Service Manua Multi Air Conditioner



CS-ME7EB1E CS-ME10EB1E CS-ME12EB1E CS-ME14EB1E



Please file and use this manual together with the service manual for Model No. CU-3E23CBPG, CU-4E27CBPG, Order No. RAC0209005C2 and CU-3E18EBE, Order No. RAC0503011C2.

🗥 WARNING

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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Operating instructions of this product can be referred at following Web site. http://phaam.panasonic.com.my

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:

• Carry out test running 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.	Engage dealer or specialist for installation and servicing. If installation or servicing done by the user is defective, it will cause wa electrical shock or fire.	ter leakage,
2.	Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or	fire.
3.	Use the attached accessories parts and specified parts for installation and servicing. Otherwise, it will cause the set to fall, wa fire or electrical shock.	ter leakage,
4.	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 done, the set will drop and cause injury.	not properly
5.	For electrical work, follow the local national wiring standard, regulation and the installation instruction. An independent circui outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or	t and single fire.
6.	Use the specified cable and connect tightly for indoor/outdoor connection. Connect tightly and clamp the cable so that no extern be acted on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.	nal force will
7.	Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, heat-up at connection point of terminal, fire or electrical shock.	it will cause
8.	When connecting the piping, do not allow air or any substances other than the specified refrigerant to enter the refrigeration cycle. Otherwise, this may lower the capacity, cause abnormally high pressure in the refrigeration cycle, and possibly result in explosion and injury.	\bigcirc
9.	Thickness of copper pipes used must be more than 0.8 mm. Never use copper pipes thinner than 0.8 mm.	\bigcirc
10.	It is desirable that the amount of residual oil is less than 40 mg/10 m.	\bigcirc
11.	Do not modify the length of the power supply cord or use of the extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock.	\bigcirc





2 Features

· Product

- A single OUTDOOR unit enables air conditioning of up to four separate rooms

Ти	pe	C	ass	sette	e			Pip	be leng	gth	
$ \rangle$	/	2.2 kW	2.8 kW	3.2 kW	4.0 kW		E	uo	0	for ngth	unt gth
OUT UNIT OUT UNIT		CS-ME7EB1E	S-ME10EB1E	CS-ME12EB1E	S-ME14EB1E	Capacity range of connectable indoor units	1-room maximu pipe length	Allowable elevati	Total allowable pipe length	Total pipe length maximum chargeless le	Additional gas amor over chargeless len
	3	0	0	0	0		m	m	m	m	g/m
	Α	0	0	0	0						
CU-3E18EBE	в	0	O	0	0	From 5.0 to 9.0 kW	25	15	50	30	20
	С	0	0	0	0						
	A	0	0	0	Ô						
CU-3E23CBPG	в	Ô	0	0	0	From 5.0 to 10.0 kW	25	15	50	30	20
	C	0	0	Ô	Ô						
	Α	0	0	0	\odot						
	в	0	Ô	0	0	From 5.0 to 13.6 kW	25	15	70	40	20
CU-4EZ/CBPG	С	0	0	0	0	FI011 3.0 10 13.0 KW	23	13			
	D	0	0	0	0						

Remarks:

- 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 outdoor unit. (Shown in the above table)
 - Example: The below indoor units combination is not possible to connect CU-3E23CBPG. (Total nominal capacity of indoor unit is between 5.0kW and 10.0kW)
 - 1) Two CS-ME7EB1E only. (Total nominal cooling capacity is 4.4kW)
 - 2) Three CS-ME14EB1E only. (Total nominal cooling capacity is 12.0kW)
- Inverter controlled for High energy efficiency and optimal comfort
- New refrigerant R410A is used for protecting ozone layer
- Lead free P.C. Board
- · Serviceability
 - Self diagnosis
 - Test Run at both Cooling and Heating rated frequency

· Built-in drain pump

- A drain pump is built in.

The pipe can rise to 200 mm above the drain outlet.



3 Functions

3.1. REMOTE CONTROL



3.2. INDOOR UNIT



HEA	TING OPERATION	COOLING
	Cold Draft Prevention Control	Deode
	Hot Start	Fog P
	Intake Air Temperature Control	Dew F

COOLING / SOFT DRY OPERATION

Deodorizing Control

Fog Prevention Control

- Dew Prevention Control

Freeze Prevention Control

- Drain Pump Control 🛛 💥

AUTOMATIC OPERATION

FAN OPERATION

4 Product Specifications

		Model		CS-ME7EB1E CS-ME10EB1E CS-ME12EB1E CS-ME14EB1 Cassette Type									
Item					Casset	te Type							
Power Source					Outdoor power (s	ingle 230V 50Hz)							
Air Volume		Cooling	m ³ /min.	9	.1	9.6	9.5						
		Heating	m ³ /min.	10	.1	10.9	9.8						
Noise Level		Cooling (Power)	dB(A)	Hi:4	0(53) 2(45)	Hi:41(54)	Hi:42(56)						
		Heating (Power)	dB(A) (dB)	Hi:4 Lo:3	2(55) 2(45)	Hi:42(56) Lo:32(45)	Hi:44(57) Lo:34(47)						
Moisture Removal			L/h	1.3	1.6	1.8	2.3						
Refrigeration	Connection	Liquid	mm		6.35 (1/4") Flare	to the main unit							
piping		Gas	mm		9.52 (3/8") Flare to the main unit								
	Type of pipe				CZ-3F								
Type of Indoor/O	utdoor connect	ing cable	mm	4 x 1.5 mm^2 flexible cord, type designation 245 IEC 57 (H05RN-F									
Drain opening			mm		VP	20							
Dimensions			mm		Height 185 x Widt	h 770 x Depth 360							
Net Weight			kg		9.8		10.5						
Fan	Туре				Cross-f	low fan							
	Motor	Туре			DC brushless moto	or (ARW50A8P30AC)							
		Output	w		4P 25W 4	OV A98258							
Heat exchanger					Plate fin f	orced-draft							
Adjustments		Switches		Wireless remote control									
		Timer		Timer with ON and OFF times programmable									
		Temperature			Electronic	thermostat							
Air filter					PP hon	eycomb							

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

Rating Conditions

	Cooling	Heating
Inside air temperature	27°C DB / 19°C WB	20°C DB
Outside air temperature	35°C DB / 24°C WB	7°C DB / 6°C WB

