HITACHI INVERTER

REMOTE OPERATOR
SRW-0J , SRW-0EX

I N S T R U C T I O N
M A N U A L

Thank you for purchasing Remote Operator. This instruction manual is written about how to use Remote Operator. Could you use this manual for inspection, maintenance, setting and use it with the main body of inverter. After reading this manual, keep it at hand for future reference.

NB615X

HITACHI

SAFETY

To get best performance with **Remote Operator**, read this manual and all of the warning sign attached to the inverter carefully before installation and operation, and follow the instructions exactly. Keep this manual handy for your quick reference.

Definitions and Symbols

A safety instruction (message) is given with a hazard alert symbol and a signal word;
WARNING or **CAUTION**. Each signal word has the following meaning throughout this manual.

This symbol means hazardous high voltage. It used to call your attention to items or operations that could be dangerous to your and/or other persons operating this equipment.
Read these messages and follow these instructions carefully.

This is the "Safety Alert Symbol. " This symbol is used to call your attention to items or operations that could be dangerous to your and/or other persons operating this equipment. Read the messages and follow these instructions carefully.

WARNING

WARNING
Indicates a potentially hazardous situation which, if not avoided, can result in serious injury or death.

CAUTION

CAUTION
Indicates a potentially hazardous situation which, if not avoided, can result in minor to moderate injury, or serious damage of product.
The matters described under ⚠ CAUTION may, if not avoided, lead to serious results depending on the situation. Important matters are described in **CAUTION** (as well as **WARNING**), so be sure to observe them.

NOTE

NOTE
Notes indicate an area or subject of special merit, emphasizing either the product's capabilities or common errors in operation or maintenance.

⚡ HAZARDOUS HIGH VOLTAGE

Motor control equipment and electronic controllers are connected to hazardous line voltages. When servicing drives and electronic controllers, there might be exposed components with cases or protrusions at or above line potential. Extreme care should be taken to product against shock.
Stand on an insulating pad and make it a habit to use only one hand when checking components. Always work with another person in case an emergency occurs. Disconnect power before checking controllers or performing maintenance. Be sure equipment is properly grounded. Wear safety glasses whenever working on electronic controllers or rotating electrical equipment.

Revision History Table

No.	Revision Contents	The Date of Issue	Operation Manual No.
1	**Initial Release of Manual NB615X**	Apr. 2000	NB615X

⚠ WARNING

Never modify the unit.
    Otherwise, there is a danger of electric shock and/or injury.

⚠ CAUTION

Avoid locations of high temperatures, high humidity, dew condensation, dust, corrosive gases, explosive gases, combustible gases, coolant mist and sea damage etc. Install indoors, to avoid direct sunlight and the unit should be well ventilated.
    Otherwise, there is a danger of electric shock and/or injury.

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1.1 Outline

This operator is series of SJ300/L300P and it has a 16 characters x 2 lines liquid crystal display. This operator enable monitor data setting, data read setting copy also it can use former operator if which can use DOP/DRW. (but function is restricted.)

1.2   Applicable Inverter Models

UNIT	DISPLAY	Attach to the inverter	Remark
SJ300,L300P series	16characters×2 lines	Possible	
SJ100,L100,J300,L300 , J100,J200,JH300,J500 , L50 series	16characters×2 lines (Display to the top row)	Impossible	Left side moving function key and remote function key are invalid

This operator can use the inverter if which can use DOP/DRW.

――《NOTE》――――

 It is necessary to change the operation mode of remote operator, when the Inverter type is not SJ300/L300P series. Because initial value of the operation mode is the value for SJ300/L300P.(Refer to 6 chapter)

1.3   Inspection upon unpacking

Please don't shake the product when you open the package. Make sure that the product is the one you orderd and there was no damage (injury,falling or dents in the body) during transpotation of the unit.
Content of package
        1. Main body of remote operator :1
        2. Instruction manual   :1
 If you have any questions please contact your supplier or the local Hitachi Distributor with the following information.

1.4 Question and Warranty of the unit

1.4.1 Request upon asking

・ If you have any questions regarding damage to the unit, unknown parts or for general

enquiries, please contact your supplier or the local Hitachi Distributor with following information.

(1) Model
(2) Product Model Code
(3) Date of purchase
(4) Reason for calling

   ・ Damaged part and its condition etc.

   ・ Unknown parts and their contents etc.

・ For reducing down time, we recommend keeping a spare unit.

1.4.2 Warranty for the unit

 The warranty period of the unit is one year after the purchase date. However within the warranty period, the warranty will be void if the fault is due to;

(1) Incorrect use as directed in this manual, or attempted repair by unauthorized personnel.
(2) Any damage sustained other than from transportation (which should be reported immediately).
(3) Using the unit beyond the limits of the specification.
(4) Act of God (Natural Disasters: Earthquakes, Lightning, etc)

・ The warranty is for remote operator only, any damage caused to third party equipment by

 malfunction of the remote operator is not covered by the warranty.

Repairing for payment
Any examination or repair after the warranty period (one-year) is not covered. And within the warranty period any repair and examination which results in information showing the fault was caused by any of the items mentioned above, the repair and examination cost are not covered. If you have any questions regarding the warranty please contact either your supplier or the local Hitachi Distributor.
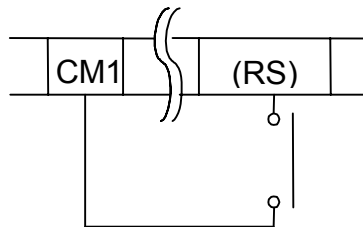
2.1   Handling the Cable (Optional)

1. Avoid pulling the cable forcibly for operation or moving the operator by its cable.
2. Fix the cable when the operator is housed in the object inverter panel.
3. Separate the cable more than 15cm from the main circuit, the main circuit relay, and the circuit control cable.
4. The allowable connection/disconnection frequency of the cable is about 1000 times. If errors or unreadable characters are often contained in displayed data, replace the cable. (If the same error symptom appears even after the cable replacement, replace the remote operator itself.)
5.   Be sure to turn OFF the power supply of the inverter and confirm the POWER lamp is OFF before connecting /disconnecting the operator cable.

2.2   Providing an EMERGENCY Switch

The operator may not stop in some cases when the stop key is pressed if an abnormal event such as contact error, cable break, etc. occurs in the operator itself, its cable or connect during operation.
To prevent such a trouble or unexpected accidents, it is recommended to provide an EMERGENCY STOP switch to the inverter terminal RS or FRS.

```
┌──────┬──  ((  ──┬──────────┬──────┐
│ CM1  │   ))     │  (RS)    │      │
└──────┴──  ((  ──┴────┬─────┴──────┘
                       ○
                       │
                       │
           ┌───────────○
           │
```

2.3   Operating Life of Memory Elements of the Remote Operator unit

The memory elements of remote operator unit are limited in operating life about 100,000 times of data writing frequency. When the operating life is reached "R-ERROR DATA ROM" will appear and the read, and the copy functions will be disabled. But monitor and data setting are able to use.

