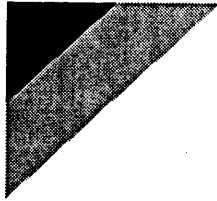


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Marine type

Container Refrigeration Unit

Service Manual · Parts List

Optional Functions

Model

LXE10D-A5R

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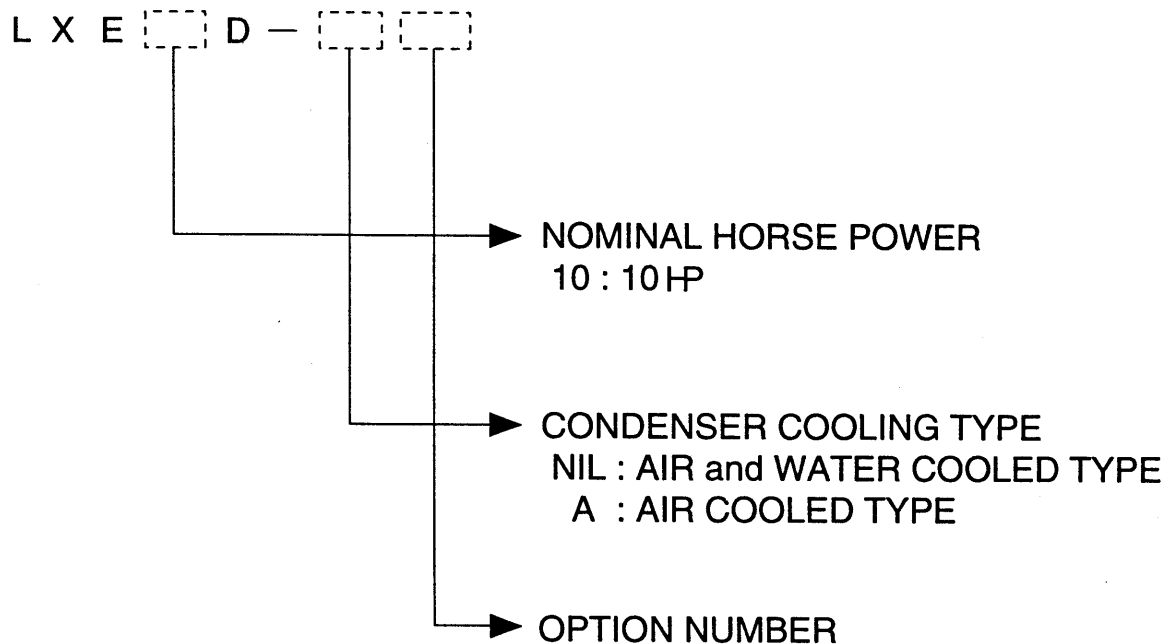
TR 98-04

This manual describes only the items different from those of the standard machine.

For the items not described in this manual, refer to the following document.

- Service Guide, Services
- Service Manual (Operation)
- Parts List
- Operation Manual of Personal Computer Software
- Compressor Dismantling and Assembly Manual

Denomination of Model Name



Note) "R" GIVEN AFTER OPTION NUMBER STANDS FOR "REVISION"
AND IT IS GIVEN FOR THE UNIT WHICH IS SPECIALLY
MODIFIED.

Covered Models

This Service Guide describes only the items different from those of the standard machine regarding the features and operation of LXE10D-A5R.

Name of models	LXE10D-A(Standard)	LXE10D-A5R
Cooling system of condenser	Specifically used for air cooling system	
Reheat coil	Provided	Not provided
400V class power cable & plug	Provided	Not provided
Lever of voltage selector	Provided	Not provided (Contactor of voltage selector have already been set to 200V class.)

CONTENTS

SAFETY RECAUTION

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4. INITIAL SETTING CONTROLLER	15


SAFETY PRECAUTIONS

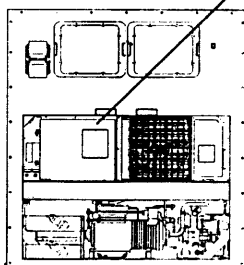
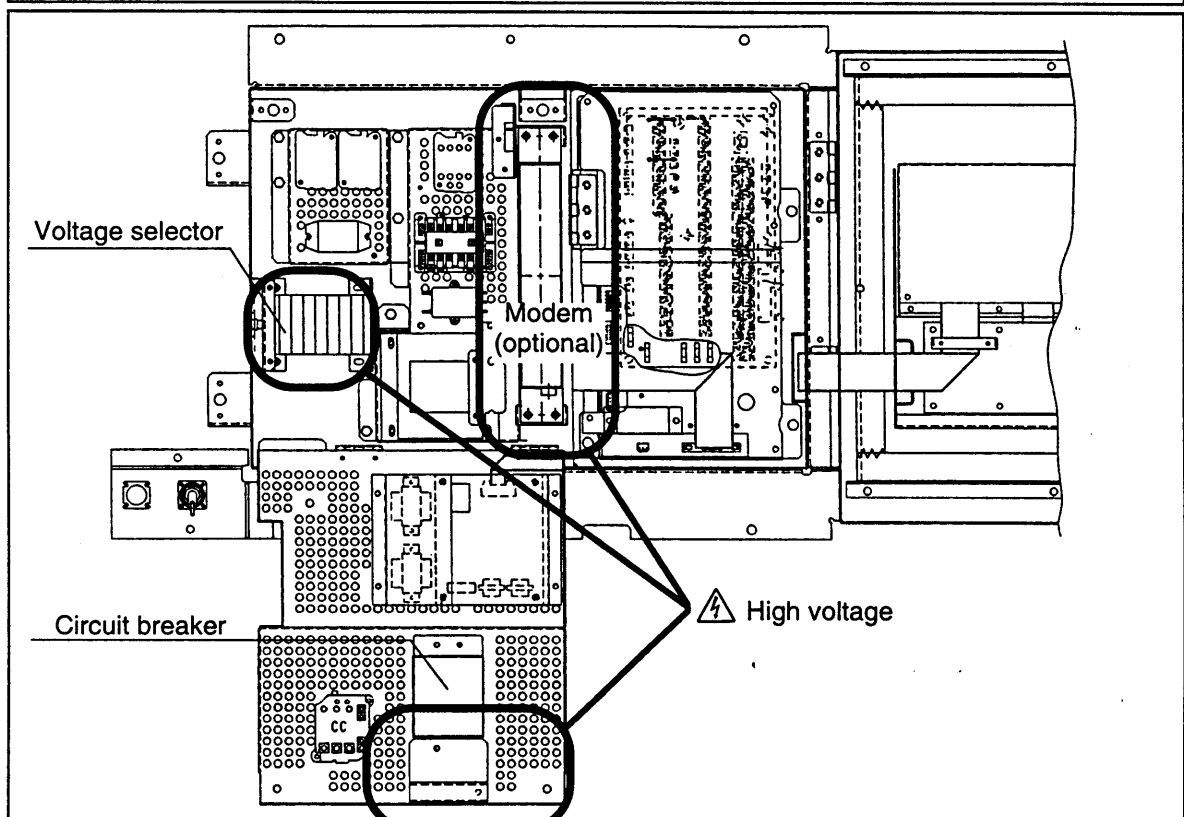
Always observe the following points before operating or inspecting a unit.

DANGER

Always turn off the main power supply of the facility before disconnecting the power plug. 

Be sure to unplug the power cord before inspecting the inside of control box.

* Because the high voltage remains at the voltage selector, the circuit breaker and the optionally provided modem even though the circuit breaker in the control box is turned off. 