5 Dimensions

5.1. Cassette Type





5.2. Grille



6 Refrigeration Cycle Diagram



Ту	ne	C	ass	sette	Э			Pip	e leng	gth	
$\langle \rangle \sim$	~ _	2.2 kW	2.8 kW	3.2 kW	4.0 kW		E	on	e	for ngth	unt igth
OUT UNIT	BLEDR	CS-ME7EB1E	CS-ME10EB1E	CS-ME12EB1E	CS-ME14EB1E	Capacity range of connectable indoor units	1-room maximu pipe length	Allowable elevati	Total allowable pipe length	Total pipe length maximum chargeless le	Additional gas amo over chargeless len
	釟))		m	m	m	m	g/m
	Α	Ô	Ô	0	0						
CU-3E18EBE	В	0	0	0	0	From 5.0 to 9.0 kW	25	15	50	30	20
	С	0	0	0	Ô						
	Α	0	0	0	0						
CU-3E23CBPG	В	0	0	0	0	From 5.0 to 10.0 kW	25	15	50	30	20
	С	0	0	0	Ô						
	Α	0	0	0	0						
	В	0	٥	0	0	From 5 0 to 13 6 kW	25	15	70	40	20
CU-4EZ/CBPG	С	0	0	0	From 5.0 to 13.6 kW 25 15					0	20
	D	0	0	0	0						

7 Block Diagram

CS-ME7EB1E/ME10EB1E/ME12EB1E/ME14EB1E



8 Wiring Diagram



9 Electronic Circuit Diagram

CS-ME7EB1E CS-ME10EB1E CS-ME12EB1E CS-ME14EB1E



Printed Circuit Board



10 Operation Details (Functions & Protection)

10.1. Simultaneous Operation Control

- 1. Operation modes which can be selected using the remote control unit: Automatic, Cooling, Soft Dry, Heating, Fan operation mode.
- 2. Types of operations modes which can be performed simultaneously
 - · Cooling operation and cooling, Dry or fan operation
 - · Heating operation and heating operation

3. Types of operation modes which cannot be performed simultaneously

· While a cooling operation is in progress, a heating operation cannot be performed by an indoor unit in another room.

In the room where the operation button for cooling was pressed first, the operation is continued. In the room where the operation button for heating was pressed afterward, the operation lamp of the indoor unit blinks, where the attempt is made to establish the heating operation. Its fan is stopped, and the air does not discharged.

• While a heating operation is in progress, a cooling operation cannot be performed by an indoor unit in another room.

In the room where the operation button for heating was pressed first, operation is continued. In the room where the operation button for cooling was pressed afterward, the operation lamp of the indoor unit blinks, where the attempt is made to establish the cooling operation. Its fan is stopped, and the air does not discharged.

4. Operation mode priority control

- The operation mode designated first by the indoor unit has priority.
- If the priority indoor unit stops operation or initiates the fan operation, the priority is transferred to other indoor units.

"**Waiting**" denotes the standby status in which the operation lamp LED blinks (ON for 2.5 sec. and OFF for 0.5 sec.), and the fan is stopped.



* In the fan mode, priority is transferred to a non-priority unit. **Note**

- C: Cooling operation mode
- D: Soft Dry operation mode
- H: Heating operation mode
- F: Fan operation mode

(4)

(5)

10.2. Airflow Direction Control

The following shows how louver operation changes depending on the direction set with the AIR SWING button and other operating conditions.

Cooling and Dry



 \cdot The louver stops at the CLOSE position when the power switch or breaker is ON.

- \cdot The louver stops at their current position when the power switch or breaker is OFF.
- · Move the horizontal airflow direction control louver manually.

Fixed

Fixed

76

34

Zone b

Zone c

Powerful

10.3. Indoor Fan Control

- · The following shows how fan speed changes depending on the setting made with the FAN SPEED button and other operating conditions.
- \cdot Actual fan speed may differ from that you set with remote control.

	« CS	S-ME7	'EB1	E》																								
Rot	ation Speed (rpm)	Stop	~	500	~	820	~	880	~	920	~	960	~	1020	~	1100	~	1180	~	1260	~	1350	~	1400	~	1490	Remarks	Remarks
	Manual							SSLo		SLo		Lo-		Low		● Me-		Me		● Me+		Hi		SHi		PSHi	L Remote control settings	L ☐ Remote control settings
ng	Auto	0						0						© *1		© *2	0	~	0								⊣ ※1 When difference	≫ 1 When difference
Cool	Powerful	0														© *1		© *2	۵	~	٢						temperature and	temperature and
	Quiet	0										© *1		© *2	0	~	0										temperature is +0.5°C and below	temperature is +0.5°C and below
λι	Manual	0						SSLo		SLo		Lo-		Low		e Ma-	Ī	Me				Hi		SHi		PSHi	% 2 When difference	×2 When difference
Soft [Auto	0								0				©	-	©	0	~	0		-						between intake air temperature	between intake air temperature
Rot	ation Speed	Stop	~	500	~	820	~	980	~	~	~	1020	~	~	~	1140	~	1260	~	1380	~	1500	~	1550	~	1600	and internal set temperature is	and internal set temperature is
	Manual			SSLo		SLo						Γ _{Low}				•	┝╹	Me	-		-	Hi	7	SSHi		PSHi	- +1.5℃ and below.	+1.5°C and below
ng	Auto	0		0		0		0				<u>∟ </u>	0	0	0	 ©	0	0	0	<u></u>	0		+-				When difference	When difference
Heat	Powerful	0												0	0	0	0	0	0	0	0	0	0				air temperature	air temperature and internal set
	Quiet	0									0	0	0	0	0	0	0	0	0	0	-		-				temperature is +1.5°C and above.	temperature is +1.5°C and above
0																												
Rot	CS ation Speed	S-ME1	0EE ~	500	~	820	~	880	~	920	~	960	~	1020	~	1180	~	1250	~	1320	~	1400	~	1450	~	1500	Remarks	Remarks
	Manual							SSLo		SLo		Lo-		Low			┝╼	Me				Hi !		SHi		PSHi	Remote control	Remote control
ß	Auto	0						0						©	-	©	0	~	0	e+	-						- ≫ 1 When difference	※1 When difference
ool ii	Powerful	0						-	\square					<u></u> %1		*2 : ©	ŧ	Ø	Ô	~	0		\vdash				between intake air temperature and	between intake air temperature and
0	Quiet	0										0		0	0	~	0	<u>*2</u>				:	-				internal set temperature is	internal set temperature is
2	Manual	0						SSLo		SLo		Lo-		Low	<u></u>	۲		Me	-			Hi !		SHi		PSHi	*0.5 C and below. %2 When difference	+0.5 C and below. 2 When difference
Soft D	Auto	0								0				©	-	<u>0</u>	0	~	0	<u>e</u> +	-						between intake	between intake
Rot	ation Speed	Stop	~	500	~	820	~	1090	~	~	~	1170	~	×1 ∼	~	*2 : 1220	 ~	1250	~	1330	~	1500	~	1550	~	1600	and internal set temperature is	and internal set temperature is
	(rpm) Manual			SSLo		SLo									┝╶		╞╴	Me	╞╌		-	Hi	<u> </u> -	SSHi		PSHi	+1.5°C and below.	+1.5°C and below
gu	Auto	0		0		0		0				<u> </u>	0	0	0	 ©	0	0	0	<u></u>	0	<u> </u>	+1				When difference	·····
Heat	D ()	0							\vdash				-	6	6	0	0	6	6	6	6	0	0				air temperature	when difference
	Powertui																_										and internal set	when difference between intake air temperature and internal set
	Quiet	0	Quiet O O O O O O Image: Constraint of the program													0	0	0	0	0		-			\vdash		temperature is +1.5°C and above.	when difference between intake air temperature and internal set temperature is +1.5°C and above
Ø	Quiet fan speed	O is s	et a	utoma	tica	a y	* 1	. O i	n Co	polin	© g in	© dicat	© .es t	© that t	© an	©	© and	© deoc	© lor i:	© zing a	are	contr	rolle	ed tog	geth	er.	and internal set temperature is +1.5°C and above.	the difference between intake air temperature and internal set temperature is +1.5°C and above