3.1   Connect to inverter

3.1.1 Connecting to operator on the surface of cover (SJ300/L300P series only)

1. After setting up like a following figure, insert the operator to the connector vertically.
2. Turn on the power supply of the inverter , and Confirm that LCD screen of the operator is ON.
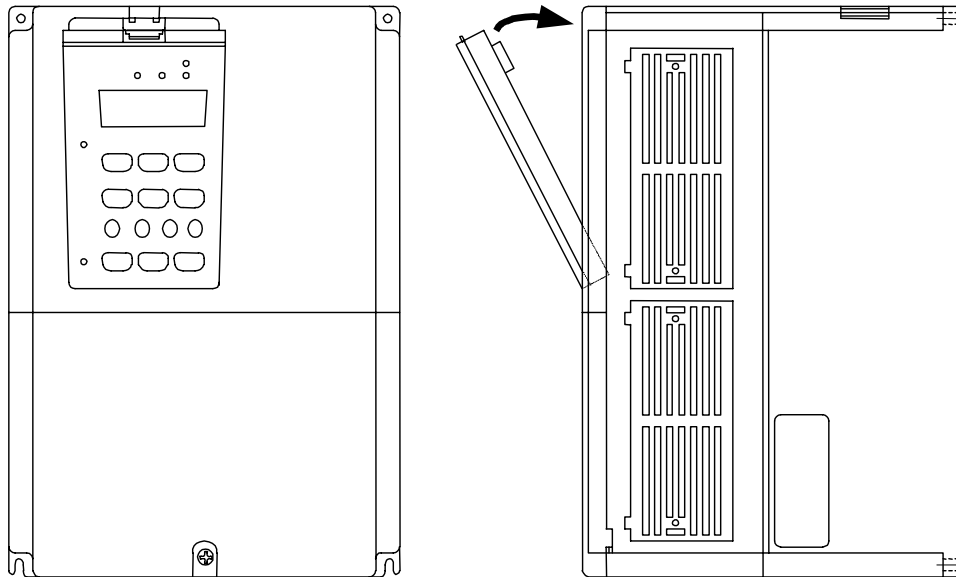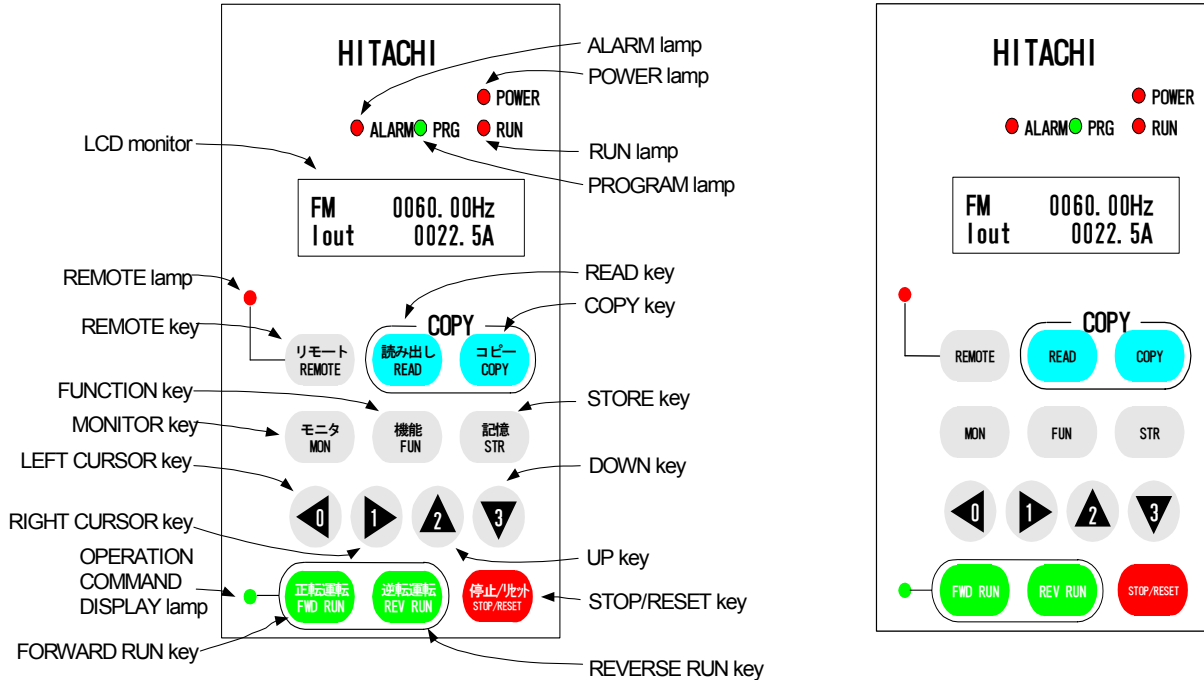

3.1.2 Connecting by cable (Option)

1. Insert the both end of cable to main body and operator.
2. Turn on the power supply of the inverter , and Confirm that LCD screen of the operator is ON.

UNIT	Cable
SJ300,L300P,SJ100,L100 series	ICS-1 , ICS-3
J300.L300,J100,J200JH300,J500,L50 series	ICS-1J ,ICS-3J

SRW-0J

SRW-0EX

Name	Contents
LCD monitor	Display of frequency, output current and set value , etc . (NOTE 1)
RUN lamp	Light on when the inverter is running. (NOTE 2)
PROGRAM lamp	Light on when displaying set value of each function in monitor section. Light will go on and off as a warning (when set value is incorrect). (NOTE 2)
POWER lamp	Power lamp of control circuit.
ALARM lamp	Light on when the Inverter trips. (NOTE 2)
OPERATION COMMAND DISPLAY lamp	Light on only when operating command (RUN/STOP) is set in operator. (NOTE 2)
REMOTE key	Remote key can change operation command and frequency command method to the operator. (NOTE 2) (NOTE 3)
READ key	The key is used for storing the data of the inverter to the memory elements of inside the remote operator.
COPY key	The key to copy the data set which data is memorized in remote operator.
MONITOR key	The key is used to enter monitor mode or trip monitor mode.
FUNCTION key	The key containing basic setting mode, extension functions mode.
STORE key	The key to store the data set. (On changing set value, must be pushed or value is lost.).
CURSOR key	The key is used to move right and left. (NOTE 4)
UP,DOWN key	The keys to change extension function mode, function mode and set value.
FORWARD,REVERSE RUN key	The key is used for operating motor but this key can command only operator. (Check operation command display lamp, whether it flash or nor.).
STOP/RESET key	The key is used to stop the motor, or reset an alarm.

(NOTE 1) 2-LineDisplay for SJ300/L300P series only

(NOTE 2) SJ300/L300P series only

(NOTE 3) Press the key more than 3 seconds , and can change while the inverter stops .

(NOTE 4) The LEFT CURSOR key is valid for SJ300/L300P series only .
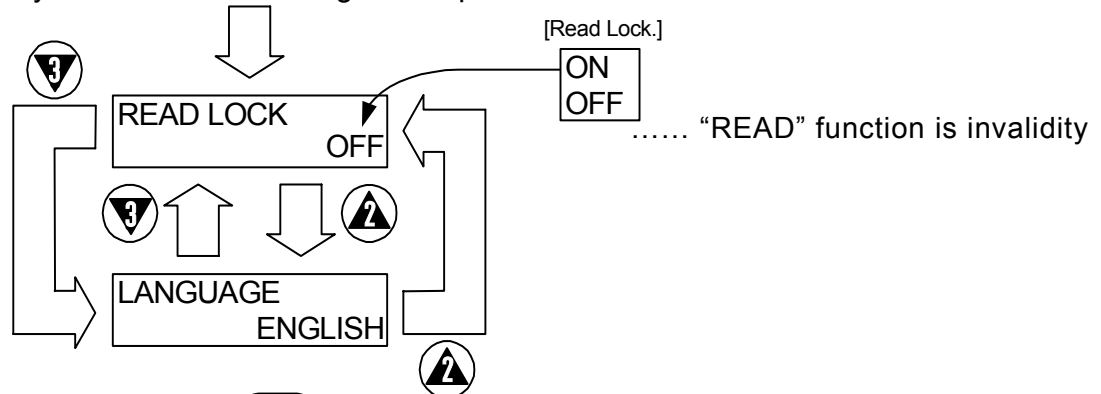
5.1　Copy Function

1. The copy function can be used only while the inverter stops. While the inverter is running, tripping, reset or soft-locked, the function is invalidated.
2. Press the Read key or copy key. The following display will appear corresponding to the entered key. When the copying ends, the display will go back to the before one.


```
( READ )                          ( COPY )

WRITER INV →→ REMT    WRITER REMT →→ INV
```
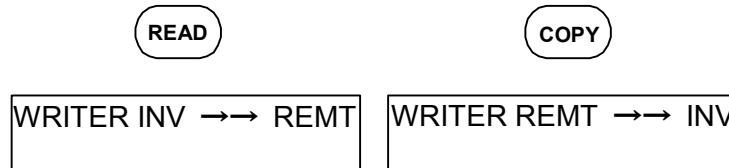
3. If any set data is updated after some data is read the inverter, the data is updated only in the inverter. To read the updated data from the inverter into a remote operator, press the Read key again.
4. The data read into a remote operator can be held even when the power supply of the inverter is turned OFF.
5. Copying data between inverters is possible only between the same type ones. (When copying is done between different type inverters ,will display error message and copy function will stop.)
6. In order to protect the data in the remote operator, a function to inhibit transferring data from inverter to remote operator and reading data from inverter is provided. To use this function read 5.2 please.
7. Refer to the each inverter instruction manual about the object item of READ /COPY .
8. When pressing any key or resetting the unit or the power is turned off after the READ key /COPY key is pressed , be sure to wait for at least ten seconds.

5.2   Read Lock Operation

More than 2 second, press the (MON) — (◀) — (STOP/RESET)
keys at the same time on general operation.

[Read Lock.]

```
                    ON
                    OFF
READ LOCK                   ...... "READ" function is invalidity
            OFF


LANGUAGE
            ENGLISH
```

If you press the (STR) key, data wil be stored.

If you press the (REMT) key, back to the general mode.

Both of the (◀) (▶) keys are used for changing the top and bottom row.

When read lock of remote operator follow as below.

(NOTE) Setting item for Multi language select . The item is displayed , when "OPERATOR TYPE" is "SRW " or "LANGUAGE SELECT " is "ON " in Setting operation mode . (refer to chapter 6)

(NOTE)

To change operating mode of the remote operator is written below. The setting data are validity after Power ON again .