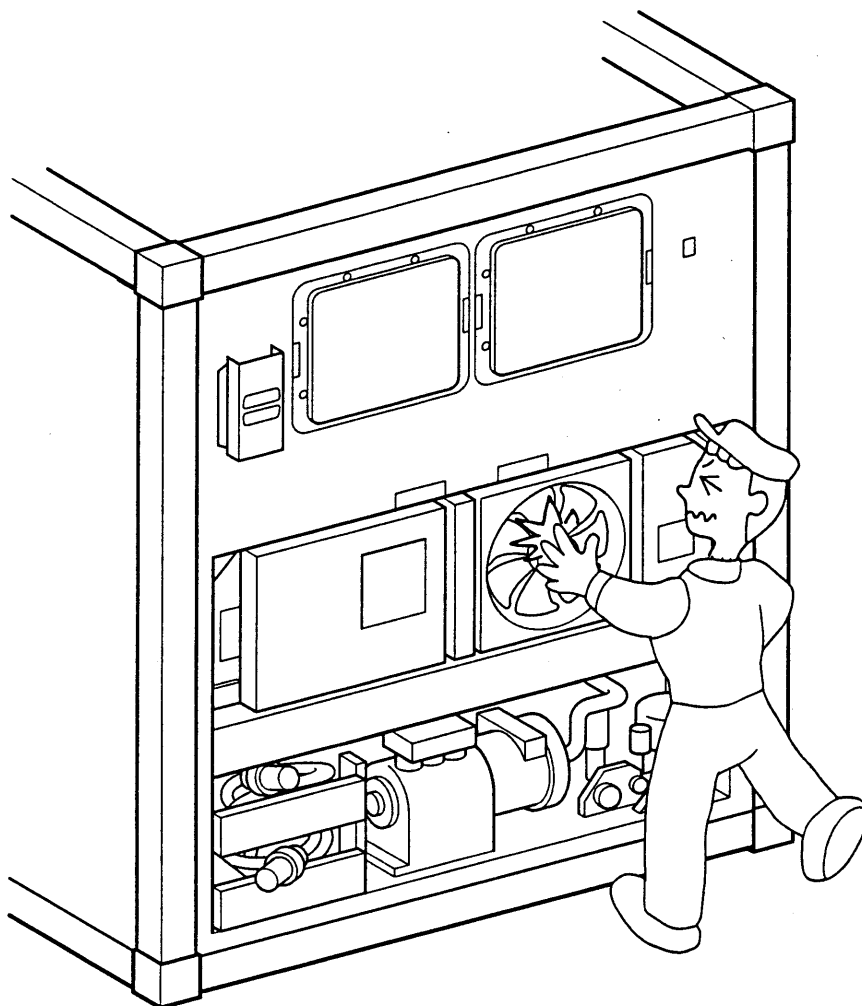
 **WARNING**

Do not touch the condenser fan during electricity being applied.

Before removing the condenser fan cover, turn off the circuit breaker and disconnect the power plug.



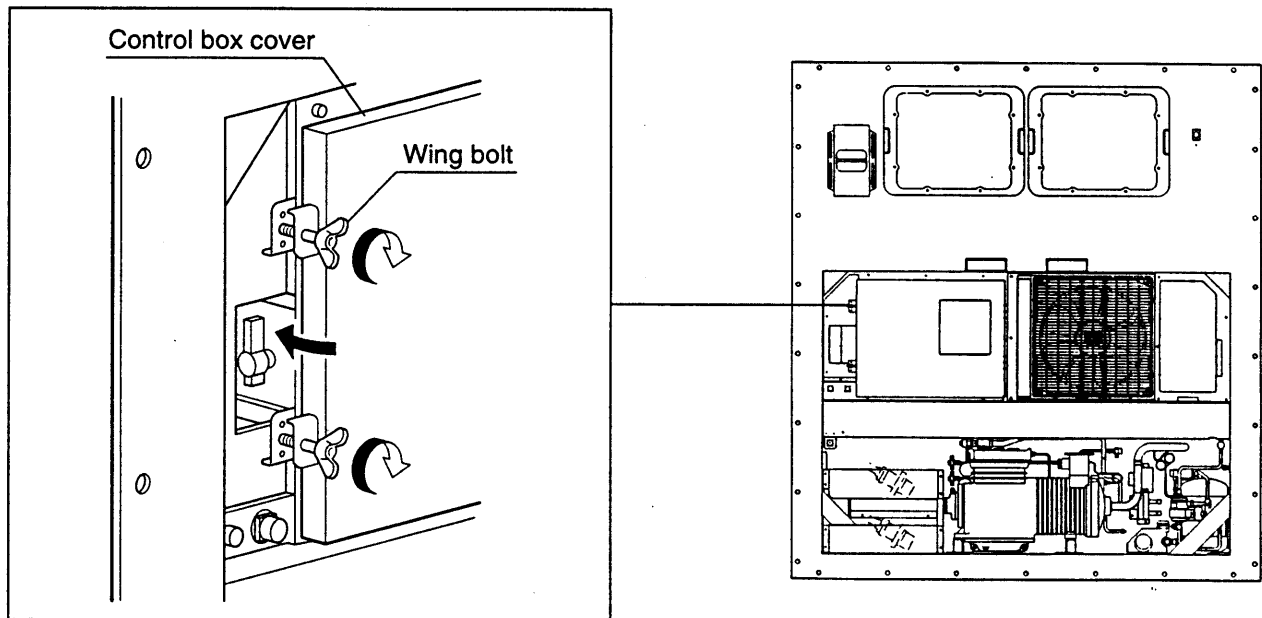
- At air-cooled operation : Condenser fan may start and stop automatically for the refrigerant high pressure control.
- At water-cooled operation : Condenser fan may start and stop automatically for cooling of the control box.



⚠ CAUTION

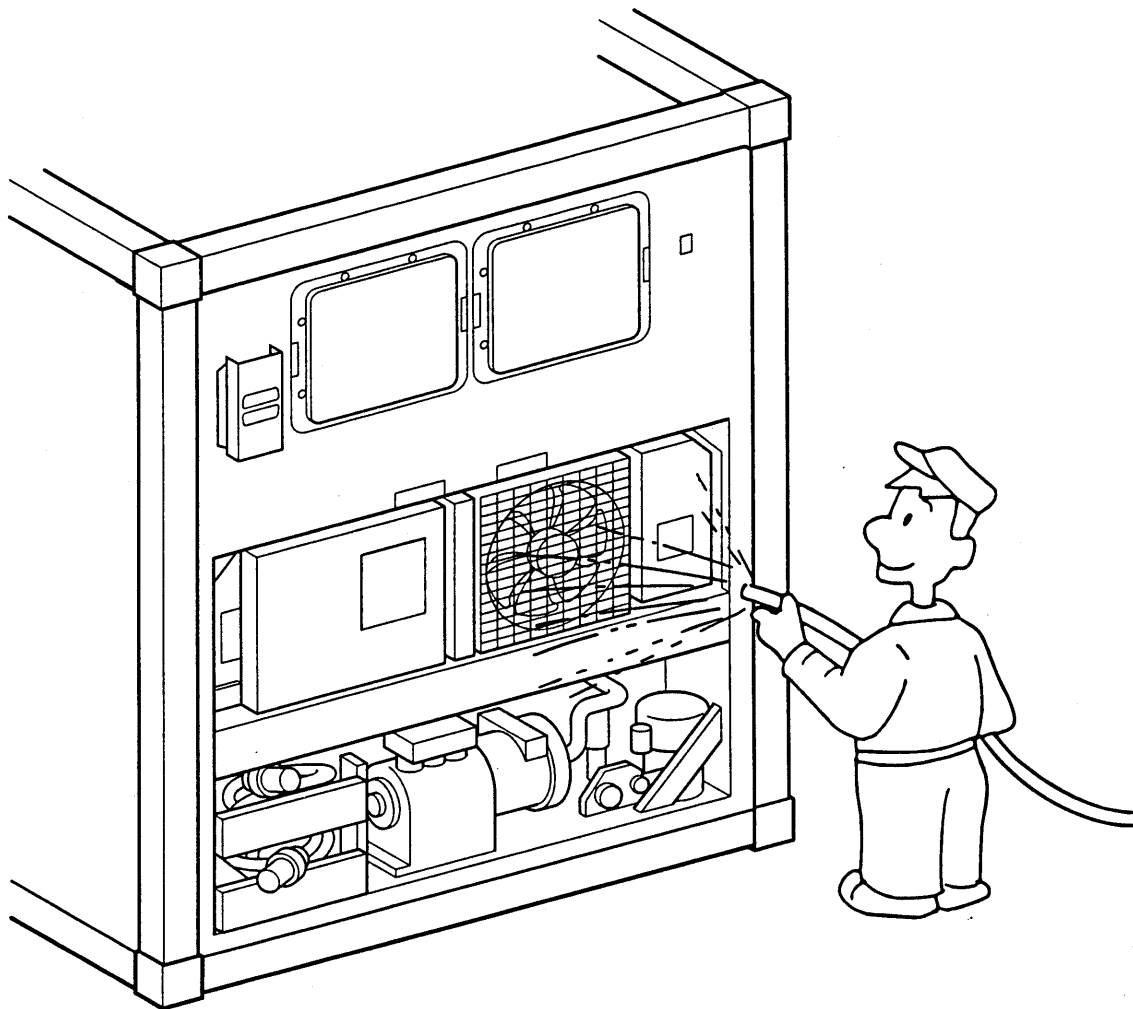
Before starting the unit, connect the power plug and run the generator.