« CS-ME12EB1E »

Rot	ation Speed (rpm)	Stop	~	500	~	880	~	920	~	960	~	1050	~	1200	~	1300	~	1400	~	1500	~	1550	~	1600	Remarks
	Manua					SSLo		SLo		Lo-		Low				Me		● Me+		Hi		SHi		PSHi	Remote control settings
ing	Auto	0				0						©*		© *2	٢	~	۲								%1 When difference between
Cool	Powerful	0												© %1		© *2	٢	~	۲						intake air temperature and internal set
	Quiet	0								© *1		© *2	0	~	0										below.
Dy	Manua	Ø				SSLo		SLo		Lo-		Low				Me		● Me+		Hi		SHi		PSHi	₩2 When difference between
Soft	Auto	0						0				©.		© *2	۲	~	۲								and internal set
Rot	ation Speed (rpm)	Stop	~	500	~	920	~	1170	~	1230	~	2	~	1340	~	1460	~	1580	~	1700	~	1750	~	1800	below.
	Manual			SSLo		SLo		Lo-		Low						Me		Me+		Hi	ī	SSHi		PSHi	When difference between
ting	Auto	0		0		0				O	0	Ø	O	Ø	0	O	0	0	0						intake air temperature
Hea	Powerful	0										Ø	O	Ø	0	0	0	0	0	0	O				temperature is +1.5°C and above.
	Quiet	0							0	Ø	O	Ø	0	0	٢	0	0	0							
0	fan speed is set automatically * 1. O in Cooling indicates that fan speed and deodorizing are controlled together. * 2. O in Heating indicates that fan speed, hot start and cold draft prevention are controlled together.																								

« CS-ME14EB1E »

Rot	ation Speed (rpm)	Stop	~	500	~	900	~	950	~	1000	~	1080	~	1200	~	1300	~	1400	~	1500	~	1550	~	1600	Remarks
	Manua					SSLo		SLo		Lo-		Low		• <u>H</u> e-		Me		Me+		Hi		SHi		PSHi	【☐ Remote control settings
ing	Auto	0				0						© *1		© *2	0	~	0								%1 When difference between
Cool	Powerful	0												© *1		© *2	٢	~	٢						intake air temperature and internal set
	Quiet	0								© *1		© *2	٢	~	٢										below.
Dry	Manual	Ø				SSLo		SLo		Lo-		Low		• <u>H</u> e-		Me		Me+		Hi		SHi		PSHi	₩2 When difference between
Soft	Auto	0						0				© *1		© *2	۲	~	0								and internal set
Rot	ation Speed (rpm)	Stop	~	500	~	920	~	1170	~	1230	~	~	~	1340	~	1460	~	1580	~	1700	~	1750	~	1800	below.
	Manual			SSLo		SLo		Lo-		Low				He-		Me		Me+		Hi]	SSHi		PSHi	
ting	Auto	0		0		0				Ø	0	0	0	Ø	Ø	Ø	0	Ø	0						intake air temperature
Hea	Powerful	0										0	O	Ø	O	Ø	0	Ø	0	0	0				temperature is +1.5°C and above.
	Quiet	0							0	Ø	0	0	O	Ø	0	Ø	0	Ø							
0	fan speed	is se	et a	utoma	tica	ally	* 1 * 2	. O ir . O ir	n Co n He	oling ating	ind ind	licate licate	s t∤ s t∤	nat fa nat fa	n sp n sp	beed a beed,	and hot	deodo stari	rizi tan	ng ar d col	e co d dr	ntrol aft p	led revo	toget ention	her. are controlled together.

Remarks

【☐ Remote control settir

When difference betweer intake air temperature and internal set temperature is +0.5°C ϵ below. % 2 When difference betweer intake air temperature and internal set temperature is +1.5°C ε below.

()

When difference betweer intake air temperature and internal set temperature is +1.5°C & above.

Remarks

【☐ Remote control settir % 1 When difference betweer intake air temperature and internal set temperature is +0.5°C ε below.

%2 When difference betweer intake air temperature and internal set temperature is +1.5°C ε below.

()

When difference betweer intake air temperature and internal set temperature is +1.5°C ϵ above.

10.4. Drain Pump Control

Basic operation

• The drain pump starts 50 seconds after the indoor unit starts or the thermostat comes on (i.e., 10 seconds after the fan motor starts).

The drain pump stops 30 seconds after the indoor unit stops or the thermostat turns off.

• The drain pump repeats a cycle of on for 30 seconds then off for between 50 and 90 seconds as long as the unit is operating. Operation while the unit is off is determined by the difference between the temperature setting and the room temperature.



Float switch operation

• When the float switch turns on for 10 seconds continuously, the thermostat of the indoor unit turns off and the drain pump operates continuously.

• When the float switch stays on for 150 seconds continuously, the drain pump and indoor unit stop and the timer lamp flashes indicating an H21 error.

