAY VALVE (LIQUID)	2	CWB011418	\leftarrow	0
44	3-WAY VALVE (GAS)	2	CWB011081J	\leftarrow	0
45	HOLDER COUPLING	1	CWH351018	\leftarrow	
46	NUT - TERMINAL COVER	1	CWH7080300J	\leftarrow	
47	CABINET TOP PLATE	1	CWE031014A	\leftarrow	
48	CABINET FRONT PLATE CO.	1	CWE06C1136	\leftarrow	
49	CABINET SIDE PLATE COMP	1	CWE04C1208	←	
50	CABINET SIDE PLATE	1	CWE041456A	←	
51	CONTROL BOARD COVER COMPLETE	1	CWH13C1073	←	
52	HANDLE	1	CWE161010	<i>←</i>	
53	WIRE NET	1	CWD041111A	←	
54	T - SHAPED TUBE COMPLETE	1	CWT20C022	←	
55	OPERATING INSTRUCTION	1	CWF567913	←	
56	OPERATING INSTRUCTION	1	CWF567914	\leftarrow	1

REF NO.	DESCRIPTION & NAME	Q'TY	CU-2RE15MBE	CU-2RE18MBE	REMARK
57	INSTALLATION INSTRUCTION	1	CWF614740	\leftarrow	
58	INSTALLATION INSTRUCTION	1	CWF614741	\leftarrow	
59	INSTALLATION INSTRUCTION	1	CWF614742	\leftarrow	
60	INSTALLATION INSTRUCTION	1	CWF614743	\leftarrow	
61	INSTALLATION INSTRUCTION	1	CWF614744	\leftarrow	
62	INSTALLATION INSTRUCTION	1	CWF614745	\leftarrow	
63	INSTALLATION INSTRUCTION	1	CWF614746	\leftarrow	
64	INSTALLATION INSTRUCTION	1	CWF614747	\leftarrow	
65	INSTALLATION INSTRUCTION	1	CWF614748	\leftarrow	

(NOTE)

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