Securely close the control box cover.
Otherwise, it will cause water ingress.



! **CAUTION**

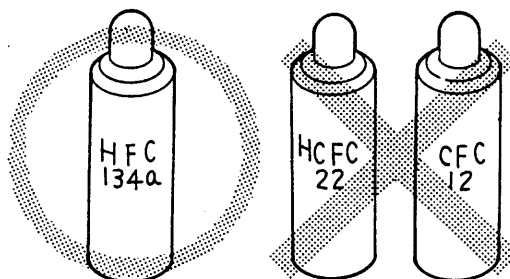
**Wash the refrigeration unit with fresh water before PTI.
Carefully flush the air-cooled condenser by fresh water since
much salt sticks to it.**



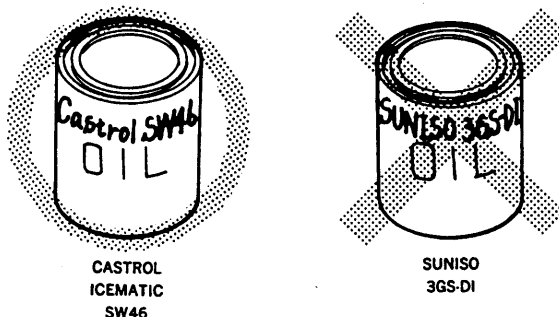
CAUTION

Refrigerant and refrigerating machine oil

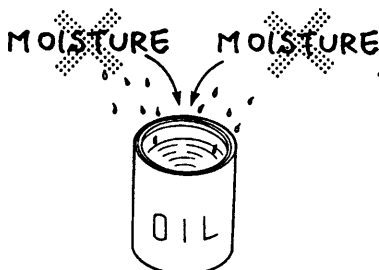
Charge only refrigerant HFC 134a to the unit.
Never attempt to use any other refrigerant (CFC12, HCFC22, etc) on the refrigeration unit.
If any other refrigerant not specified is charged, it may cause the troubles to the unit.



Use only Daikin specified oil (Castrol Icematic SW46) when replacing the refrigerating machine oil.
If any other refrigerating machine oil not specified is charged, it may cause the troubles to the unit.



Open the oil can, just before charging the oil, and use all the oil whose can is opened once.
Do not leave the opened can as it is for 5 hours or longer to avoid moisture ingress.
If any refrigerating machine oil which absorbs much moisture is used, it may cause the troubles to the unit.



Use only exclusive tools for HFC134a.(gauge manifold, charging cylinder, etc)
Do not use any tools for CFC12 or HCFC22.
Service ports with quick joints for exclusive use of HFC134a are provided in the refrigeration unit to avoid refrigerant and refrigerating machine oil of a different kind entering into the refrigeration circuit. (Refer to section 7.2)
The charging hose and service port are not interchangeable with those of previous model(s).

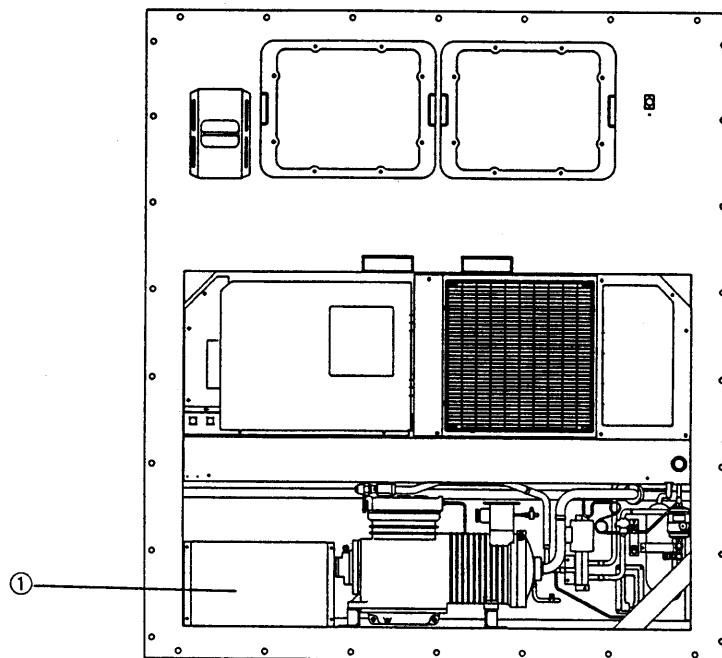
1. DATA OF REFRIGERATION UNIT

1.1 Main specification

Item		Model	LXE10D-A5R
Condenser cooling system		Air-cooled type	
Controller		DECOS III b	
Power supply		Single voltage AC 3-phase 200V class 50Hz : 200V 60Hz : 200V/220V/230V	
Compressor		Semi-hermetic type (Output: 5.5kW)	
Evaporator		Finned coil type	
Air-cooled condenser		Finned coil type	
Water-cooled condenser		Receiver	
Fan		Direct motor driven type propeller fan	
Fan motor		Three-phase squirrel-cage induction motor	
Defrosting	System	Hot-gas defrosting system	
	Initiation	Dual timer or manual switch	
	Termination	Evaporator outlet pipe temperature measured by a defrosting termination detecting thermostat.	
Refrigerant flow control		Electronic expansion valve	
Capacity control		Hot gas bypass control with modulating control valve	
Protective safe devices		Circuit breaker, PT/CT board (for over current protection), compressor thermal protector, fan-motor thermal protector, high-pressure switch, fusible safety plug, fuse (10A) × 5	
Refrigerant (charged amount)		R134a : 4.4kg/9.7 (lbs)	
Refrigeration oil (charged amount)		CASTROL ICEMATIC SW46: 3.6 (ℓ)	
Unit weight		Approx. 650 (kg)/1433 (lbs)	