10.5. Auto Restart Control

• if there is a power failure, operation will automatically be restarted when the power is resumed. It will start with the previous operation mode and airflow direction. (Time Delay Safety Control is valid)

1. Control start conditions

<1> The 24-hour timer must not be set.

<2> The sleep timer must not be set.

Auto restart control is not available when timer or sleep mode is set.

2. Description of control

<1> In the case of manual operation, the operation mode, temperature setting, fan speed and airflow direction before the power is turned off are restored.

<2> In the case of automatic operation, after the power is restored operation starts with the determination of the mode.

<3> While the air conditioner odour clear timer has been set, the setting is cancelled, and operation is transferred to the mode before the power is turned off.

<4> While the air conditioner odour clear operation (with timer / without timer setting) are being performed, both of these operations are completed, and operation is transferred to the operation mode prior to these operations.

Example: When the power is turned off during an outdoor unit cooling operation



10.6. Other Indoor Unit Operation Functions

10.6.1. Auto button

Proceed with operation when the air conditioner is stopped. (When the auto button is pressed during operation, the air conditioner is stopped.)



1. Emergency operation

Press the auto button and release it within 5 seconds to perform emergency operation.

Under normal condition (failure is not occurred) automatic operation is performed. In the event of a failure that still enables operation to be performed, emergency operation is performed.

2. Forced cooling operation

Keep pressing the auto button until one beep sounds to perform the automatic cooling operation.

The air conditioner does not operate for 2 minutes if the room temperature is low (intake temperature below 16 °C) so just wait. The forced operation is performed after the 2 minutes have elapsed.

3. Forced heating operation

First press the auto button until one beep sounds, and then set it to OFF.Now press the auto button until two beeps sound to perform the automatic heating operation.

4. Select Remote Control Transmission Code

- 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 more indoor unit installed nearby together.
- To change remote control transmission code, short or open jumpers at the remote control printed circuit board.

Remote Control Printed Circuit Board	Transmission Code Combination			
	J - A	J - B	Remote Control No.	
J-B	Short	Open	A (Default)	
	Open	Open	В	
	Short	Short	С	
	Open	Short	D	

10.6.2. Drain Test

When installing the unit and you want the drain pump to operate independently, press the DRAIN TEST switch to operate it for about 5 minutes.



10.6.3. Self Diagnosis display

10.6.3.1. BreakDown Self Diagnosis Function (Three Digits Alphanumeric Code)

- Once abnormality has been detected during operation, the unit will immediately stop its operation. (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, error code is not displayed. The last error code (abnormality) will be saved in IC memory.

· Timer LED Blinking in Abnormal Operation:

- 1. Automatically stops the operation.
- 2. Timer LED on display of the indoor unit blinks.
- 3. The LED will be off if the unit is turned off or the Error RESET button on the remote controller is pressed.

· To display memorized error (Protective operation) status:

- 1. Turn the unit on.
- 2. Press the CHECK button on the remote controller for continuously 5 seconds or more with a pointed object to appear "--" on the display.
- 3. Press the "TIMER" or button on the remote controller to appear "H00" on the display. Signal is transmitted to the main unit.
- 4. Press the "TIMER" button (When the vector button is pressed, the display goes back.) repeatedly and slowly until Beeps sound (about 5 seconds intermittently) is heard from main unit.
- 5. Then, displayed error code matches to the error code saved in unit memory. The power LED on the main unit also lights up.

Note: When the CHECK button is pressed continuously for 5 seconds again, or when no operation continues for 30 seconds, or when the RESET button on remote controller is pressed with a pointed object, the display is cancelled.

- To clear memorized error (Protective operation) status after repair:
 - 1. Press the AUTO button in main unit continuously for 5seconds or more and release it. (Test run / Pump downoperation: Beep sound)
 - Press the CHECK button on 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 breakdownstatus)

- 1. Press the ON/OFF button after selecting Cooling or Heating operation. (Receiving Beep sound is heard andthe TIMER LED blinks.)
- 2. The unit can temporarily be used until repaired.



10.6.3.2. Error Code

Symbol	Diagnosis	Diagnosis method		
H11	Indoor / Outdoor abnormal	This error occurs when indoor/outdoor unit communication fails to be established after 30 seconds or more. <diagnosis checkpoint=""></diagnosis>		
	communication	 Measure the voltage of the indoor/outdoor unit communication cables, and check whether the voltage is being supplied properly to the outdoor unit or whether it is being returned from the outdoor unit to the indoor units. 		
H12	Indoor unit capacity unmatched	 This error occurs when wrong in the total connection capacity and wrong connection in each capacity. The error is determined within 2 minutes after the power is turned on. > > Check the total capacity of the units connected and check that the models are compatible for connection. 		
H14	Intake air temp. sensor	 This error occurs when the intake air temperature has exceeded above 46°C continuously for 2 minutes or dropped below -54°C continuously for 5 seconds during operation. <diagnosis checkpoint=""></diagnosis> 1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected. Check the sensor, and if open-circulating (more than 500k ohms) or short-circulating (less than 6.5k ohms) 		
H16	Outdoor Current Transformer	Is not found, defective contact of the connector is possible. When the total current has dropped below the set current level continuously for 20 seconds during operation beyond the set capacity, operation is stopped. Three minutes later, operation is started up again, and when the trouble occurs on 4 successive occasions, the error occurs (the timer lamp blinks). <diagnosis checkpoint=""></diagnosis>		
		 Check the refrigerating cycle: Gas may be leaking (the amount of refrigerant is extremely low). Check the control P.C. Board: Check for a broken wire (open-circuit) in the current transformer. (If open-circuit is found, replace the control P.C. Board). 		
		In the case of a scroll compressor (DC motor), H16 is detected only when the regular compressor is operating.		
H19	Indoor fan motor mechanism lock	High-voltage PWM: When a state in which the fan motor speed is not synchronized with the control signal has been detected on 7 successive occasions:		
		Low-voltage PAM: When the fan lock detection signal has been detected on 7 successive occasions or it has been detected continuously for 25 seconds or when a state in which the fan motor speed is not synchronized with the control signal has been detected on 7 successive occasions:		
		The error occurs (the timer lamp blinks).		
		Original States and States an		
		Check for disconnections of the fan motor connectors and for defects in contact, in the fan motor and in the control P.C. Board.		
H21	Indoor float switch abnormality	Error occurs when the float switch is open for 150 seconds. > Diagnosis checkpoint> 1. Drain blockage		
		2. Check the conductivity of float switch.		
H23	Indoor heat exchanger temp. sensor	This error occurs when a temperature of under approximately -40°C or above approximately 80°C has been detected by the heat exchanger temperature sensor continuously for 5 seconds. (This error is not detected during de-icing.)		
		1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.		
	-	Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 2.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.		
H27	Outdoor air temp. sensor	 This error occurs when a temperature of under approximately -40°C or above approximately 150°C has been detected by the outdoor air temperature sensor for 2 to 5 seconds. (This error is not detected during de-icing.) <diagnosis checkpoint=""></diagnosis> 1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected. 		
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.		
H28	Outdoor heat exchanger temp. sensor 1	This error occurs when a temperature of under approximately -60°C or above approximately 110°C has been detected by the heat exchanger temperature sensor for 2 to 5 seconds. (This error is not detected during de- icing.) 		
		detected.		
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.		

