Service Manual Air Conditioner

### CS-ME7KB1E





Please file and use this manual together with the service manual for Model No. CU-2E15LBE CU-2E18LBE CU-3E18LBE CU-4E23LBE, Order No. PHAAM1003090C3 and Model No. CS-ME7CKPG CS-ME10CKPG CS-ME12CKPG CS-ME14CKPG CS-ME18CKPG CU-2E15CBPG CU-2E18CBPG CU-3E23CBPG CU-4E27CBPG, Order No. RAC0209005C2

### A 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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### 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.



• 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.	Engage dealer or specialist for installation and servicing. If installation or servicing done by the user is defective, it will cause wate leakage, electrical shock or fire.	ər
2.	Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or fire	e.
3.	Use the attached accessories parts and specified parts for installation and servicing. Otherwise, it will cause the set to fall, water I fire or electrical shock.	eakage,
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 pr done, the set will drop and cause injury.	operly
5.	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 fire	single e.
6.	Use the specified cable and connect tightly for indoor / outdoor connection. Connect tightly and clamp the cable so that no extern will be acted on the terminal. If connecting or fixing is not perfect, it will cause heat-up or fire at the connection.	al force
7.	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
8.	When connection the piping, do not allow air or any substances other than the specified refrigerant to enter refrigeration cycle. Otherwise, this may lower capacity, cause abnormal high pressure in the refrigeration cycle, and possibly result in explosive and injury.	$\bigcirc$
9.	Thickness of copper pipes used must be more than 0.8mm. Never use copper pipes thinner than 0.8mm.	$\bigcirc$
10	It is desirable that the amount of residual oil is less than 40mg/10m.	$\bigcirc$
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.	$\bigcirc$



4.	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. Please use a 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 solder will tend to splash when heated too high (about $1100^{\circ}F / 600^{\circ}C$ ).
	ATTENTION
1.	Selection of the installation location. Select an installation which is rigid and strong enough to support or hold the unit, and select a location for easy maintenance.
2.	Power supply connection to the air conditioner. Connect the power supply cord of the air conditioner to the mains using one of the following methods.
	Power supply point shall be the place where there is ease for access for the power disconnection in case of emergency. In some countries, 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 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 circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.5 mm contact gap.
3.	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.
4.	Installation work: It may need two people to carry out the installation or servicing work.
5.	Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.

### 2 Features

### • Product

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

Т	ne	Cassette			Pip	be leng	gth	
	<u> </u>	2.0 kW		E	on	ە	for ingth	unt igth
OUT UNIT OUT UNIT		CS-ME7KB1E	Capacity range of connectable indoor units	3 1-room maximu pipe length	B Allowable elevati	Total allowable	Total pipe length maximum chargeless le	Additional gas amo
	A	Ô						
CU-3E18LBE	в	O	From 5.0 to 9.0 kW	25	15	50	30	20
	С	Ô						
	Α	Ô						
CU-3E23LBE	В	Ø	From 5.0 to 10.0 kW	25	15	50	30	20
	С	Ô						
	Α	Ø						
	в	O	From 5.0 to 13.6 kW	25	15	70	40	20
CO-4L2/CBFG	С	Ø	1 1011 3.0 to 13.0 kw					
	D	O						

### 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-3E23LBE. (Total nominal capacity of indoor unit is between 5.0kW and 10.0kW)

- 1) Two CS-ME7KB1E only. (Total nominal cooling capacity is 4.4kW)
- 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.