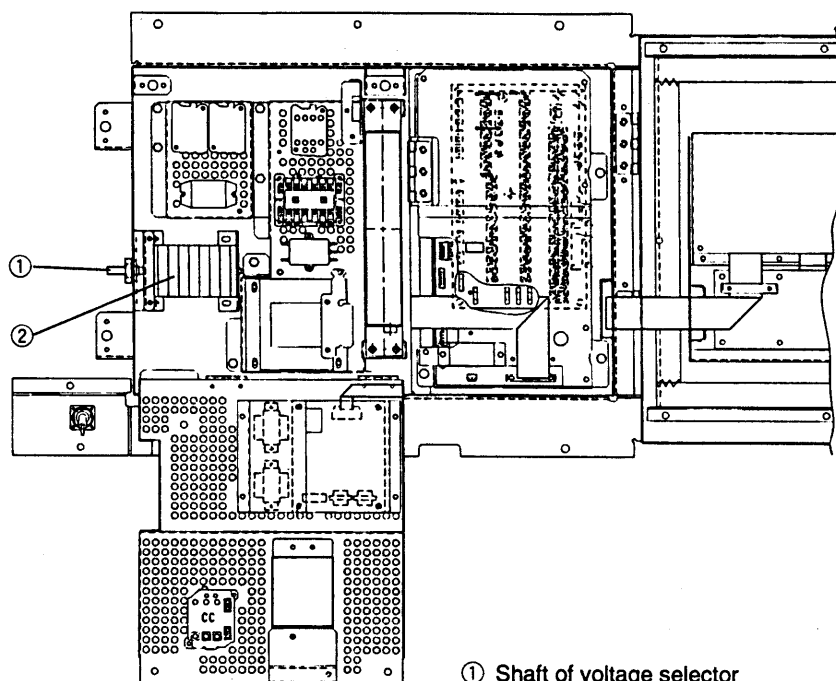
1.2 Name of components

● Outside



① Storage space for power cable (200V class)