Symbol	Diagnosis	Diagnosis method
H30	Outdoor discharge pipe temp. sensor	Disconnected discharge sensor When the condensation temperature is higher than the discharge temperature + (plus) 6°C, a sensor disconnection is detected, operation stops, and the error occurs (the timer lamp blinks).
		<diagnosis checkpoint=""> This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected. </diagnosis>
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.
H32	Outdoor heat exchanger temp. sensor 2	This error occurs when a temperature of under approximately -60°C or over approximately 110°C has been detected continuously for 2 to 5 seconds by the outlet temperature sensor of the heat exchanger.
	(discharge pipe temp.)	1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.
H34	Outdoor heatsink temp. sensor	This error occurs when a temperature of under -43°C or above 80°C has been detected by the outdoor unit radiator fin sensor continuously for 2 seconds. <diagnosis checkpoint=""></diagnosis>
		1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.
H35	Drainage or drain pump abnormality	This error occurs if the float switch is open three times for 10 seconds or more during a twenty-minute period. Diagnosis checkpoint> 1. Drain blockage
		2. Check the conductivity of float switch.
		3. Check that the resistance of the drain motor is about 200 ohms.
H36	Outdoor gas pipe temp. sensor	This error occurs when a temperature of under -45°C or above approximately 149°C has been detected by the outdoor unit gas side pipe temperature sensor continuously for 2 to 5 seconds. <diagnosis checkpoint=""></diagnosis>
		detected.
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.
H37	Outdoor liquid pipe temp. sensor	This error occurs when a temperature of under -45°C or above 149°C has been detected by the outdoor unit liquid side pipe temperature sensor continuously for 2 seconds. A Trans creater and the provided and the provi
		detected.
		Check the sensor, and if open-circuit (more than 500k ohms) or short-circuit (less than 0.5k ohms) is not found, defective contact of the connector or a defective control P.C. Board is possible.
H39	Abnormal indoor operating unit or standby units	This error occurs in rooms other than one in which indoor freezing error has occurred when the pipes have been connected incorrectly, when an outdoor expansion valve is defective or when an expansion valve connector has become disconnected.
H97	Outdoor fan motor mechanism lock	When the fan motor speed detected when its maximum output is demanded is below 30 rpm. continuously for 15 seconds, the fan motor stops for 3 minutes and then restarted.
		 When this happens on 16 occasions (the error is cleared when the value is normal for 5 minutes), the H97 diagnostic symbol is stored in the memory, and the fan motor stops. <diagnosis checkpoint=""> Check the nature of the fan lockup error. </diagnosis>
		Check for disconnections of the fan motor connectors and for defects in contact, in the fan motor and in the control P.C. Board.
H98	Indoor high pressure protection	The restriction on the compressor frequency is started when the temperature of the indoor unit heat exchanger source is between 50°C and 52°C, the compressor stops at a temperature from 62°C to 65°C, it is restarted 3 minutes later at below 62°C to 65°C, and the restriction on the compressor frequency is released at a temperature between 48°C and 50°C. (No error occurs.)
		Sugnosis cneckpoint> Check the indoor unit heat exchanger temperature sensor (check for changes in its characteristics and check its resistance): Symptoms include no hot start when operation is started, a failure of the thermostat to turn on (no outdoor unit operation). And, frequent repetition of stopping and startup.
		2. Check also for short-circuits indoors and clogging of the air filters.