Inverter Type	BPS	OPERATOR TYPE	remarks

Press the (REMT) — (FUN) key at the same time, in order to turn on power.

LOCAL MODE

During press the (REMT) — (FUN) key.,

"LOCAL MODE " will appear

CONFIGURATION DIAGNOSE

Keep off the (REMT) — (FUN) key,

"CONFIGURATION DIAGNOSE" will appear.

Press the (STR) key, when the cursor is the head of top row.

BPS
2400

2400
4800
9600
19200

(Comunicating speed(bps))

SET DEFAULT
CANCEL

(Whether set default or not)

CANCEL
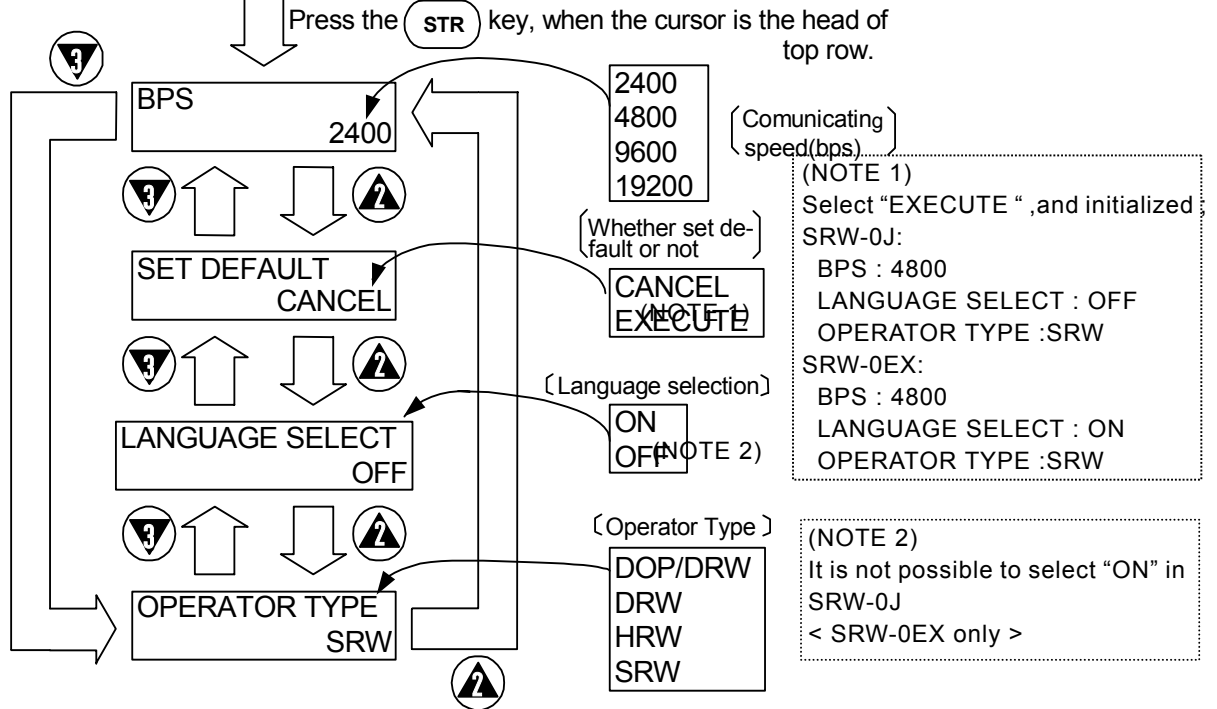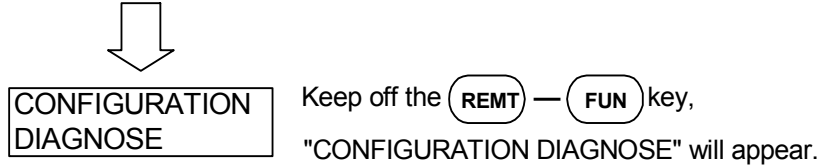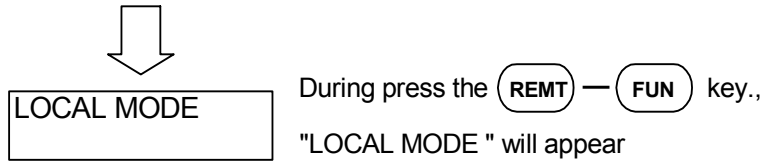EXECUTE (NOTE 1)

LANGUAGE SELECT
OFF

(Language selection)

ON
OFF (NOTE 2)

OPERATOR TYPE
SRW

(Operator Type)

DOP/DRW
DRW
HRW
SRW

(NOTE 1)
Select "EXECUTE " ,and initialized
SRW-0J:
  BPS : 4800
  LANGUAGE SELECT : OFF
  OPERATOR TYPE :SRW
SRW-0EX:
  BPS : 4800
  LANGUAGE SELECT : ON
  OPERATOR TYPE :SRW

(NOTE 2)
It is not possible to select "ON" in
SRW-0J
< SRW-0EX only >

If press the (STR) key, data will be stored.

If press the (REMT) key, back to the general operation.

Both the keys are used for changing the top and bottom row.

SJ300, L300P series	4800	SRW	
SJ100 ,L100,J100, L50 series	4800	DRW2	It is possible to monitor and data setting ,when "OPERATOR TYPE" is "DOP/DRW". But Copy function is restricted.(NOTE 3)
J300,L300,J500, JH300 series	4800	HRW	It is possible to monitor and data setting ,when "OPERATOR TYPE" is "DOP/DRW", "DRW2". But Copy function is restricted . (NOTE 3)

(NOTE 3) Refer to the each inverter instruction manual .

Error messages to be displayed on the screen are classified into inverter errors and operator errors. They will appear on the screen as shown below.

7.1 Inverter error message

ERR1 ********	For more information, refer to the

inverter instruction manual.

or

?ERROR ********

7.2 Operator error messages

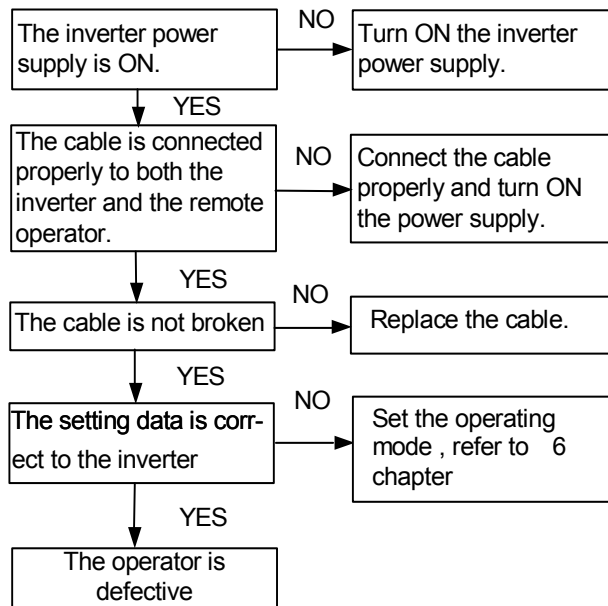| Display R-ERROR ******	Cause	Check item	Action	Reset-ting Method
COMM.<1>	Quantity of the data within time unit didn't match.	・ Check noise sources around there. ・ Check the cable for disconnection.	・ Separate the cable from others to eliminate the noise. ・ Check the cable	Press STOP/ RESET Key
COMM.<2>	No signal is received from the inverter within 5 sec.	・ Reset the inverter. ・ Check the connector for looseness /disconnection. ・ Check the cable for break	・ Avoid issuing the RESET signal continuously for more than 5 sec. (NOTE 1) ・ Replace the cable and the connector.	
INV .RUN	・ The COPY key is pressed while the inverter is running. ・ Soft-lock is turned ON.	・ Check if the COPY key is pressed while the inverter is running. ・ Check if the COPY key is pressed while Soft-Lock is ON	・ The COPY key Should be pressed only while the inverter stops. ・ Release the Soft-Lock (of the inverter).	
INV. TRIP	COPY key is pressed while the inverter trips.	Check if the inverter trips.	Reset the inverter from the trip status.	
INV. TYPE	An attempt was made to copy between different type inverters		Copying is possible only between same type inverters.	
RD LOCK	In case of display "READ LOCK".		Release the Read Lock.	
DATA ROM	EEPROM of remote operator is overloaded		・ If the same error recurs after the power is supplied once or twice, ・ Purchase the new operator please.	Supply the power again.

COPY ROM	The data written in the inverter un-matches with the data in the remote operator.		If the same error recurs when copying is done again, the inverter is defective.(NOTE 2)	

(NOTE 1) Except SJ300/L300P/SJ100/L100 series.

(NOTE 2) Refer to the each inverter instruction manual.

For the troubleshooting of the inverter, refer to the inverter instruction manual. In this section, the troubleshooting of the operator will be described.