● Inside of the control box

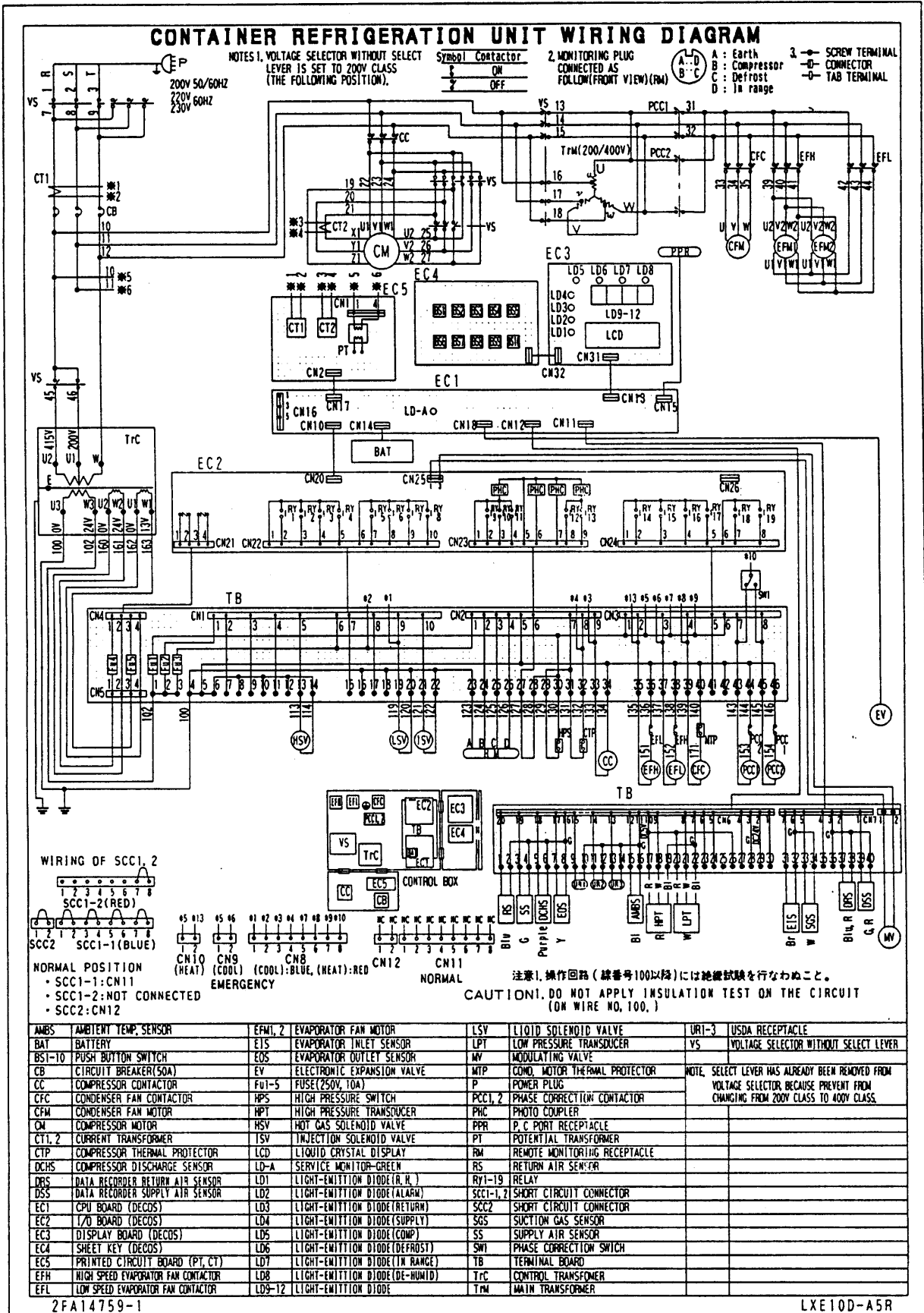


① Shaft of voltage selector
② Voltage selector without select lever

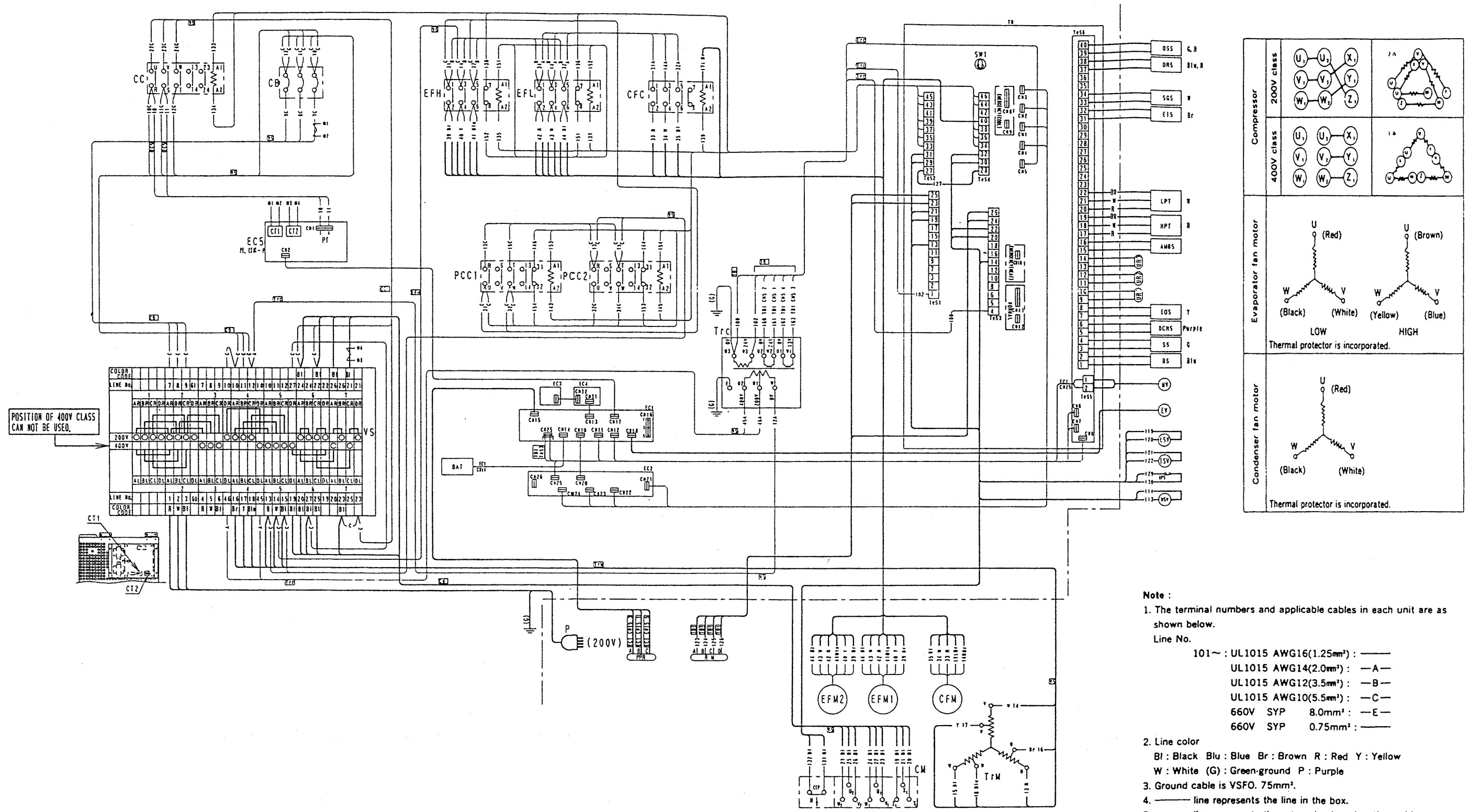
CAUTION

Do not turn the shaft of voltage selector with using tools like monkey wrench.

1.3 Schematic wiring diagram



1.4 Stereoscopic wiring diagram



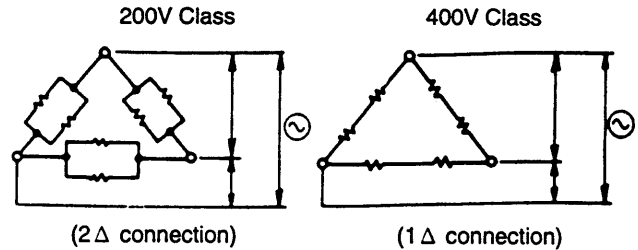
- Note :**
- The terminal numbers and applicable cables in each unit are as shown below.
 Line No.
 101~ : UL1015 AWG16(1.25mm²) : —
 UL1015 AWG14(2.0mm²) : —A—
 UL1015 AWG12(3.5mm²) : —B—
 UL1015 AWG10(5.5mm²) : —C—
 660V SYP 8.0mm² : —E—
 660V SYP 0.75mm² : —
 - Line color
 Bl : Black Blu : Blue Br : Brown R : Red Y : Yellow
 W : White (G) : Green-ground P : Purple
 - Ground cable is VSFO, 75mm².
 - line represents the line in the box.
 - line represents the external unit or junction cable.
 - represents the optional specification.

2. VOLTAGE SELECTION SYSTEM (Change-over for 200V/400V class)

(1) Voltage selection system

Since the compressor motor is a dual voltage type and the fan motor is a transformer operated type, supply power is changed by the voltage selector lever with multi-contact cam switch which fits the wiring connections to the transformer for the control circuit and to each motor with its supply voltage. The internal wiring of the dual voltage compressor is as shown in the right.

(Machine for 200V/400V dual power supply)



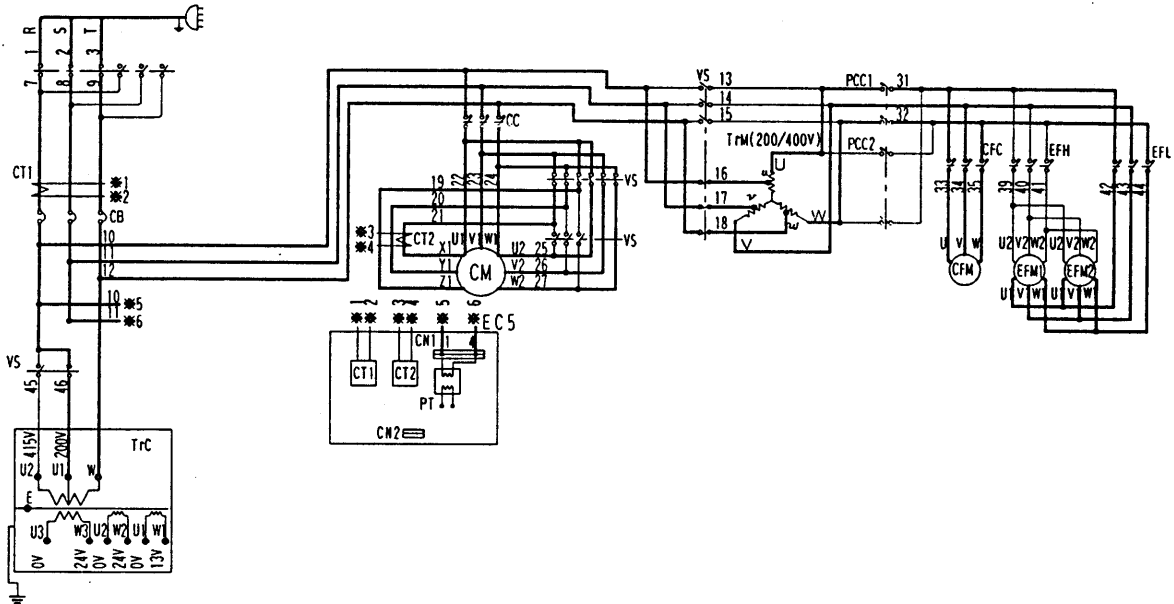
But LXE10D-A5R doesn't have the select lever of voltage selector.

The contacts of voltage selector are locked at the position of 200V class.

(2) Circuit formation

● 200V class




The contacts (except SSW) shown by † become closed in the sequence circuit.



⚠ CAUTION

LXE10D-A5R doesn't have the select of voltage selector.
Select lever has already been removed from voltage selector,
for the prevention of changing over from 200V class to 400V
class.

3. G-SET OPERATION

- ① Press the G-SET key.
 - ② Select "11", "12", "13", "14" or "15" (KVA) indicated on the LED by the  key or the  key, and press the  key to determine the setting, then the energy saving operation starts so that the power consumption is saved to be the selected value (KVA) or lower.
- * If "OFF" is pressed during the energy saving operation, the energy saving operation is canceled.
 - * If the power supply is turned off in the G-SET mode, the mode is not canceled.
 - * During the G-SET operation, the leftmost. iLCD display indicates "G".



CAUTION

Set "11" (KVA) in G-SET mode "11" (KVA) is set in the factory sets.

Always operate the unit in the G-SET mode.



CAUTION Observe the following items when installing the new controller.

4. INITIAL SETTING OF CONTROLLER

The controller needs to be initialized referring to the operation procedures of the following modes.

Referto section 3.2 in servicemanual (Maintenance and Repair) (TR97-09).

7. Optional function setting mode
8. Basic function setting mode
9. Optional condition setting mode
10. Input data mode

※Since the spare part is not initially set, it can not be operated as it is, (The alarm will be displayed.)



CAUTION

Always select "UAL" on INPUT POWER SETTING of "8. Basic function setting mode".

Power supply of LXE10D-A5R is 200V class single voltage, not dual voltage. But it is necessary to set "dUAL" at initial setting of controller.

(標準品と異なる部品のみ記載)

Chapter for Parts List

(The parts which are different from that of the standard products only are described in this parts list)

パーツリスト使用上の注意

このパーツリストはダイキン海上コンテナ冷凍装置の部品を集録してあります。パーツリスト使用にあたっては、必ず次の注意事項をご一読の上使用していただくようお願いいたします。

1. 部品のご注文の際は機種名、部品番号、および部品名、形式を必ずご指定ください。
なお、部品番号欄が空白になっている部品は、図面番号で指示願います。
2. 掲載部品の範囲は、あくまでも現地にて分解修理できるところまで記載しております。
一部部品につき納期のかかるものおよびセット単位となるものもありますので、お近くのダイキンパーツセンター又はサービスステーションに相談願います。

ORDERING INSTRUCTIONS

The parts list contains the parts of the DAIKIN Marine Type Container Refrigeration Units.