### Functions

### 3.1. REMOTE CONTROL



### 3.2. INDOOR UNIT



### **HEATING OPERATION**

### **COOLING / SOFT DRY OPERATION**

**Cold Draft Prevention Control** 

Hot Start

Intake Air Temperature Control

Deodorizing Control

Fog Prevention Control

Dew Prevention Control

Freeze Prevention Control

Drain Pump Control 💥

### AUTOMATIC OPERATION

FAN OPERATION

### 4 **Product Specifications**

Model				CS-ME7KB1E					
Item				Cassette Type					
Power Source				Outdoor power (single 230V 50Hz)					
Air Volume		Cooling	m <sup>3</sup> /min	9.1					
		Heating	m <sup>3</sup> /min	10.1					
Noise Level	ise Level Cooling (Power)		dB (A) (dB)	Hi:40(53) Lo: 32(45)					
		Heating (Power)	dB (A) (dB)	Hi:42(55) Lo: 32(45)					
Moisture Remo	oval		L/h	1.3					
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/	Outdoor connect	ting cable	mm	4 x 1.5 mm <sup>2</sup> flexible cord, type designation 245 IEC 57 (H05RN-F)					
Drain opening			mm	VP20					
Dimension			mm	Height 185 x Width 770 x Depth 360					
Net Weight			kg	9.8					
Fan	Туре			Cross-flow fan					
	Motor	Туре		DC brushless motor (ARW50A8P30AC)					
		Output	W	4P 25W 40V A98258					
Heat exchange	r			Plate fin forced-draft					
Adjustments		Switches		Wireless remote control					
Timer				Timer with ON and OFF times programmable					
		Temperature		Electronic thermostat					
Air filter				PP honeycomb					

\* 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℃ DB / 6℃ WB

### Dimensions

### 5.1. Cassette Type



### ■Cassette Type (CS-ME7KB1E)

### Installation dimensions

	(Units. min)
Grille	1070 × 460
Ceiling opening	1010 × 390
Hanging bolts	830 × 240
Main unit	H185×W770×D360
Ceiling clearance	190 or more
Drain rise	200 or less





### 5.2. Grille



### 6 Refrigeration Cycle Diagram



Ти	ne	Cassete			Pip	be leng	gth	
		2.0 kW		m	uo		for ngth	unt gth
OUT UNIT OUT UNIT		CS-ME7KB1E	Capacity range of connectable indoor units	<sup>3</sup> 1-room maximu pipe length	3 Allowable elevation	Total allowable	Total pipe length 1 maximum chargeless lei	Additional gas amou over chargeless len
	A	Ô						<b>J</b>
CU-3E18LBE	в	0	From 5.0 to 9.0 kW	25	15	50	30	20
	С	0						
	Α	Ô						
CU-3E23LBE	в	Ø	From 5.0 to 10.0 kW	25	15	50	30	20
	С	Ô						
	Α	Ø						
	В	O	From 5.0 to 13.6 kW	25	15	70	40	20
CO-4L2/CBFG	С	O	11011 3.0 to 13.0 kW	_0		10		
	D	O						

### 7 Block Diagram

CS-ME7KB1E



### 8 Wiring Connection Diagram



### 9 Electronic Circuit Diagram

CS-ME7KB1E



### **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.

$\square$	B ROOM	Non P	Priority	Unit(2nd	d. ON)
A R	OOM	Cooling	Soft Dry	Heating	Fan
t. 0N)	Cooling	0 C	DC	Waiting C	۴ C
nit (1s	Soft Dry	D	D	Waiting D	FD
ity U	Heating	Waiting H	Waiting H	H	Stop H
Pr ior	Fan <sup>*</sup>	F	F	H Stop	F

\* 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

### 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



### Heating



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

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

### 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.
- Actual fan speed may differ from that you set with remote control.

### « CS-ME7KB1E »

Rot	ation Speed (rpm)	Stop	~	500	~	820	~	880	~	920	~	960	~	1020	~	1100	~	1180	~	1260	~	1350	~	1400	~	1490	Remarks
	Manua I							SSLo		SLo		Lo-		Low		● Me-		Me		● <u>H</u> e+		Hi		SHi		PSHi	Remote control settings
ing	Auto	0						0						© *1		© **2	۲	~	0								When difference
Cool	Powerful	0														© *1		© *2	٢	~	0						temperature and internal set
	Quiet	0										© %1		© *2	0	~	0										temperature is +0.5°C and below.
Dry	Manua I	Ø						SSLo		SLo		Lo-		Low		● <u>M</u> e-		Me		● <u>He</u> +		Hi		SHi		PSHi	₩2 When difference
Soft	Auto	0								0				© *1		© **2	۲	~	۲								between intake air temperature and internal set temperature is +1.5°C and below
Rot	ation Speed (rpm)	Stop	~	500	~	820	~	980	~	~	~	1020	~	~	~	1140	~	1260	~	1380	~	1500	~	1550	~	1600	
	Manual			SSLo		SLo						Low				● He-		Me		● He+		Hi	]	SSHi		PSHi	
ting	Auto	0		0		0		0				Ø	0	Ø	0	0	0	Ø	0	Ø	0						When difference between intake
Hea	Powerful	0												Ø	0	Ø	0	Ø	٢	0	0	Ø	0				air temperature and internal set temperature is +1.5°C and above.
	Quiet	0									0	Ø	٢	Ø	0	Ô	٢	٥	٢	Ø							
Ø	fan speed is set automatically * 1.0 in Cooling indicates that fan speed and deodorizing are controlled together. * 2.0 in Heating indicates that fan speed, hot start and cold draft prevention are controlled together.																										