1. No data appears on the screen.

| The inverter power supply is ON. | NO → | Turn ON the inverter power supply. |

↓ YES

| The cable is connected properly to both the inverter and the remote operator. | NO → | Connect the cable properly and turn ON the power supply. |

↓ YES

| The cable is not broken | NO → | Replace the cable. |

↓ YES

| The setting data is correct to the inverter | NO → | Set the operating mode , refer to 6 chapter |

↓ YES

| The operator is defective |

2. Key operations are ignored.

| The inverter operation is normal. | NO → | Reset the inverter. |

↓ YES

| The cable is connected properly to the connector. | NO → | Connect the cable properly, then turn ON the inverter power supply. |

↓ YES

| The cable is not broken. | NO → | Replace the cable. |

↓ YES

| Operator does not accept a order, even though key is pressed several times. | YES → | The operator is defective. |
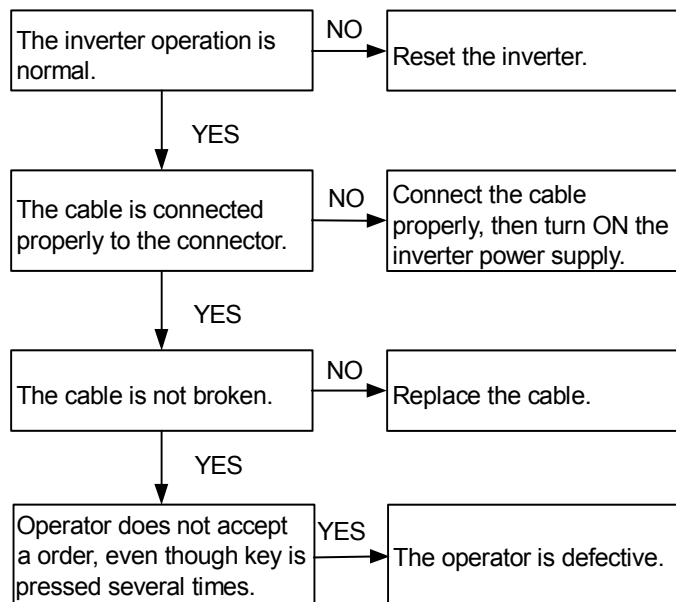
3. If the operator/inverter screen becomes dark or characters cannot be identified, inductive noise may be entered from the cable. Separate the remote operator cable more than 15 cm from other cables. To reset the disturbed screen, turn ON any keys of remote operator. If the same symptom appears again, turn OFF the inverter power supply or reset the terminal reset signal.

10.1   Type of LCD screen, configuration LCD

LCD screens are classified five types. Each of mode's operation way is written on 10.3

1.   Monitor mode A (display monitor screen display in top row   and
                             function mode simple display in bottom row.)

Monitor Item 1
Function Mode Simple Display

Ex. :

FM   0060.00H
>A001   REM

2.   Monitor mode B (display the monitor screen display on top row and bottom row.)

Monitor Item 2
Monitor Item 3

Ex. :

FM   0060.00H
Iout   0022.5A

3.   Trip mode (display each data during trip)

ERR1   Factor
The data on trip   Inverter status

Ex. :

ERR1   OC.   Accel
F   037.00Hz   ACC

4.   Warning monitor (display each data during warnig)

WARN   Factor code
Contents of warning

Ex. :

WARN   W025
Lim-L   > FS

5.   Function mode (selecting function)

>Code No.   Name of group
Individual   setting value

Ex. :

>A001   F-SET
SELECT   REM

10.2 The way of changing mode

Each of the way of changing is written following figure.
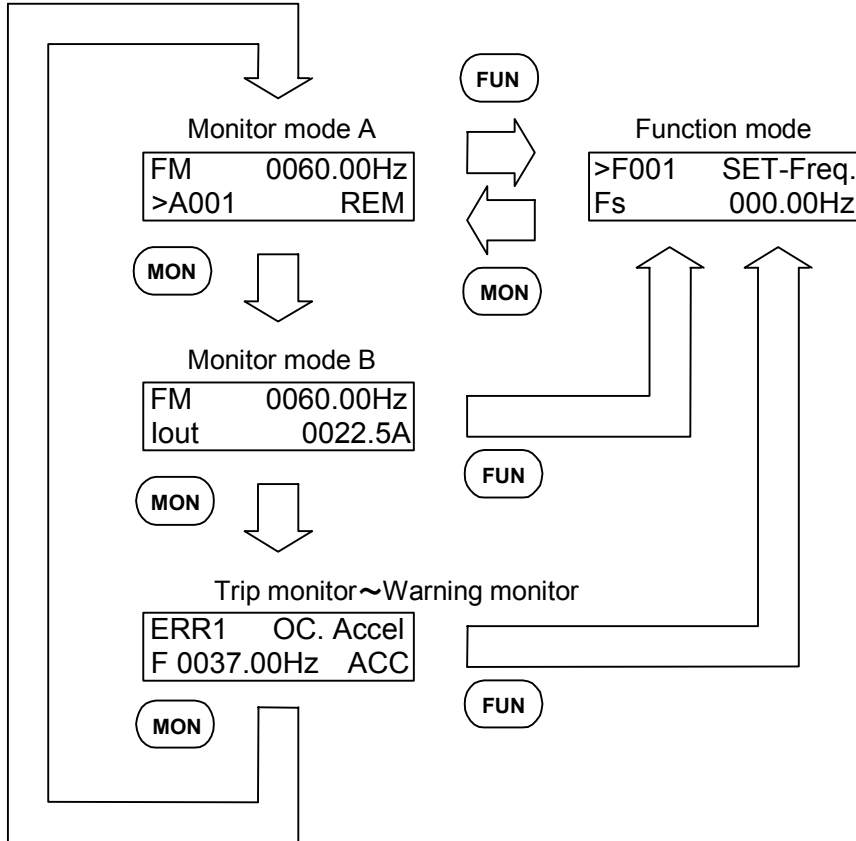
10.3 Method of each of modes operation

（1）Monitor Mode A

Use ◁ ▷ and ▲ ▼ keys, input the monitor item which you desired in top row, select setting item in bottom row, then press the store key.

・　Example 1

In case of method of select the output current in monitor item 1 and select A001 to the simple display item of function mode, and frequency command change from remote operator to terminal.

Monitor Mode A

```
FM        0000.00Hz
>F001   0010.00Hz
```

⬇ Press the (▲) key several times,   then select   "Iout"(Output current monitor)

```
Iout        0000.0A
>F001   0010.00Hz
```

⬇ Press the (▶) key, then move the cursor down.

```
Iout        0000.0A
>F001   0010.00Hz
```

⬇ Press the (▲) key several times, then select   "A001"(Method of frequency command selection).

```
Iout        0000.0A
>A001         REM
```

⬇ Press the (▶) key 5 times, then move the cursor to the data area in bottom row.

```
Iout        0000.0A
>A001         REM
```

⬇ Press the (▲) key 1 time, then select "TRM"(Terminal).

```
Iout      0000.0A
>A001        TRM
```

⬇ Press the (STR) key, then decide the monitor item for storing the data value.

```
Iout        0000.0A
>A001        TRM
```

While simple display item of function is updated. You can display updated item by changing code number.

・ Example 2

When changing from A001 to C021.

Monitor Mode A

```
Iout          000.0A
>A001          REM
```

Press the ▶ key,   then move the cursor to the bottom row.

```
Iout          0000.0A
>A001          REM
```

Press the ▶ key, then move the cursor to the code number display "A".

```
Iout          0000.0A
>A001          REM
```

Press the ⊼ key 2 times to select   "C"   (display C001).

```
Iout          0000.0A
>C001           RS
```

Press the ▶ key 2 times, then move the cursor to second figure of
code number display.

```
Iout          0000.0A
>C001           RS
```

Press the ⊼ key 2 times to select   "2".
(Automatically, C021 is selected, then data of C021 will be displayed.)

```
Iout          0000.0A
>C021          FA1
```

Press the (STR)key, then move the cursor to the head of top row.

```
Iout          0000.0A
>C021          FA1
```

（2） Monitor Mode B

Use ◀Ⅰ ▶Ⅰ key and ②③ key select the monitor item which you desired, press the store key.

・　Example

In case of selecting output current monitor in monitor item 2 and electric power monitor in monitor item 3.

Monitor Mode B

FM	0000.00Hz
Iout	0000.0A

Press the ② key several times, then select "Iout".

Iout	0000.0A
Iout	0000.0A

Press the ▶Ⅰ key, then move the cursor down.

Iout	0000.0A
Iout	0000.0A

Press the ② key several times,　then select "Power".

Iout	0000.0A
Power	000.0kW

Press the (STR) key, then decide monitor item.

Iout	0000.0A
Power	000.0kW

（3）Trip Monitor

How to display each of trip data is following explanation.