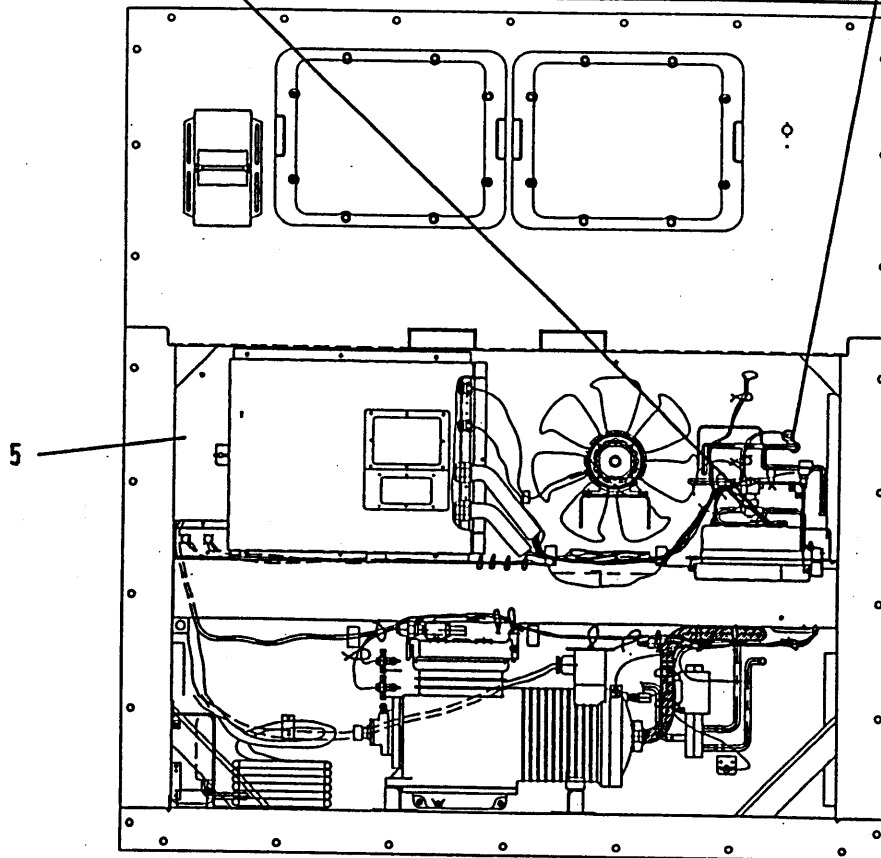
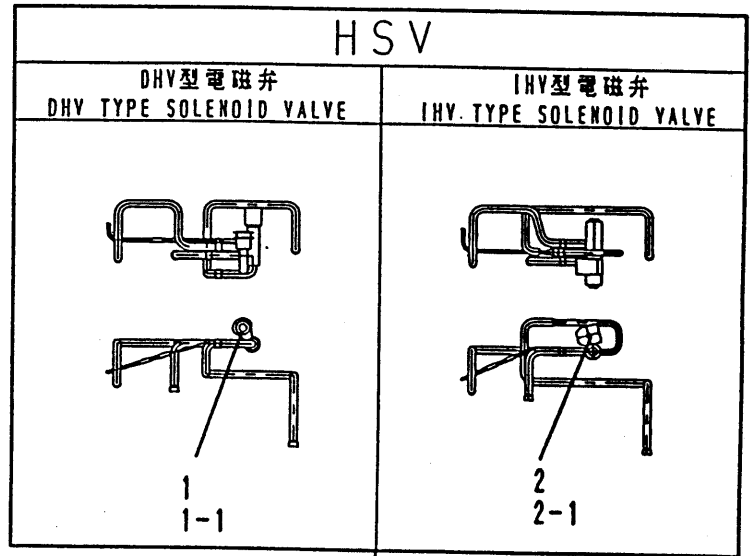
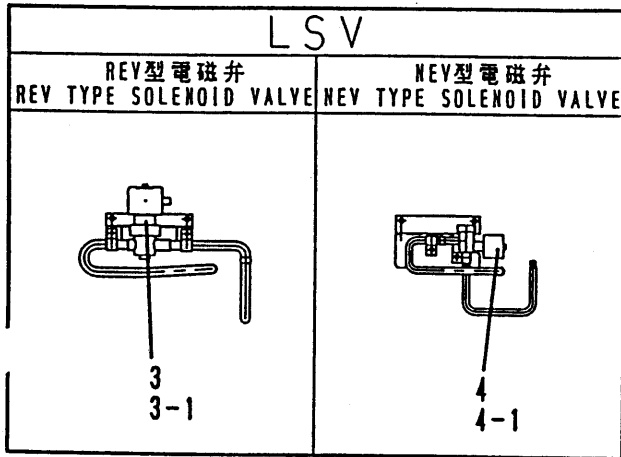
Carefully read the following cautions before using the list.

1. When ordering the parts, be sure to describe Model No., Name of part and type.
When ordering the parts No. are not shown in the PARTS NO. column, be sure to describe DWG.NO..
2. The parts shown in the list are replacement or repairing on the spot only.
Certain parts require a long time of delivery or are assembled in a set, so it is advisable to contact with the nearest DAIKIN PARTS CENTRE.

本書は標準機と異なる箇所のみ記載しておりますので、本書に記載なき事項は別途発行パーツリスト (TR97-11) を併せて参照下さい。

The parts which are different from that of the standard model only are described in this manual. Regarding the items which are not described in this manual, refer to Parts List (TR97-11) as well.