Our set at	Diamagia	Discussion method				
Symbol	Diagnosis					
H99	Indoor operating unit freezing	The restriction on the compressor frequency is started when the indoor unit heat exchanger temperature is between 8°C and 12°C. Operation stops if a temperature below 0°C continues for 6 minutes. Three minutes later, operation is started up at a temperature from 3°C to 8°C. The restriction on the compressor frequency is released at a temperature between 13°C and 14°C. <diagnosis checkpoint=""></diagnosis> I A cooling or dry mode operation conducted at a low outside air temperature is mainly to suspect.				
		this is not indicative of any malfunctioning.				
		If the outdoor air temperature rises during automatic operation in the winter months, the dry mode operation is selected. The H99 diagnostic display also appears at such a time.				
		2. Check the refrigerating cycle: Gas may be leaking (the amount of refrigerant is low) or a pipe may be broken, etc.				
		3. Check also for short-circuits indoors and clogging of the air filters.				
F11	4-way valve switching failure	When a difference of 0°C to 5°C has been detected between the outdoor unit heat exchanger temperature and liquid side pipe temperature on 5 occasions, the error occurs. Signosis checkpoint Check the 4-way value coil: Check that no power is supplied to the coil during cooling and dry mode				
		operations, and that power is supplied during heating operation. Inspect the coil for broken wires (open- circuit).				
		2. If the coil trouble-free, the switching action of the 4-way valve may be defective.				
F17	Indoor standby units freezing	When the difference of an intake temperature (room temperature sensor) and the indoor unit heat exchanger temperature (piping sensor) is higher than 10°C or an indoor unit heat exchanger temperature of below -1°C has been detected continuously for 5 minutes, operation stops. Three minutes later, it is started up, and the error occurs when this has occurred on 3 consecutive occasions. <diagnosis checkpoint=""></diagnosis> 1. Check the refrigerating cycle: Expansion valve leakage				
		 Check the indoor unit pipe temperature sensor. (Check for changes in its characteristics and check its resistance.) 				
F90	PFC circuit protection	 When a DC voltage over 393V to 424V has been detected on 16 occasions, this error occurs. <diagnosis checkpoint=""></diagnosis> 1. To check whether the shutting valve has been left close by mistake, operation is performed for one to several minutes after the compressor has started up, F93 is stored in the memory as the symptom, and operation operation 				
		 Check the inverter circuit (for open-circuiting) in the control P.C. Board: Check the IPM base current (6 locations) within 3 minutes after the power has been turned back on. As the symptom, F93 is stored in the memory 30 seconds after the compressor has started up, and operation stops. The error occurs after 4 restarts. 				
		 Check for broken wires (for open-circuiting) in the compressor winding: Approximately 1 ohm under normal conditions for each phase (same symptom as in 2.) 				
		4. Check the power supply voltage has been fluctuating or not.				
F91	Refrigeration cycle abnormality	 When the compressor frequency is above 55 Hz and the current drops below the prescribed level continuously for 7 minutes, operation stops, and it is restarted 3 minutes later. When the compressor discharge temperature has exceeded the setting and the expansion valve has remained fully open for 80 seconds, operation stops, and it is restarted 3 minutes later. When the stopping described above has occurred on 4 occasions, operation stops, and the error occurs. <diagnosis checkpoint=""> Check the refrigerating cycle: Gas may be leaking (more than one-half of the volume of the gas has gone). The diagnosis displays resulting from a gas leak generally change in the following sequence depending on the extent of the gas leak: H99 → F97 → F91 → H16. </diagnosis> 				
		The range of this error (F91) is limited. (Compressor protection at the start of the season)				
F93	Compressor abnormal revolution	 When a state in which the rotation of the compressor is not synchronized with the control signal has been detected on 8 successive occasions, operation stops, and the error occurs. <diagnosis checkpoint=""></diagnosis> 1. To check whether the shutting valve has been left close by mistake, operation is performed for one to several minutes after the compressor has started up, F93 is stored in the memory as the symptom, and operation 				
		 stops. 2. Check the inverter circuit (for open-circuit) in the control P.C. Board: Check the IPM base current (6 locations) within 3 minutes after the power has been turned back on. As the symptom, F93 is stored in the memory 30 seconds after the compressor has started up, and operation stops. The error occurs after 4 restarts. 3. Check for broken wires (open-circuit) in the compressor winding: Approximately 1 ohm under normal 				
F96	IPM (Power transistor	conditions for each phase (same symptom as in 2.) When error occurs from the electrical parts radiation fin temperature sensor and OLP output during operation,				
	module) or compressor overheating	 operation stops, and it is restarted 3 minutes later. If the trouble occurs on 4 occasions, operation stops, and the error occurs. <diagnosis checkpoint=""></diagnosis> 1. Something may be interfering with the dissipation of the heat outdoors or the outdoor unit fan may be defective. (The outdoor unit fan is not running.) 				
		2. Defective IPM (Outdoor unit control P.C. Board)				
		3. Gas leaks. Shutting valve is not opened.				

Symbol	Diagnosis	Diagnosis method
F97	Compressor high discharge temperature	 This error occurs and operation stops when this happens on 6 occasions (it is cleared when the operation is normal for 20 minutes). <diagnosis checkpoint=""></diagnosis> 1. Check the refrigerating cycle: Gas may be leaking (The amount of refrigerant is low). The stopping of the outdoor unit from time to time is a symptom of this error.
		When operation steps with this error occurs, check the compressor temperature sensor. (Check for changes in its characteristics and check its resistance.)
		 Something may be interfering with the dissipation of the heat outdoors or the outdoor unit fan may be defective. (The fan will not run because of open-circuiting.)
		(The protection may be activated by an overload, and the F97 error will remain stored in the memory.)
F98	Total running current protection	 When the total current exceeds the setting (17A to 20A), frequency control is started, and if it then exceeds the setting, operation stops, and the error occurs. <diagnosis checkpoint=""></diagnosis> 1. Check the AC voltage at the outdoor unit terminal board during operation: The voltage drop must be within 5% of the voltage when operation has stopped (±110% of rated voltage even during operation). If the voltage drop exceeds 5% of if the voltage changes suddenly, inspect whether the power supply cord and indoor/outdoor unit connection cables are too long or too small in diameter, etc.
		2. Check whether something is interfering with the dissipation of the heat exchanger outdoors (during cooling operation): Normally, the capacity is limited by the current so that outdoor unit doesn't stop, and the diagnostic display does not appear.
F99	DC peak detection	 When "Output current error", which occurs when the prescribed current level is exceeded, has occurred on 16 consecutive occasions, operation stops, and the error occurs. <diagnosis checkpoint=""> Check whether the compressor is defective (locked up or shorted winding). Check the outdoor unit control P.C. Board. </diagnosis>

11 Installation Instructions

	M WARNING
7	Engage dealer or specialist for installation. If installation done by the user is defective, it will cause water leakage, electrical shock or fire.
2)	Install according to this installation instruction strictly. If installation is defective, it will cause water leakage, electrical shock or fire.
3)	Use the attached accessories parts and specified parts for installation. Otherwise, it will cause the set to fall, water leakage, fire or electrical shock.
4)	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 properly done, the set will drop and cause injury.
5)	For electrical work, follow the local national wiring standard, regulation and this installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.
(9	Use the specified cable (1.5 mm ³) and connect tightly for indoor/outdoor connection. Connect tightly and clamp the cable so that no 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.
4	Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.
8)	This equipment must be earthed. It may cause electrical shock if grounding is not perfect.
6	When carrying out piping connection, take care not to let air substances other than the specified information into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.
10	When connecting the piping, do not allow air or any substances other than the specified refrigerant (R410A) to enter the refrigeration cycle. Otherwise, this may lower the capacity, cause abnormally high pressure in the refrigeration cycle, and possibly result in explosion and injury.
1	Do not modify the length of the power supply cord or use of the extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock.
	CAUTION
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.
2)	Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.
	ATTENTION
1)	Selection of the installation location. Select a installation location which is rigid and strong enough to support or hold the unit, and select a location for easy maintenance.
2)	Do not release refrigerant. Do not release refrigerant during piping work for installation, reinstallation and during repairing a refrigeration parts. Take care of the liquid refrigerant, it may cause frostbite.
3)	Installation work. It may need two people to carry out the installation work.
4)	Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.

SAFETY PRECAUTIONS

Pipe cutter Spanner

Installation Instructions

42 N•m (4.2 kgf.m) 18 N•m (1.8 kgf.m)

. Knife . Gas leak detector 10. Measuring tape 11. Thermometer 12. Megameter 13. Multimeter

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Electric drill, hole core drill Hexagonal wrench (4 mm)

7. Reamer

Philips screw driver Level gauge (mm 07ø)

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14. Torque wrench

Required tools for Installation Works

16. Gauge manifold

15. Vacuum pump

Read the following "SAFETY PRECAUTIONS" carefully before installation.