・Example

In case of display last time (ERR2) trip contents.

Trip Monitor

```
ERR1    OC. Accel
F 0037.00Hz  ACC
```

Press the ⚠ key to select "ERR2".

```
ERR2       Over.V
F 0035.30Hz  DEC
```
In the display example, Factor is Over.V(Over voltage trip), frequency is 35.30Hz on tripping. Inverter status is DEC(During deceleration).

Press the ▶ key, then move the cursor to the bottom row.

```
ERR2       Over.V
F 0035.30Hz  DEC
```

Press the ⚠ key to display output current on tripping.

```
ERR2       Over.V
Iout 0022.5A  DEC
```
In the display example, output current is 22.5A on tripping.

Press the ⚠ key to display PN voltage on tripping.

```
ERR2       Over.V
Vpn   0395.0V  DEC
```
In the display example, PN voltage is 395V on tripping.

Press the ⚠ key to display accumulated time on tripping during run which time counted from when inverter is operating.

```
ERR2       Over.V
RUN 000010hr DEC
```
In the display example, accumulated time on tripping during run is 10 hours while inverter is turned on.

Press the ⚠ key to display accumulated time on tripping of ON time which time is counted from when inverter is turned on.

In the display example, accumulated time on tripping of ON time is 12 hours   which time is counted from when inverter is turned on.

```
ERR2       Over.V
ON 000012hr DEC
```

Trip history trip data of ERR2 in the display examples are arranged following list.

Item	Data value
Factor of tripping	Over . V (Overload voltage trip)
Inverter status on tripping	DEC (During deceleration)
Output frequency on tripping	35.30Hz
Output current on tripping	22.5A
PN voltage on tripping	395.0V
Accumulated time on tripping during run.	10hr
Power ON time on tripping.	12hr

（4）Function mode

In function mode, there are three ways of display item.
1. Method of changing the code following display direction.

Function mode
```
>F001    SET-Freq.
FS       0000.00Hz
```

Press the ⚠ key to select "A002".

```
>A002        F/R
SELECT       REM
```

Press the ▶ key 7 times or press ◀ key one time, then move the cursor to the data area (REM:Remote).

```
>A002        F/R
SELECT       REM
```

Press the ⚠ keys to select "TRM"(Terminal).

```
>A002        F/R
SELECT       TRM
```

Press the (STR) key for keeping the updated data to the EEPROM, then move the cursor to the head of top row.

```
>A002        F/R
SELECT       TRM
```
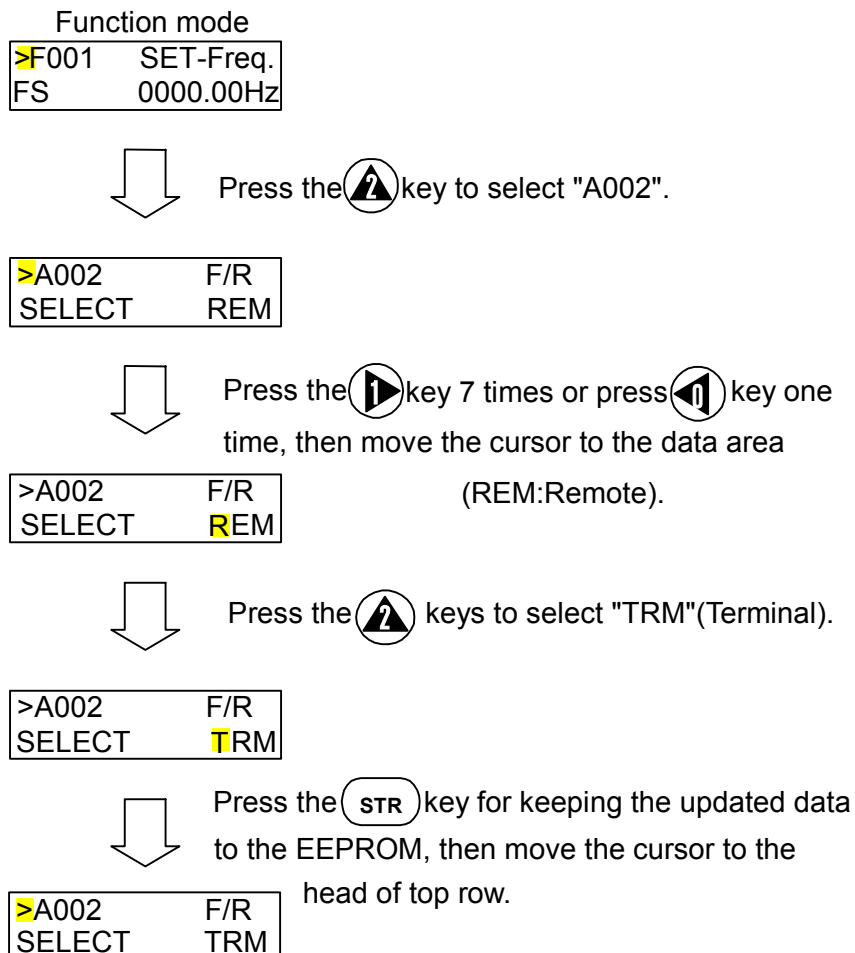
・Example Display A002(Operation setting selection)then change from remote to terminal

2. Method of transferring to other function.

・Example

Display A002(Operation setting selection), then change from remote to terminal.

Function mode

```
>F001     SET-Freq.
 FS        0000.00Hz
```

⬇ Press the (▶) key, then move the cursor to the display code number "F".

```
>F001     SET-Freq.
 FS        0000.00Hz
```

⬇ Press the (▲) key, then change the display code number "F" to "A".

```
>A001        F-SET
 SELECT       REM
```

⬇ Press the (▶) key 3 times, then move the cursor to first figure of display code number.

```
>A001        F-SET
 SELECT       REM
```

⬇ Press the (▲) key, then set "2" on first figure of display code number.
(A002 is selected, A002 data is displayed)

```
>A002         F/R
 SELECT       REM
```

⬇ Press the (▶) key 3 times, then move the cursor to the data area.

```
>A002         F/R
 SELECT       REM
```

⬇ Press the (▲) key to select "TRM(Terminal)".

```
>A002         F/R
 SELECT       TRM
```

⬇ Press the (STR) key to store the updated data to EEPROM.
Move the cursor at the head of top row.

```
>A002         F/R
 SELECT       TRM
```

3.   How to select name of group and individual name on display.

・ Example

In case of changing from 0% to 10%, in display A054(DC braking power on stop).

Function mode

```
>F001    SET-Freq.
 FS       0000.00Hz
```

⇩   Press the ▶ key 5 times to move the cursor to the group display section.

```
>F001    SET-Freq.
 FS       0000.00Hz
```

⇩   Press the ⚠ key several times to change group display from "SET-Freq."
     to DCB(Direct current   braking).

```
>A051         DCB
 Mode         OFF
```

⇩   Press the ▶ key to move the cursor to the individual name section.

```
>A051         DCB
 Mode         OFF
```

⇩   Press the ⚠ key several times to change individual name display from
     "Mode" to "STR-V(Direct braking power on stop)".

```
>A054         DCB
 STP-V        000%
```

⇩   Press the ▶ key to move the cursor to second figure of data area.

```
>A054         DCB
 STP-V        000%
```

⇩   Press the ⚠ key to change the data from 000% to 010%.

```
>A054         DCB
 STP-V        010%
```

⇩   Press the STR key to store the updated data to EEPROM.
     Move the cursor to the head of top row.

```
>A054         DCB
 STP-V        010%
```

(5) User display

User-display-mode display the item to be selected by U001 ~ U012.

Press the (MON) — (FUN) keys more than 2 seconds and press them at the same time on general operation.

The item is set by U001
>A001	Name of group
Individual	setting value

The item is set by U002
>b021	Name of group
Individual	setting value

The item is set by U012
>C001	Name of group
Individual	setting value

User display of monitor mode is monitor mode B.

Top row
Bottom row

The item is selected by U001 to U012.