### 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.

un · 1

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

		While power is off							
Unit A (manual cooling operation) priority unit	Operation On Off	Cooling operation		Cooling operation					
Unit B (stop)	Operation On Off	Stop		Stop					
Unit C (manual heating operation)	Operation On Off	Heating (standby)		Heating (standby)					
Unit D (automatic operation)	Operation On Off	Cooling (automatic)	Mode determination	Cooling or					
Outdoor unit		Cooling operation		heating(standby) 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 ▼ 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 5 seconds 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 breakdown status)

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



### 10.6.4. Error Code

Symbol	Diagnosis	Diagnosis method	
H11	Indoor/outdoor abnormal communication	<ul> <li>This error occurs when indoor/outdoor unit communication fails to be established after 30 seconds or more.</li> <li><b>Oiagnosis checkpoint&gt;</b> <ol> <li>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. </li> </ol></li></ul>	
H12	Indoor unit capacity unmatched	<ul> <li>This error occurs when wrong in the total connection capacity and wrong connection in each capacity.</li> <li>The error is determined within 2 minutes after the power is turned on.</li> <li><b><diagnosis checkpoint=""></diagnosis></b></li> <li>1. Check the total capacity of the units connected and check that the models are compatible for connection.</li> </ul>	
H14	Intake air temp. sensor	<ul> <li>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.</li> <li><diagnosis checkpoint=""> <ol> <li>This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.</li> <li>Check the sensor, and if open-circulating (more than 500k ohms) or short-circulating (less than 6.5k ohms) is not found, defective contact of the connector is possible.</li> </ol> </diagnosis></li> </ul>	
H16	Outdoor Current Transformer	<ul> <li>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).</li> <li><diagnosis checkpoint=""> <ol> <li>Check the refrigerating cycle: Gas may be leaking (the amount of refrigerant is extremely low).</li> <li>Check the control P.C. Board: Check for a broken wire (open-circuit) in the current transformer. (If opencircuit is found, replace the control P.C. Board.)</li> <li>In the case of a scroll compressor (DC motor), H16 is detected only when the regular compressor is operating.</li> </ol> </diagnosis></li> </ul>	
H19	Indoor fan motor mechanism lock	<ul> <li>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:</li> <li>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:</li> <li>The error occurs (the timer lamp blinks).</li> <li>  <b>Objective State Objective State Objective State</b> Low-voltage PAM: When the fan lock detection signal has been detected on 7 successive occasions: The error occurs (the timer lamp blinks). <b>Objective State Objective State Distribution Objective State Ob</b></li></ul>	
H21	Indoor float switch abnormality	<ul> <li>Error occurs when the float switch is open for 150 seconds.</li> <li><diagnosis checkpoint=""> <ol> <li>Drain blockage.</li> <li>Check the conductivity of float switch.</li> <li>Check that the resistance of the drain motor is about 200 ohms.</li> </ol> </diagnosis></li> </ul>	
H23	Indoor heat exchanger temp. sensor	<ul> <li>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.</li> <li>(This error is not detected during de-icing.)</li> <li><b>&gt; Diagnosis checkpoint&gt;</b></li> <li>1. This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.</li> <li>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.</li> </ul>	
H27	Outdoor air temp. sensor	<ul> <li>This error occurs when a temperature of under approximately -40° C or above approximately 150° C has bee detected by the outdoor air temperature sensor for 2 to 5 seconds. (This error is not detected during de-icing </li> <li><b>Diagnosis checkpoint&gt;</b> <ol> <li>This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.</li> <li>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.</li> </ol> </li> </ul>	
H28	Outdoor heat exchanger temp. sensor 1	<ul> <li>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 deicing.)</li> <li><diagnosis checkpoint=""> <ol> <li>This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.</li> <li>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.</li> </ol> </diagnosis></li> </ul>	