Electrical work must be installed by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model to be 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 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.	
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CAUTION This indication shows the possibility of causing injury or damage to properties only. \triangleleft

The items to be followed are classified by the symbols:

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Symbol with background white denotes item that is PROHIBITED from doing.

Carry out test running to confirm that no abnormality occurs after the installation. 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.





Other Items to be Prepared (Locally Purchased)

Part name Part number

Required Materials

CZ-BT20P (white)

Decorative grille

Product name	Remarks
Rigid PVC pipe	VP20 (outer diameter ø26) ; also sockets, elbows and other parts as necessary
Adhesive	PVC adhesive
Insulation	For refrigerant piping insulation (foarmed polyethylene with a thickness of 8 mm or more) For drain piping insulation (foarmed polyethylene with a thickness of 10 mm or more)
Indoor/outdoor connecting cable	4×1.5 mm² flexible cord, type designation 245 IEC 57 (H05RN-F) (See "Connecting the Indoor/Outdoor Connecting Cable".)
Hanging bolt related parts	Hanging bolts (M10) (4) and nuts (12), Flat washers (8)

Selecting the Installation Location -

Determine the location with the agreement of the customer

Indoor unit

- □ The location should be strong enough to support the main unit without vibration.
- □ There should not be any heat or steam sources nearby. □ Drainage should be easy. Avoid locating the drain port close to ditches
 - (domestic wastewater).
- - Notineave reactivity.
 Notineave the access and exits.
 □ Ensure the distances indicated by the ⇔ marks in the illustration.
 □ Ensure sufficient space for installation and servicing.
 □ The ceiling surface (lower surface) should be level.
 □ Cathe the indoor unit at least 1 m or more away from a TV, radio, wireless equipment, antenna cables and fluorescent lights, and 2 m or more away
 - Recommended installation height for indoor unit shall be least 2.5m. from a telephone.

Note that if the air conditioning unit is installed near an electronically lit fluorescent light (inverter, rapid start type, etc.), it may not receive the remote control signals.

Indoor Unit Installation Diagram



Remote control mounting location

- □ Signals may not be transmitted and received correctly when the remote control is operated while in the holder. Take the remote control in your hand to operate the unit.
 - Mount the holder in a location that is not subject to the effects of heat (direct sunlight and stoves, etc.)





CS-ME7EB1E / CS-ME10EB1E / CS-ME12EB1E / CS-ME14EB1E





Screw cap



AUTO SWITCH OPERATION

The below operations will be performed by pressing the "AUTO" switch. 1. AUTO OPERATION MODE

- immediately once the "AUTO" switch is pressed. 2. TEST RUN OPERATION (FOR PUMP The Auto operation will be activated
 - the "AUTO" switch is pressed continuously for The Test Run operation will be activated if more than 5 sec. to below 8 sec.. DOWN/SERVICING PURPOSE)
- A short beep sound will occur at the fifth sec., in order to identify the starting of Test Run

operation.

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- "DRAIN TEST" switch AUTO" switch

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Changing the remote control transmission code

When installing two air conditioners in one room, each air conditioner can be synchronized to the remote control.

In order to operate separately, open the rear cover of one of the remote control and set Jumper wire to "B".

Remote control This can be achieved by cutting the jumper wire of the remote Set "B" on the remote control. control with a cutter.



→ The disconnected jumper

Setting the air conditioner unit to "B"

- 1. Press the "AUTO" switch for about 11 to 15 seconds. When you hear three short beeps, release the switch.
- Note: you will hear one short beep in about 5 seconds, and then two short beeps in about 8 seconds.
- 2. Press again the "AUTO" switch within 60 seconds. Every press the "AUTO" switch, you will hear a short beep. When you hear eventually a long beep, stop pressing the "AUTO" switch , which achieves "B" setting.
 - f you stop pressing the "AUTO" switch midway at the short beep, this will achieve "A" setting.
- 3. After 60 seconds or longer of the above setting, use the "B" set remote control to confirm successful operation.

battery	compartment	limos (1 A)	(Normaly short)	Small opening)		
	LCD][)		
	<i>_</i>	×		\;	(Normally oper		
pening at the centre	er (J_A) can be seen	on PCB shown belov	in be seen	Remo-Con No.	A (Default)	В	
	<u> </u>	~					

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12 Disassembly of Parts

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.

12.1. Detaching the fan motor and cross flow fan





12.2. Detaching the drain pump



12.3. Detaching the control board



- Detach the air guide and unscrew the screw on the heat exchanger.
- Detach the float switch and unscrew the 3 screws and disengage the 2 catches on the fan motor holder.
- 10) Loosen the screw fixing the shaft between the cross flow fan and the fan motor and detach the fan motor.
- 11) Remove the cross flow fan.

- 8) Unscrew the screw on the drain pump holder and detach it.
- 9) Detach the drain hose from the drain pump and remove the drain pump.

- 1) Open the air inlet section of the front grille.
- 2) Unscrew the 4 screws on the front grille, then disengage the catches with a screwdriver and detach the front grille.



- 3) Loosen the screw on the cover and detach the cover.
- 4) Unscrew the 2 screws on the control section cover and detach all connectors.

5) Disengage the catch on the control board and remove it.