Parts related with the unit (outside) 1
庫外関連部品 1



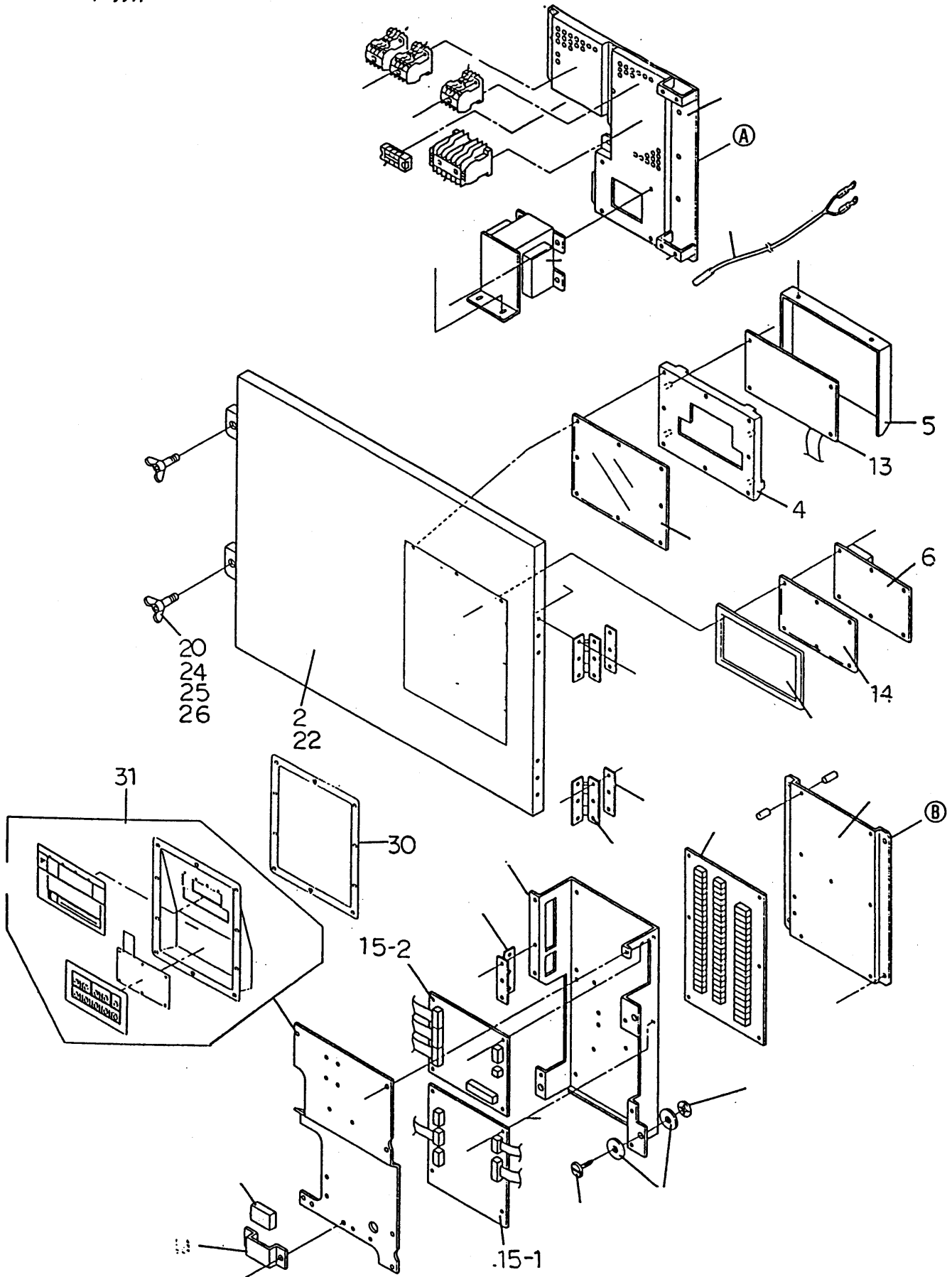
Parts related with the unit(outside) 1
庫外関連部品1

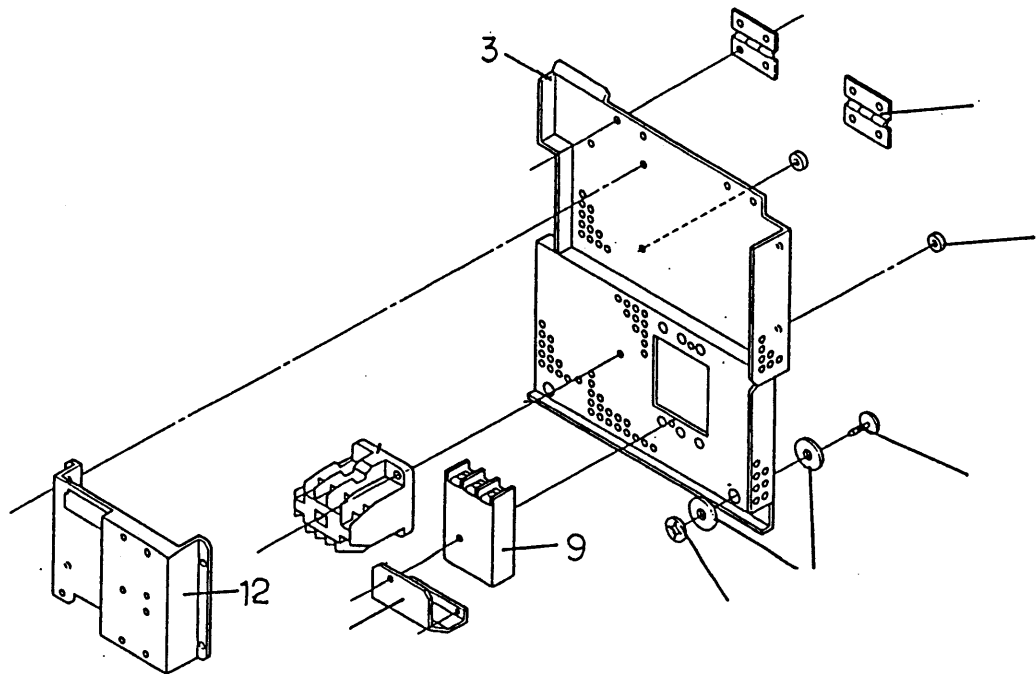
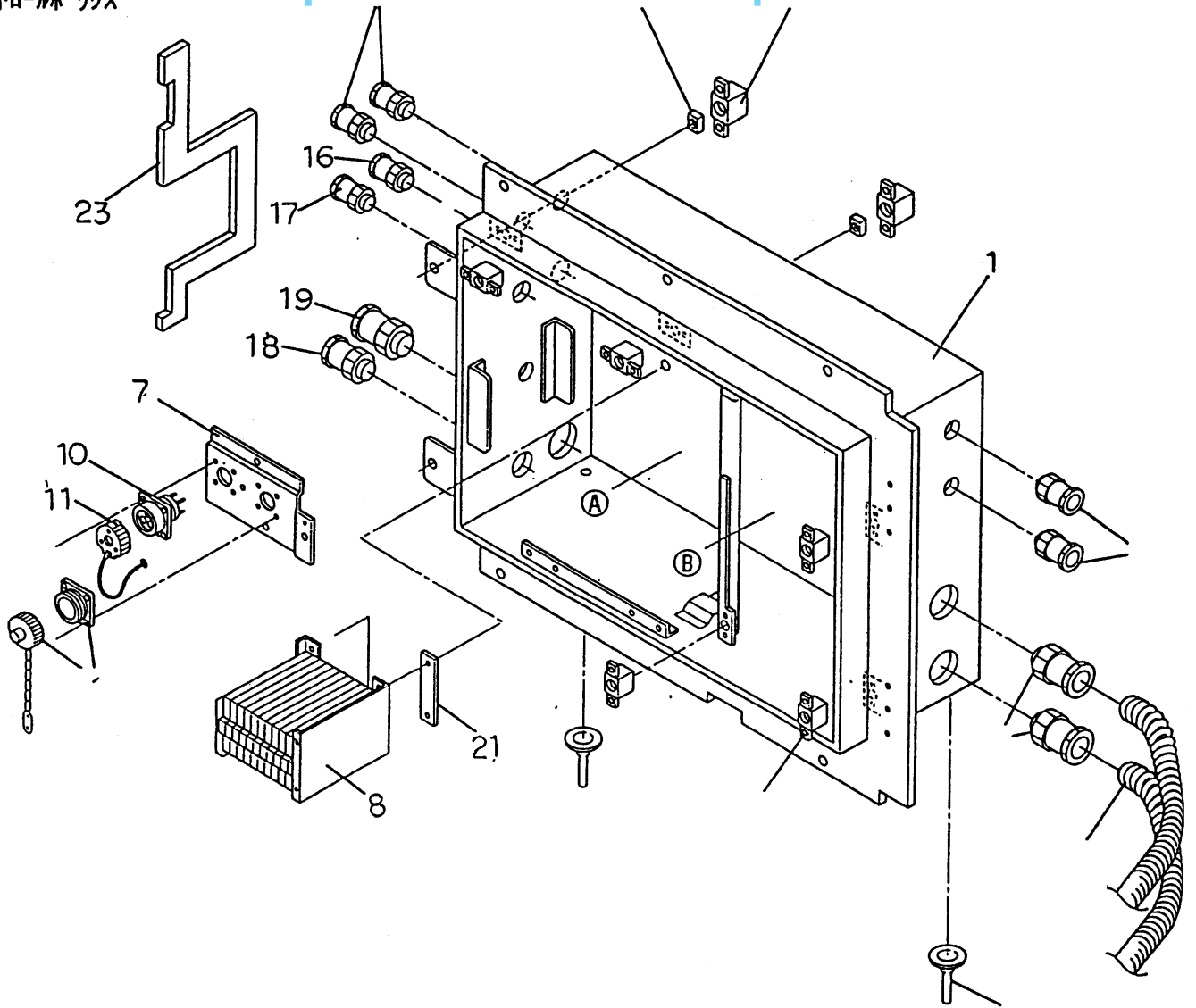
NO. 符号	PARTS NO. 部品番号	PARTS NAME	部品名称	DWG. NO. 図面番号	TYPE SPECIFICATION 形式 仕様	QTY/UNIT 1台当たりの所要数	REMARKS 備考
1	0598622	Three way solenoid valve (HSV)	三方電磁弁 (HSV)	3PA11792-4	DHV-804DXF, HSV	1	BODY+COIL
1-1	0598639	Coil, three way solenoid valve	三方電磁弁コイル	3PA11792-4-KA		1	COIL ONLY
3	0598684	Refrigerant solenoid valve (LSV)	冷媒用電磁弁 (LSV)	3PA43018-3	REV-1004DXF, LSV	1	BODY+COIL
3-1	0598691	Coil, solenoid valve	電磁弁コイル	3PA43018-3-KA		1	COIL ONLY
5		C, box front plate	C, BOX前板 (左)	2P023471-1		1	