Symbol	Diagnosis	Diagnosis method
H30	Outdoor discharge	Disconnected discharge sensor
	pipe temp. 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). <b></b>
		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.
H32	Outdoor heat	This error occurs when a temperature of under approximately -60°C or over approximately 110°C has been
	exchanger temp. sensor 2	detected continuously for 2 to 5 seconds by the outlet temperature sensor of the heat exchanger. <diagnosis checkpoint=""></diagnosis>
	(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	This error occurs if the float switch is open three times for 10 seconds or more during a twenty-minute period.
	pump abnormality	<diagnosis checkpoint=""></diagnosis>
		1. Drain blockage.
		<ol> <li>Check the conductivity of noal switch.</li> <li>Check that the resistance of the drain motor is about 200 ohms.</li> </ol>
H36	Outdoor gas pipe	This error occurs when a temperature of under -45°C or above approximately 149°C has been detected by
1100	temp. sensor	the outdoor unit gas side pipe temperature sensor continuously for 2 to 5 seconds.
		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.
H37	Outdoor liquid pipe	This error occurs when a temperature of under -45°C or above 149°C has been detected by the outdoor unit
	temp. sensor	quid side pipe temperature sensor continuously for 2 seconds.
		<ol> <li>This error occurs when a temperature which is impossibly high or low from a normal standpoint has been detected.</li> </ol>
		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	This error occurs in rooms other than one in which indoor freezing error has occurred when the pipes have
	standby units	connector has become disconnected.
H97	Outdoor fan motor	When the fan motor speed detected when its maximum output is demanded is below 30 rpm. continuously for
1101	mechanism lock	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
		<pre></pre> <pre></pre> <pre></pre> <pre>diagnosis checkpoint&gt;</pre>
		1. Check the nature of the fan lockup error.
		2. Check for disconnections of the fan motor connectors and for defects in contact, in the fan motor and in
	Indoor high processo	the control P.C. Board.
H98	protection	exchanger source is between $50^{\circ}$ C and $52^{\circ}$ C, the compressor stops at a temperature from $62^{\circ}$ C to $65^{\circ}$ 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.)
		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.
1	1	2. Check also for short-circuits indoors and clogging of the air filters.

Symbol	Diagnosis	Diagnosis method
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.
		<ol> <li>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.</li> <li>Check the refrigerating cycle: Gas may be leaking (the amount of refrigerant is low) or a pipe may be broken, etc.</li> </ol>
	4 way yalva awitahing	3. Check also for short-circuits indoors and clogging of the air filters.
F11	failure	<ul> <li>and liquid side pipe temperature on 5 occasions, the error occurs.</li> <li><b><diagnosis checkpoint=""></diagnosis></b> <ol> <li>Check the 4-way valve 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</li> </ol> </li> </ul>
		(opencircuit).
F17	Indoor standby units freezing	<ul> <li>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.</li> <li><diagnosis checkpoint=""> <ol> <li>Check the refrigerating cycle: Expansion valve leakage.</li> <li>Check the indoor unit pipe temperature sensor. (Check for changes in its characteristics and check its resistance.)</li> </ol> </diagnosis></li> </ul>
F90	PFC circuit protection	<ul> <li>When a DC voltage over 393V to 424V has been detected on 16 occasions, this error occurs.</li> <li><diagnosis checkpoint=""> <ol> <li>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.</li> <li>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.</li> <li>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.)</li> <li>Check the power supply voltage has been fluctuating or not.</li> </ol></diagnosis></li></ul>
F91	Refrigeration cycle abnormality	<ul> <li>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.</li> <li>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.</li> <li>When the stopping described above has occurred on 4 occasions, operation stops, and the error occurs.</li> <li><diagnosis checkpoint=""> <ol> <li>Check the refrigerating cycle: Gas may be leaking (more than one-half of the volume of the gas has gone).</li> <li>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.</li> <li>The range of this error (F91) is limited. (Compressor protection at the start of the season)</li> </ol> </diagnosis></li> </ul>
F93	Compressor abnormal revolution	<ul> <li>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.</li> <li><diagnosis checkpoint=""> <ol> <li>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.</li> <li>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.</li> <li>Check for broken wires (open-circuit) in the compressor winding: Approximately 1 ohm under normal conditions for each phase (same symptom as in 2.)</li> </ol> </diagnosis></li> </ul>
F96	IPM (Power transistor module) or compressor overheating	<ul> <li>When error occurs from the electrical parts radiation fin temperature sensor and OLP output during operation, operation stops, and it is restarted 3 minutes later. If the trouble occurs on 4 occasions, operation stops, and the error occurs.</li> <li><diagnosis checkpoint=""> <ol> <li>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.)</li> <li>Defective IPM (Outdoor unit control P.C. Board)</li> <li>Gas leaks. Shutting valve is not opened.</li> </ol> </diagnosis></li> </ul>