The display is selected by monitor B.
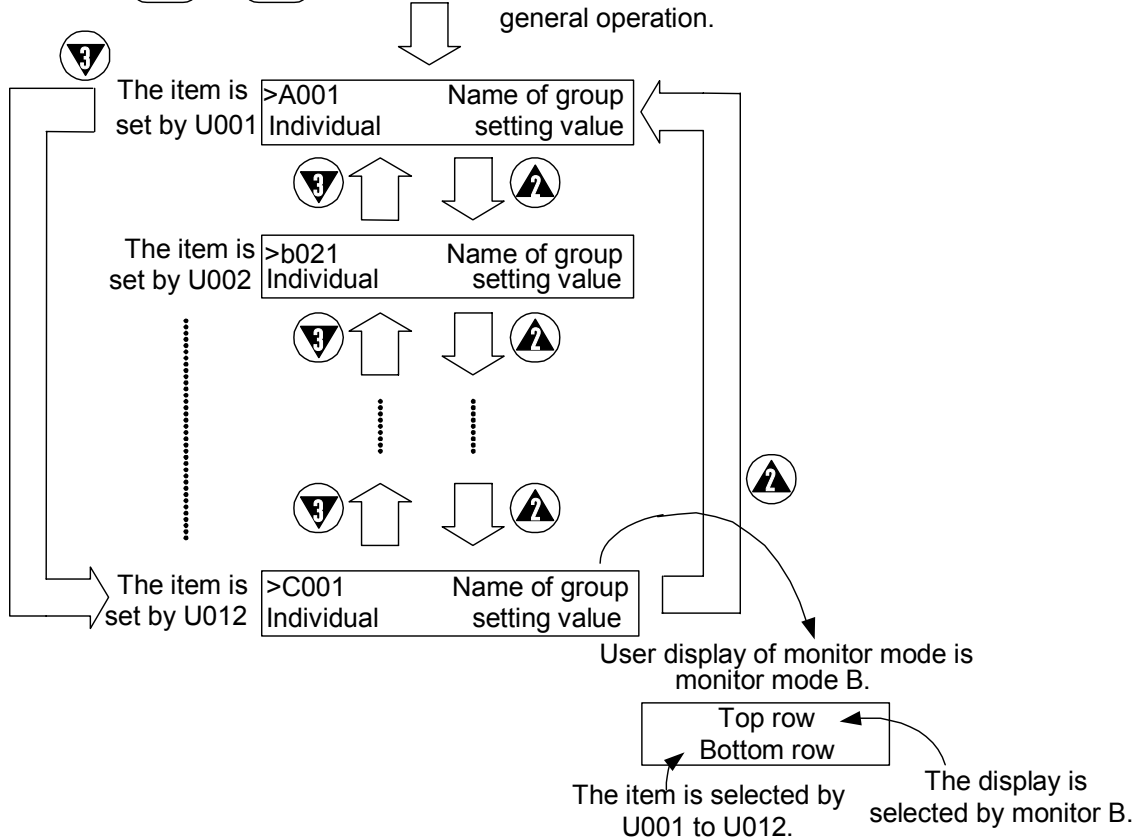
If you press the (MON) key, then it will move to the monitor mode.

If you press the (FUN) it will move to the function mode.

10.4 Display list

(1) Monitor Mode

No.	Function name	Display contents		Monitor range	Remark
1	Setting frequency monitor	FS	0000.00Hz	0.00 - 400.00 (Hz)	Multi-speed 0 (First setting)
		2FS	0000.00Hz	Display is changed, depend on Frequency type which is set presently.	Multi-speed 0 (second setting)
		3FS	0000.00Hz		Multi-speed 0 (Third setting) (NOTE 2)
		TM	0000.00Hz		Analog input
		JG	000.00Hz		Jogging mode

		01S 0000.00Hz		Multi-speed 1
		|		|
		15S 0000.00Hz		Multi-speed 15
		OP1 0000.00Hz		Frequency from option 1
		OP2 0000.00Hz		Frequency from option 2
		RS485 0000.00Hz		Frequency from RS485
2	Output frequency monitor	FM 0000.00Hz	0.00 - 400.00 (Hz)	
3	Output current monitor	Iout 0000.0A	0.0 - 999.9 (A)	
4	Operation direction monitor	Dir FWD	FWD / STOP / REV	
5	PID feedback monitor	PID-FB 0000.00%	0.00 – 99900	
6	Intelligent input terminal monitor	IN-TM LLLLLLLLL	"L":terminal OFF, "H":terminal ON status	L300P series: IN-TM L_____LLLLL
7	Intelligent output terminal monitor	OUT-TM LLLLLL	"L":signal OFF, "H":signal ON status	OUT-TM L___LL
8	Frequency conversion monitor	F-CNV 000000.00	0.00 – 39960.00	
9	torque monitor	TRQ +000%	-300. - +300 %	(NOTE 2)
10	Output voltage monitor	Vout 000.0V	0.0 - 600.0 V	
11	Input electric power monitor	Power 000.0kW	0.0 – 0999.9 kW	
12	Accumulated time monitor during RUN	RUN 0000000hr	0. – 999999 hr	
13	Power ON time monitor	ON 0000000hr	0. – 999999 hr	
14	Number of trip time monitor	ERR COUNT 00000	0. – 65535 times	

(NOTE 1) Do not forget to press "STR" key when you change the display.

(NOTE 2) SJ300 series only .

（2） Trip monitor mode

No.	Function name	Display contents (Example)	Remark
1-(1)	Trip monitor 1 (Frequency)	ERR1 OC.Accel F 0035.23Hz ACC	The latest trip contents . (When acceleration time of over current.)
(2)	(output current)	ERR1 OC.Accel Iout 0022.2A ACC	
(3)	(Direct voltage)	ERR1 OC.Accel Vpn 296.6V ACC	
(4)	(Accumulated time during RUN)	ERR1 OC.Accel RUN 000011hr ACC	
(5)	(Power on time)	ERR1 OC.Accel ON 000023hr ACC	
2-(1)	Trip monitor 2 ((Frequency)	ERR2 EXTERNAL F 0030.00Hz CST	The last time trip contents. (In case of external trip.)
(2)	(Output current)	ERR2 EXTERNAL Iout 0010.2A CST	
(3)	(Direct voltage)	ERR2 EXTERNAL Vpn 280.3V CST	
(4)	(Accumulated time during RUN)	ERR2 EXTERNAL RUN 000010hr CST	
(5)	(Power on time)	ERR2 EXTERNAL ON 000021hr CST	
3-(1)	Trip monitor 3 (Frequency)	ERR3 Over.V F 0037.56Hz DEC	Trip contents 2 times before (In case of over voltage trip)
(2)	(Output current)	ERR3 Over.V Iout 0018.1A DEC	
(3)	(Direct voltage)	ERR3 Over.V Vpn 396.5V DEC	
(4)	(Accumulated time during RUN)	ERR3 Over.V RUN 000009hr DEC	
(5)	(Power on time)	ERR3 Over.V ON 000019hr DEC	
4	Trip monitor 4	ERR4 ? ? ? ?	Trip contents 3 times before (In case of no occurrence.)
5	Trip monitor 5	ERR5 ? ? ? ?	Trip contents 4 times before. (In case of no occurrence.)
6	Trip monitor 6	ERR6 ? ? ? ?	Trip contents 5 times before. (In case of no occurrence.)
7	Warning monitor	WARN W025 Lim-L > FS	Warning contents (Lim-L > FS)
	Warning monitor	WARN ? ?	Warning contents (Non occur)

（3） Function mode (F mode)

No.	Function name	Display contents	Display contents
1	Output frequency	>F001 SET-Freq. FS 0000.00Hz	0.00，Starting frequency-Max. frequency Hz
		>F001 SET-Freq. 2FS 0000.00Hz	0.00，Starting frequency-2nd Max frequency Hz
		>F001 SET-Freq. 3FS 0000.00Hz	0.00，Starting frequency-3rd Max frequency Hz (NOTE 1)
		>F001 SET-Freq. TM 0000.00Hz	0.00，Starting frequency-1st ,2nd ,3rd Max frequency Hz (NOTE 2)
		>F001 SET-Freq. JG 0000.00Hz	0.00，Starting frequency ~ 9.99 Hz
		>F001 SET-Freq. 01S 0000.00Hz	0.00，Starting frequency-1st ,2nd ,3rd Max frequency Hz (NOTE 2)
		|	
		>F001 SET-Freq. 15S 0000.00Hz	0.00，Starting frequency-1st ,2nd .3rd Max frequency Hz (NOTE 2)
		>F001 SET-Freq. OP1 000.00Hz	0.00，Starting frequency-1st ,2nd,3rd Max frequency Hz (NOTE 2)
		>F001 SET-Freq. OP2 0000.00Hz	0.00，Starting frequency-1st,2nd,3rd Max frequency Hz (NOTE 2)
		>F001 SET-Freq. RS485 000.00Hz	0.00，Starting frequency-1st,2nd,3rd Max frequency Hz (NOTE 2)
2	1st acceleration time	>F002 ACCEL TIME1 0030.00s	0.01 - 3600.00 s
3	2nd acceleration time	>F202 2ACCEL TIME1 0030.00s	0.01 - 3600.00 s
4	3rd acceleration time	>F302 3ACCEL TIME1 0030.00s	0.01 - 3600.00 s (NOTE 1)
5	1st deceleration time	>F003 DECEL TIME1 0030.00s	0.01 - 3600.00 s
6	2nd deceleration time	>F203 2DECEL TIME1 0030.00s	0.01 - 3600.00 s
7	3rd deceleration time	>F303 3DECEL TIME1 0030.00s	0.01 - 3600.00 s (NOTE 1)
8	Operation direction selection	>F004 DIG-RUN SELECT FW	FW/RV

(NOTE 1) SJ300 series only .