When ordering the parts whose No. are not shown in the PARTS NO. column, be sure to describe DWG NO. .

部品番号欄が空白になっている部品は、図面番号で、指示願います。

Control box
コントロールボックス





Control box
コントロールボックス

NO. 符号	PARTS NO. 部品番号	PARTS NAME	部品名称	DWG. NO. 図面番号	TYPE SPECIFICATION 形式 仕様	QTY/UNIT 1台当たりの所要数	REMARKS 備考
1		C. box welding ass'y	C. BOX溶接組立品	2P003754-1		1	
2	0991555	Control box cover welding ass'y	コントロールボックス蓋溶接組立品	3P003505-1		1	
3	1459838	Set plate, control devices (2)	機器取付板 (2)	2P010019-1		1	
4	1142154	Plate, label	銘板張付用板	3P003753-1		1	
5	1140165	Cover, display board	表示基板用カバー	3P005734-1		1	
6		Fixing plate, sheet key	取付板 (シートキー)	4P00354-1		1	
7	1460179	Fixing plate, PC port	パソコンレセプタクル固定板	4P009422-1		1	
8	634017	Cam switch (VS)	カムスイッチ (VS)	R3421041-3	7P-3CL	1	
9	0344971	Circuit breaker (CB)	ノーフューズブレーカ (CB)	3PA37567-1	50A FA53B	1	
10	0991531	PC port connector	パソコンポートコネクタ	3P010803-1		1	
11	1270011	Personal computer port cover	パソコンポートカバー	3P010805-1		1	
12	0980788	PT/CT board	PT/CTボード	2P010906-1		1	
13	1010815	Display board	表示基板	2P010368-2		1	
14	0954570	Membrane switch	シートキー	2P010363-1		1	
15	1075526	CPU & I/O board ass'y	CPU & I/O ボード組立品	3P015006-9		1	
15-1	1080270	CPU board	CPU ボード	2P010365-5		1	
15-2	0954594	I/O board	I/O ボード	2P010367-1		1	
16	0758657	Cable gland	電線グランド	3PA37599-7	SCL-18A ケーブルコネクタ	1	
17	0758633	Cable gland	電線グランド	3PA37599-8	SCL-18B ケーブルコネクタ	1	
18	0965556	Cable gland	電線グランド	3PA37599-9	SCL-22A ケーブルコネクタ	1	
19	0966294	Cable gland	電線グランド	3PA37599-12	SCL-30B	1	
20	1170065	Wing bolt, control box cover	蝶ボルト (コントロールボックス蓋)	4P010750-1		2	
21	833012	Patch plate nut	当板ナット	R4718017-1		1	
22		Rubber gasket	パッキン (C. BOX蓋)	4P003732-2		1	
23	1460148	Packing (C. box front plate)	パッキン (C. BOX前板)	4P007341-1		1	
24	844022	Plain washer	平座金	4SK07005-12		2	
25	1136438	Insulation sheet	絶縁シート (C. BOX蓋)	4P016059-1		2	

・When ordering the parts whose No. are not shown in the PARTS NO. column, be sure to describe DWG NO.,

・部品番号欄が空白になっている部品は、図面番号で、指示願います。

Control box
コントロールボックス

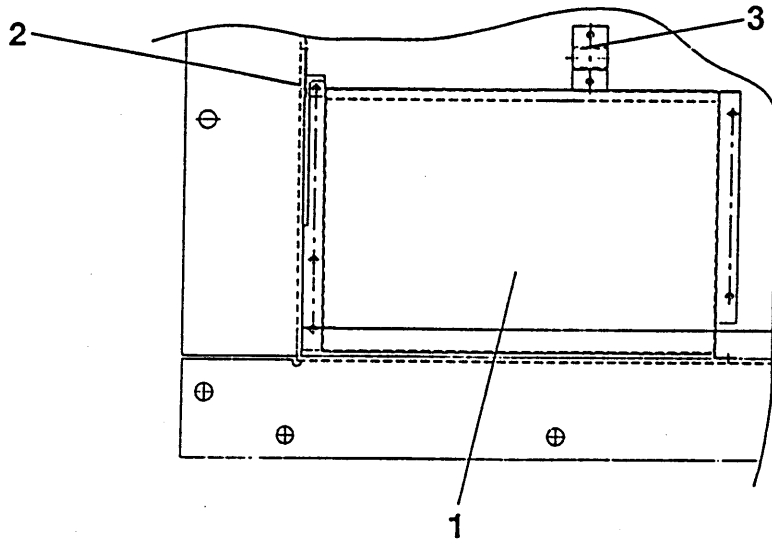
NO. 符号	PARTS NO. 部品番号	PARTS NAME	部品名称	DWG. NO. 図面番号	TYPE SPECIFICATION 形式 仕様	QTY/UNIT 1台当たりの所要数	REMARKS 備考
26	1136445	Retaining ring	E形止メ輪	4P016093-1		2	

When ordering the parts whose No. are not shown in the PARTS NO. column, be sure to describe DWG NO..

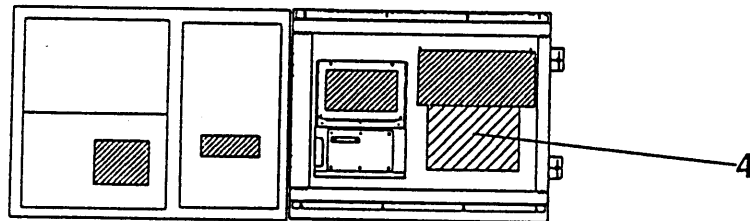
部品番号欄が空白になっている部品は、図面番号で、指示願います。

Parts related with the unit (outside)
屋外関連部品

200V級シングル電源 (200V class single voltage type)



銘板 (Name plate)



Control box (Inside)

Parts related with the unit (outside)
庫外関連部品

NO. 符号	PARTS NO. 部品番号	PARTS NAME	部品名称	DWG. NO. 図面番号	TYPE 形式	SPECIFICATION 仕様	QTY/UNIT 1台当たりの所要数	REMARKS 備考
1		Front plate(cable)	前板(ケーブル)	2FA14758-1			1	
2	1266144	Mounting plate, front plate(cable)	取付板	4P006981-1			1	
3	1264458	Wire clamp	管止金	4PA61539-3			1	
4		Name plate, wiring diagram		2FA14759-1			1	

・When ordering the parts whose No. are not shown in the PARTS NO. column, be sure to describe DWG NO.,

・部品番号欄が空白になっている部品は、図面番号で、指示願います。

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