Symbol	Diagnosis	Diagnosis method
F97	Compressor high discharge	This error occurs and operation stops when this happens on 6 occasions (it is cleared when the operation is normal for 20 minutes).
	temperature	<diagnosis checkpoint=""></diagnosis>
		<ol> <li>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.</li> </ol>
		<ol><li>When operation steps with this error occurs, check the compressor temperature sensor. (Check for changes in its characteristics and check its resistance.)</li></ol>
		<ol> <li>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.)</li> </ol>
		(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.
		<ul> <li><diagnosis checkpoint=""></diagnosis></li> <li>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.</li> <li>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.</li> </ul>
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=""></diagnosis>
		<ol> <li>Check whether the compressor is defective (locked up or shorted winding). Check the outdoor unit control P.C. Board.</li> </ol>

### **11 Installation Instruction**

Installation Instructions

Required tools for Installation Works

14. Torque wrench 18 N•m (1.8 kgf.m) 42 N•m (4.2 kgf.m)

Reamer
 Knife
 Gas leak detector
 Measuring tape

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

(ø70 mm)

4. . 6.

Pipe cutter Spanner

Philips screw driver

<del>.</del> ы. Э 11. Thermometer 12. Megameter 13. Multimeter

15. Vacuum pump 16. Gauge manifold

	A WARNING
€	Endage 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 <sup>2</sup> ) 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 refrigerant go 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.
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.
	A 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.

# Read the following "SAFETY PRECAUTIONS" carefully before installation.

SAFETY PRECAUTIONS

- 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.

The items to be followed are classified by the symbols: 

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



### Dominad Matarials

Lequileu Inial	elidio	
Part name	Part number	
Decorative grille	CZ-BT20P (white)	

## Other Items to be Prepared (Locally Purchased)

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 (foarned polyetby/lene with a thickness of 8 mm or more) For drain piping insulation (foarned polyetby/lene with a thickness of 10 mm or more)	
Indoor/outdoor connecting cable	$4 \times 1.5 \ mm^2$ 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

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

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.



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### □ Signals may not be transmitted and received correctly when Remote control mounting location

the remote control is operated while in the holder. Take the remote control in your hand to operate the unit.  $\hfill \square$  Mount the holder in a location that is not subject to the effects of heat (direct sunlight and stoves, etc.).



30 cm or more

Intake

Discharge vent or more 20 cm

30 cm or more Wall









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to "B".

operation.

### **12 Disassembly of Parts**

### MARNING

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



- 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.
- 5. Detach the connectors going from the control board to the drain pump and from the receiver and display sections.

- 6. Unscrew the screw and disengage the 2 catches on the air outlet grille, then take out the drain pan plug to drain off excess water.
- 7. Unscrew the 4 screws and disengage the 5 catches on the drain pan.



### 12.2. Detaching the drain pump



### 12.3. Detaching the control board



- 8. Detach the air guide and unscrew the screw on the heat exchanger.
- 9. 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



- 3. Loosen the screw on the cover and detach the cover.
- 4. Unscrew the 2 screws on the control section cover and detach the connector for the louver motor.
- 5. Unscrew the screw and disengage the 2 catches on the air outlet grille.

6. Unscrew the 2 screws on the louver motor on the back of the air outlet grille and remove the louver motor.



### **13 Technical Data**

### 13.1. Operation Characteristics (CU-3E18LBE)

### 13.1.1. One Indoor Unit Operation

### Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT) Operation condition: High fan speed Piping length: 5m 230V 50Hz

A) Indoor unit capacity: Cooling (2.0kW: CS-ME7KB1E), service mode frequency = Fc



### • Heating Characteristic

### [Condition] Room temperature: 20°C (DBT), 12°C (WBT) Operation condition: High fan speed Piping length: 5m 230V 50Hz

44.000 42.000 40.000 Outlet Air Temperature (°C) 38.000 36.000 34.000 32.000 30.000 28.000 10 -15 -10 -5 0 5 15 Outdoor Air Temperature (°C) 4.000 3.500 Heating Capacity (kW) 3.000 2.500 2.000 1.500 1.000 -15 -10 -5 0 5 10 15 Outdoor Air Temperature (°C) 7.500 7.000 Current (A) 6.500 6.000 5.500 -15 10 15 -10 -5 Ó 5 Outdoor Air Temperature (°C) 1.000 0.900 Gas Side Piping Pressure (MPa) 0.800 0.700 0.600 0.500 0.400 0.300 -15 -10 10 -5 0 5 15 Outdoor Air Temperature (°C)