(NOTE 2) L300P series : 0.00，Starting frequency-1st,2nd Max frequency (Hz)

（4） Function mode   (1/15)

No.	Function name	Display	Data range
1	Frequency setting selection	>A001 F-SET SELECT REM	TRM(terminal)/REM(operator)/RS485(RS485)/OP1(option 1)/OP2(option 2)
2	Operation setting selection	>A002 F/R SELECT REM	TRM(terminal)/REM(operator)/RS485(RS485)/OP1(option 1)/OP2(option 2)
3	Base frequency	>A003 F-BASE F 0060Hz	30. – Maximum frequency Hz
4	Base frequency, 2nd motor	>A203 2F-BASE F 0060Hz	30. –2nd Maximum frequency Hz
5	Base frequency, 3rd motor	>A303 3F-BASE F 0060Hz	30.- 3rd Maximum frequency Hz (NOTE 1)
6	Maximum frequency	>A004 F-max F 0060Hz	30 - 400 Hz
7	Maximum frequency 2nd motor	>A204 2F-max F 0060Hz	30 - 400 Hz
8	Maximum frequency 3rd motor	>A304 3F-max F 0060Hz	30 - 400 Hz (NOTE 1)
9	AT terminal selection	>A005 AT SELECT O/OI	O/OI(Changing of O and OI with AT terminal)/ O/O2(Changing of O and O2 with AT terminal)
10	O2 selection	>A006 O2 SELECT O2	O2(Single) / O/OI-P(auxillary speed of O, OI) [no reversible] /O/OI-PM(auxillary speed of O, Oi) [reversible]
11	O start	>A011 INPUT-O EXS 0000.00Hz	0.00 - 400.00 Hz
12	O end	>A012 INPUT-O EXE 0000.00Hz	0.00 - 400.00 Hz
13	O start rate	>A013 INPUT-O EX%S 000%	0 - 100 %
14	O end rate	>A014 INPUT-O EX%E 100%	0 - 100 %
15	O start selection	>A015 INPUT-O LEVEL 0Hz	O-EXS(external starting frequency) / 0Hz(0Hz)
16	O, OI, O2 sampling	>A016 INPUT F-SAMP 08	1 - 30 times
17	Multi-speed selection	>A019 SPEED SELECT BINARY	BINARY(range is to 16 stage speed with 4 terminals)/ BIT(range is to 8 stage speed with 7 terminals)
18	Multi-speed 0	>A020 SPEED FS 0000.00Hz	0.00 , Starting frequency– maximum frequency(Hz)
19	Multi-speed 0, 2nd motor	>A220 SPEED 2FS 0000.00Hz	0.00 , Starting frequency– 2nd maximum frequency(Hz)
20	Multi-speed 0, 3rd motor	>A320 SPEED 3FS 0000.00Hz	0.00 , Starting frequency– 3rd maximum frequency(Hz) (NOTE 1)
21	Multi-speed 1	>A021 SPEED 01S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
22	Multi-speed 2	>A022 SPEED 02S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
23	Multi-speed 3	>A023 SPEED 03S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)

| 24 | Multi-speed 4 | >A024   SPEED
04S   0000.00Hz | 0.00   ,   Starting   frequency-maximum frequency(Hz) |

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
25	Multi-speed 5	>A025 SPEED 05S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
26	Multi-speed 6	>A026 SPEED 06S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
27	Multi-speed 7	>A027 SPEED 07S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
28	Multi-speed 8	>A028 SPEED 08S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
29	Multi-speed 9	>A029 SPEED 09S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
30	Multi-speed 10	>A030 SPEED 10S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
31	Multi-speed 11	>A031 SPEED 11S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
32	Multi-speed 12	>A032 SPEED 12S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
33	Multi-speed 13	>A033 SPEED 13S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
34	Multi-speed 14	>A034 SPEED 14S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
35	Multi-speed 15	>A035 SPEED 15S 0000.00Hz	0.00 , Starting frequency-maximum frequency(Hz)
36	Jogging frequency	>A038 Jogging F 01.00Hz	0.00 , Starting frequency-9.99(Hz)
37	Jogging selection	>A039 Jogging Mode FRS	FRS(free-run on JG stop / invalid on running)/ DEC(stop decelerating on JG stop / invalid on running)/ DB(DC braking on JG stop / invalid on running)/ R-FRS(free-run on JG stop / valid on running [JG after stop decelerating])/ R-DEC(stop decelerating on JG stop / valid on running[JG after stop decelerating])/ R-DB(DC braking on JG stop / valid on running [JG after stop decelerating])
38	Torque boost Selection	>A041 V-Boost Mode MANUAL	MANUAL (manual torque boost)/ AUTO(automatic torque boost)
39	Torque boost selection, 2ndmotor	>A241 2V-Boost Mode MANUAL	MANUAL(manual torque boost)/ AUTO(automatic torque boost)
40	Manual Torque boost	>A042 V-Boost Code 01.0%	0.0 - 20.0 %
41	Manual Torque boost 2nd motor	>A242 2V-Boost Code 01.0%	0.0 - 20.0 %

42	Manual Torque boost 3rd motor	>A342 3V-Boost Code 01.0%	0.0 - 20.0 % (NOTE 1)
43	Manual Torque boost point	>A043 V-Boost F 05.0%	0.0 - 50.0 %
44	Manual Torque boost point, 2nd motor	>A243 2V-Boost F 05.0%	0.0 - 50.0 %
45	Manual Torque boost point, 3rd motor	>A343 3V-Boost F 05.0%	0.0 - 50.0 % (NOTE 1)

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
46	1st control	>A044 Control 1st VC	VC / VP / FREE-V/F / SLV / 0SLV / V2 (NOTE 1)
47	2nd control	>A244 2Control 2nd VC	VC / VP / FREE-V/F / SLV / 0SLV (NOTE 1)
48	3rd control	>A344 3Control 3rd VC	VC / VP (NOTE 2)
49	Output voltage again	>A045 V-Gain Gain 100%	20 - 100 %
50	DC braking selection	>A051 DCB Mode OFF	OFF(invalid) / ON(valid)
51	DC braking frequency	>A052 DCB F 0.50Hz	0.00 - 60.00 Hz
52	DC braking wait time	>A053 DCB WAIT 0.0s	0.0 - 5.0 s
53	DC braking power	>A054 DCB STP-V 000%	0 - 100 % (NOTE 3)
54	DC braking time	>A055 DCB STP-T 00.0s	0.0 - 60.0 s
55	DC braking edge/level selection	>A056 DCB KIND LEVEL	EDGE(edge action) / LEVEL(level action)
56	DC braking power (starting time)	>A057 DCB STA-V 000%	0 - 100 % (NOTE 3)
57	DC braking time (starting time)	>A058 DCB STA-T 00.0s	0.00 - 60.0 s
58	DC career frequency	>A059 DCB CARRIER 05.0kHz	0.5 -15.0 kHz (Derating) (NOTE 4)
59	1st maximum frequency limiter	>A061 LIMIT HIGH 0000.00Hz	0.00 , 1st frequency lower limiter-maximum frequency(Hz)
60	2nd maximum frequency limiter	>A261 2LIMIT HIGH 0000.00Hz	0.00 , 2nd frequency lower limiter-2nd setting –maximum frequency(Hz)
61	1st minimum frequency limiter	>A062 LIMIT LOW 0000.00Hz	0.00 ,start frequency-maximum frequency(Hz)
62	2nd minimum frequency limiter	>A262 2LIMIT LOW 0000.00Hz	0.00 , start frequency-2nd setting-maximum frequency(Hz)
63	Jump frequency1	>A063 JUMP F1 0000.00Hz	0.00 - 400.00 Hz
64	Jump frequency width 1	>A064 JUMP W1 00.50Hz	0.00 - 10.00 Hz

65	Jump frequency2	>A065 JUMP F2 0000.00Hz	0.00 - 400.00 Hz
66	Jump frequency width 2	>A066 JUMP W2 00.50Hz	0.00 - 10.00 Hz
67	Jump frequency3	>A067 JUMP F3 0000.00Hz	0.00 - 400.00 Hz
68	Jump frequency width 3	>A068 JUMP W3 00.50Hz	0.00 - 10.00 Hz
69	Acceleration stop frequency	>A069 F-STOP F 0000.00Hz	0.00 - 400.00 Hz
70	Acceleration stop time	>A070 F-STOP T 00.0s	0.00 - 60.00 s

(NOTE 1) L300P series : VC / VP / FREE-V/F

(NOTE 2) SJ300 series only .