12.4. Detaching the louver motor



13 Technical Data 13.1. OPERATION CHARACTERISTICS





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CU-3E23CBPG (two rooms operation) Cooling characteristics and outdoor temperature Operating conditions (72Hz) : Room 27°C, fan on HIGH Heating characteristics and outdoor temperature Operating conditions (79Hz) : Room 20°C, fan on HIGH ΰ υ ΰ Rated amount 17 28 41 40 of refrigerant Outlet air temperature (Outlet air temperature 16 40 Piping length 15 39 7.5m X 3 40 28 38 14 Cooling capacity (kW) 37 Heating capacity (kW) 8. 0 7.5 9. 0 28+40 7.0 28+40 8. 0 6.5 7.0 Gas side pressure H.P (MPa G) σ 6. 0 Gas side pressure L.P (MPa 2. 0.96 7 28+40 . . 0.94 2.6 28+40 0.92 2. 5 0.90 2.4 Current (A) Current (A) 11.5 11.0 10.5 . . 28+40 10.5 10.0 10.0 9.5 28+40 9.5 9.0 9.0 30 35 40 2 12 Outdoor temperature (°C) Outdoor temperature (°C) * Forced heating operation so the inside fan is set to HIGH CU-3E23CBPG (three rooms operation) Cooling characteristics and outdoor temperature Heating characteristics and outdoor temperature Operating conditions (62Hz) : Room 27°C, fan on HIGH Operating conditions (78Hz): Room 20°C, fan on HIGH ŝ Rated amount 22, 28 Outlet air temperature (°C) 19 34 32,40 of refrigerant ... 18 Outlet air temperature 33 32,40 Piping length 22, 28 17 32 7.5m X 3 16 31 Cooling capacity (kW) 30 Heating capacity (kW) 8. 0 . . 7.5 9. 0 28+32+40 7.0 8. 0 28+32+40 6.5 7.0 (MPa G) Θ 6. 0 L.P (MPa 1.14 2 2 H.P.(... 1.12 2 1 28+32+40 2. 0 1.10 Gas side pressure Gas side pressure 28+32+40 1.08 1. 9 Current (A) Current (A) 9.5 8.5 8.0 9.0 8.5 28+32+40 7.5 28+32+40 8.0 7.0 7.5 30 40 35 2 12 Outdoor temperature (°C) Outdoor temperature (°C) * Forced heating operation so the inside fan is set to HIGH

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14 Exploded View & Replacement Parts List

14.1. Exploded View



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.

14.2. Replacement Parts List

<Model: CS-ME7EB1E / CS-ME10EB1E / CS-ME12EB1E / CS-ME14EB1E>

Ref.	Part Name & Description	Q´ty	Part No.			Remarks	
No.			CS-ME7EB1E	CS-ME10EB1E	CS-ME12EB1E	CS-ME14EB1E	
1	FLOAT SWITCH	1	CWA121207	←	←	←	1
2	THERMAL FUSE	1	CWA16C1020J	←	←	←	1
3	TERMINAL BOARD COMPLETE	1	CWA28K1045J	←	←	←	1
4	SENSOR COMPLETE	1	CWA50C2100	←	←	←	1
5	TERMINAL PLATE FOR EARTH	1	CWA64C1005	←	←	←	
7	LEAD WIRE COMPLETE (AS)	1	CWA67C5811	←	←	←	
8	PC BOARD (MAIN)	1	CWA73C1946	CWA73C1947	CWA73C1948	CWA73C2170	1
9	PC BOARD (RECEIVER)	1	CWA744084	←	←	←	1
10	REMOTE CONTROL	1	CWA75C2610X	←	←	←	1
11	AIR SWING MOTOR	1	CWA98168	←	←	←	1
12	FAN MOTOR	1	ARW50A8P30AC	←	←	←	1
13	EVAPORATOR	1	CWB302119	←	←	CWB30C1171	
14	DRAIN PUMP	1	CWB532010J	←	←	←	1
16	DRAIN CAP	1	CWB82018	←	←	←	
17	CHASSIS COMPLETE	1	CWD50C260	←	←	←	
18	FAN MOTOR BRACKET	1	CWD54232	←	←	←	
19	PARTICULAR PLATE	1	CWD66238	←	←	←	
20	PARTICULAR PIECE-1	1	CWD76223	←	←	←	
21	PARTICULAR PIECE-2	1	CWD76225	←	←	←	
22	PARTICULAR PIECE-3	4	CWD91197	←	←	←	
23	DRAIN PUMP BRACKET	1	CWD93938	←	←	←	
24	DISCHARGE GRILE COMPLETE	1	CWA20C2490	←	←	←	
25	LOUVER	1	CWE24423	←	←	←	
26	VERTICAL LOUVER	1	CWE24C101	←	←	←	
27	DECORATION PANEL	1	CWE35K1007	←	←	←	
31	INSULATION SHEET	1	CWG10467	←	←	←	
34	CROSS-FLOW FAN COMPLETE	1	CWH02K117X	←	←	←	
35	CONTROL BOARD BOX	1	CWH10931	←	←	←	
36	CONTROL COVER-1	1	CWH131172	←	←	←	
37	CONTROL COVER-2	1	CWH13424	←	←	←	
38	CONTROL COVER-3	1	CWH13426	←	←	←	
40	HOLDER SENSOR	1	CWH32137	- -	←	←	
43	DRAIN TRAY	1	CWH40C1022	د	←	- -	
44	BELT	3	CWH4605004	L	←	L	
45	GUTTER	1	CWH481002X	←	←	←	
46	BUSHING FOR DRAIN PUMP-1	1	CWH50196	د		L	
47	BUSHING FOR DRAIN PUMP-2	1	CWH50197	E	←	4	
48	BUSHING	1	CWH50198.T	د	د	CWH501030	
49	CAP (1/4)	1	CWH52061	<u>ر</u>	د	←	
50	CAP (3/8)	1	CWH52062	د	د	ب	
51	CAP	1	CWH52160		←	L	
52	FLUCRIM	1	CWH64C017	E	←	4	
54	DRAIN PIPE	1	CWH851109	د	د	ب	
55	DRAIN HOSE COMPLETE	1	CWH85C1031		←	4	
56	TIBE ASSY (3/8)	1	CWT022528	<u>د</u>	ر د	CWT022529	
57	TUBE ASSY $(1/4)$	1	CWT024003	د	د	CWT024004	
58	FLARE NUT (1/4)	1	CWT25086	د	د	<u>د</u>	
59	FLARE NUT (3/8)	1	CWT25087	د	د	د	
62	JOINT FOR DRAIN PIPE	1	CWT29116	- -	←	←	
63		1	ERZVEAV511	<u>د</u>	ر ب	ر ب	
64	FIISE (250V 3A)	1	XBA2C31TR0	E	←	L	
65	OPERATING INSTRUCTIONS	1	CWF565240	· -	· -	_	
	OPERATING INSTRUCTIONS	1	CWF565241	· -	、 上	, _	
66	INSTALLATION INSTRUCTIONS	1	CWF612962		←	L	
⊢	INSTALLATION INSTRUCTIONS	1	CWF612963		←	L	
	INSTALLATION INSTRUCTIONS	1	CWF612968		←	L	
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(Note)

· Other parts except the operation manual and the installation manual are parts for RoHS.

 \cdot "l" marked parts are recommended to be kept in stock.

· All parts are supplied from ACD, JAPAN (VENDER CODE : 00025800).