A) Indoor unit capacity: Heating (2.0kW: CS-ME7KB1E), service mode frequency = Fc

### 13.2. Operation Characteristics (CU-4E23LBE)

### 13.2.1. One Indoor Unit Operation

### • Cooling Characteristic

[Condition] Room temperature: 27°C (DBT), 19°C (WBT) Operation condition: High fan speed Piping length: 5m 230V 50Hz

A) Indoor unit capacity: Cooling (2.0KW: CS-ME7KB1E), service mode frequency = Fc



### • Heating Characteristic

### [Condition] Room temperature: 20°C (DBT), 12°C (WBT) Operation condition: High fan speed Piping length: 5m 230V 50Hz

A) Indoor unit capacity: Heating (2.0kW: CS-ME7KB1E), service mode frequency = Fc



### 13.3. Operation Characteristics (CU-4E27CBPG)

### 13.3.1. One Indoor Unit Operation

### • Cooling Characteristic

[Condition] Room temperature: 27°C Operation condition: Fan on HIGH

A) Indoor unit capacity: Cooling (2.0kW: CS-ME7KB1E), service mode frequency = Fc



### • Heating Characteristic

[Condition] Room temperature: 20°C Operation condition: Fan on HIGH

A) Indoor unit capacity: Heating (2.0kW: CS-ME7KB1E), service mode frequency = Fc



### **14 Exploded View and 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

REF. NO.	PART NAME & DESCRIPTION	QTY.	CS-ME7KB1E	REMARKS
1	FLOAT SWITCH	1	CWA121207	0
2	THERMAL FUSE	1	CWA16C1047	0
3	TERMINAL BOARD COMPLETE	1	CWA28K1045J	0
4	SENSOR COMPLETE	1	CWA50C2100	0
5	TERMINAL PLATE FOR EARTH	1	CWA64C1005	
7	LEAD WIRE COMPLETE (AS)	1	CWA67C5811	
8	PC BOARD (MAIN)	1	CWA73C4647	0
9	PC BOARD (RECEIVER)	1	CWA744084	0
10	REMOTE CONTROL	1	CWA75C2610X	0
11	AIR SWING MOTOR	1	CWA98169J	0
12	FAN MOTOR	1	ARW50A8P30AC	0
13	EVAPORATOR	1	CWB302119	
14	DRAIN PUMP	1	CWB532010J	0
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	CWE20C2490	
25	LOUVER	1	CWE24423	
26	VERTICAL LOUVER	1	CWE24C101	
27	DECORATION PANEL	1	CWE35K1007	
31	INSULATION SHEET	1	CWG10468	
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	
44	BELT	3	CWH4605004	
45	GUTTER	1	CWH481002X	
46	BUSHING FOR DRAIN PUMP-1	1	CWH50196	
47	BUSHING FOR DRAIN PUMP-2	1	CWH50197	
48	BUSHING	1	CWH50198J	
49	CAP (1/4)	1	CWH52061	
50	CAP (3/8)	1	CWH52062	
51	САР	1	CWH52160	
52	FLUCRUM	1	CWH64C017	
54	DRAIN PIPE	1	CWH851109	
55	DRAIN HOSE COMPLETE	1	CWH85C1031	
56	TUBE ASSY (3/8)	1	CWT022528	
57	TUBE ASSY (1/4)	1	CWT024003	
58	FLARE NUT (1/4)	1	CWT251026	
59	FLARE NUT (3/8)	1	CWT251027	
62	JOINT FOR DRAIN PIPE	1	CWT29116	
1		1	1	1

REF. NO.	PART NAME & DESCRIPTION	QTY.	CS-ME7KB1E	REMARKS
63	ZNR	1	ERZVEAV511	
64	FUSE (250V 3A)	1	XBA2C31TR0	
65	OPERATING INSTRUCTIONS	1	CWF567435	
	OPERATING INSTRUCTIONS	1	CWF567436	
66	INSTALLATION INSTRUCTIONS	1	CWF613731	
	INSTALLATION INSTRUCTIONS	1	CWF613732	
	INSTALLATION INSTRUCTIONS	1	CWF613733	

(NOTE)

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

• "I" marked parts are recommended to be kept in stock.

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