(NOTE 3) L300P series : 0 - 70%

(NOTE 4) L300P series : 0.5 – 12.0kHz (Derating)

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No.	Function name	Display	Data range
71	PID selection	>A071 PID SW OFF	OFF(invalid) / ON(valid)
72	PID-P gain	>A072 PID P 1.0	0.2 - 5.0
73	PID-I gain	>A073 PID I 0001.0s	0.0 - 3600.0 s
74	PID-D gain	>A074 PID D 000.00	0.00 - 100.00 s
75	PID scale	>A075 PID CONV 01.00	0.01 - 99.99 %
76	PID feedback Selection	>A076 PID INPUT OI	OI(feedback: OI) / O(feedback: O)
77	AVR selection	>A081 AVR MODE DOFF	ON(ON always)/OFF(OFF always)/ DOFF(OFF on decelerating)
78	Motor voltage selection	>A082 AVR AC 200V	200/215/220/230/240, 380/400/415/440/460/480
79	Operation mode selection	>A085 RUN MODE NOR	NOR(normal operation) / ECO(energy-saving operation) FUZZY(fuzzy) (NOTE 1)
80	Energy-saving response-accuracy adjustment	>A086 RUN ECO 0050.0s	0.0 - 100.0s
81	Acceleration time2	>A092 ACCEL TIME2 0015.00s	0.01 - 3600.00 s
82	Acceleration time2 (2nd motor)	>A292 2ACCEL TIME2 0015.00s	0.01 - 3600.00 s
83	Acceleration time2 (3rd motor)	>A392 3ACCEL TIME2 0015.00s	0.01 - 3600.00 s (NOTE 2)
84	Deceleration time2	>A093 DECEL TIME2 0015.00s	0.01 - 3600.00 s
85	Deceleration time2 (2nd motor)	>A293 2DECEL TIME2 0015.00s	0.01 - 3600.00 s
86	Deceleration time2 3rd motor)	>A393 3DECEL TIME2 0015.00s	0.01 - 3600.00 s (NOTE 2)
87	2nd stage adjustable selection	>A094 ACCEL CHANGE TM	TM(change with 2CH terminal) / FREE(change with setting)

88	2nd stage adjustable selection (2nd motor)	>A294 2ACCEL CHANGE TM	TM(change with 2CH terminal) / FREE(change with setting)
89	2nd acceleration frequency	>A095 ACCEL CHFr 0000.00Hz	0.00 - 400.00 Hz
90	2nd acceleration frequency(2nd motor)	>A295 2ACCEL CHFr 0000.00Hz	0.00 - 400.00 Hz
91	2nd deceleration frequency	>A096 DECEL CHFr 0000.00Hz	0.00 - 400.00 Hz
92	2nd deceleration frequency(2nd motor)	>A296 2DECEL CHFr 000.00Hz	0.00 - 400.00 Hz
93	Acceleration pattern selection	>A097 ACCEL LINE Linear	Linear(straight line) / S-curve / U-curve /RV-curve(reverse U-curve)
94	Deceleration pattern selection	>A098 DECEL LINE Linear	Linear(straight line) / S-curve / U-curve /RV-curve(reverse U-curve)

(NOTE 1) L300P series : NOR / ECO

(NOTE 2) SJ300 series only .

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No.	Function mode	Display	Data range
95	OI start	>A101 INPUT-OI EXS 0000.00Hz	0.00 – 400.00 Hz
96	OI end	>A102 INPUT-OI EXE 0000.00Hz	0.00 – 400.00 Hz
97	OI start rate	>A103 INPUT-OI EX%S 20%	0 – 100 %
98	OI end rate	>A104 INPUT-OI EX%E 100%	0 – 100 %
99	OI start selection	>A105 INPUT-OI LEVEL 0Hz	OI-EXS(external start frequency) / 0Hz
100	O2 start	>A111 INPUT-O2 EXS +0000.00Hz	-400.00 – 400.00 Hz
101	O2 end	>A112 INPUT-O2 EXE +0000.00Hz	-400.00 – 400.00 Hz
102	O2 start rate	>A113 INPUT-O2 EX%S -100%	-100 – 100 %
103	O2 end rate	>A114 INPUT-O2 EX%E +100%	-100 – 100 %
104	Acceleration curve constant	>A131 ACCEL GAIN 02	01(small swelling)-10(large swelling)
105	Deceleration curve constant	>A132 DECEL GAIN 02	01(small swelling)-10(large swelling)
106	Retry selection	>b001 IPS POWER ALM	ALM(trip) / ZST(Ohz start) / RST(start after equaling frequency) / FST(trip after equaling frequency and deceleration stop)
107	Allowable under-voltage power failure time	>b002 IPS TIME 1.0s	0.3 – 1.0 s
108	Retry wait time	>b003 IPS WAIT 001.0s	0.3 – 100.0 s
109	Instantaneous power failure/under-voltage trip during stop	>b004 IPS TRIP OFF	OFF(invalid) / ON(valid) / DOFF(invalid during stop and deceleration by stop command)

110	Instantaneous power failure/under-voltage retry time selection	>b005 IPS RETRY 16	16(16 times) / FREE(free)
111	Open-phase selection	>b006 PH-FAIL SELECT OFF	OFF(invalid) / ON(valid)
112	Frequency setting to match	>b007 IPS F 0000.00Hz	0.00 – 400.00 Hz
113	Electronic thermal level	>b012 E-THM LEVEL 0000.0A	0.2*constant current-1.20*constant current(A)
114	Electronic thermal level (2nd motor)	>b212 2E-THM LEVEL 0000.0A	0.2*constant current-1.20*constant current(A)
115	Electronic thermal level (3rd motor)	>b312 3E-THM LEVEL 0000.0A	0.2*constant current-1.20*constant current(A) (NOTE 1)
116	1st electronic thermal characteristic selection	>b013 E-THM CHAR SUB	SUB(reduced characteristic) / CRT(constant torque characteristic) / FREE(free setting)
117	2nd electronic thermal characteristic selection	>b213 2E-THM CHAR SUB	SUB(reduced characteristic) / CRT(constant torque characteristic) / FREE(free setting)

(NOTE 1) SJ300 series only .

(6/15)

No.	Function name	Display	Data range
118	3rd electronic thermal characteristic selection	>b313 3E-THM CHAR SUB	SUB(reduced characteristic) / CRT(constant torque characteristic) / FREE(free setting) (NOTE 1)
119	Free electronic thermal frequency 1	>b015 E-THM F1 0000Hz	0 - 400 (Hz)
120	Free electronic thermal current 1	>b016 E-THM A1 0000.0A	0.0 - 1000.0(A)
121	Free electronic thermal frequency 2	>b017 E-THM F2 0000Hz	0 - 400 (Hz)
122	Free electronic thermal current 2	>b018 E-THM A2 0000.0A	0.0 - 1000.0(A)
123	Free electronic thermal frequency 3	>b019 E-THM F3 0000Hz	0 - 400 (Hz)
124	Free electronic thermal current 3	>b020 E-THM A3 0000.0A	0.0 - 1000.0(A)
125	Overload restriction selection	>b021 OLOAD 1MODE ON	OFF(invalid) / ON(enabled on acceleration / constant speed) / CRT(enabled on constant speed) / R-OFF(enabled on acceleration / constant speed(speed increasing at regenerating mode))
126	Overload restriction level	>b022 OLOAD 1LEVEL 0000.0A	0.5* rated current-2.00* rated current(A) (NOTE 2)
127	Overload restriction limit constant	>b023 OLOAD 1CONST 01.00	0.10 - 30.00(s)
128	Overload restriction selection 2	>b024 OLOAD 2MODE ON	OFF(invalid) / ON(enabled on acceleration / constant speed) / CRT(enabled on constant speed) / R-OFF(enabled on acceleration / constant speed(speed increasing at regenerating mode))

No.	Function name	Display	Data range
129	Overload restriction level 2	>b025 OLOAD 2LEVEL 0000.0A	0.5* rated current-2.00* rated current(A) (NOTE 2)
130	Overload restriction limit constant 2	>b026 OLOAD 2CONST 01.00	0.10 - 30.00(s)
131	Software lock mode selection	>b031 S-LOCK Mode MD1	MD0(impossible to change the data except this item when SFT terminal is ON) / MD1(impossible to change the data except setting frequency item when SFT terminal is ON) / MD2(impossible to change the data except this item) / MD3(impossible to change the data except setting frequency item) / MD10(possible to change data on operating)
132	RUN time/Power ON time level	>b034 TIME WARN 00000	0 – 65535 (×10hr)
133	Operation direction restrict	>b035 LIMIT F/R FREE	FREE(forward and reverse are valid) / FWD(only forward) / REV(only reverse)
134	start reduced voltage	>b036 RVS ADJUST 06	00(start reduce voltage time small) -06(start reduced voltage time large)
135	Display selection	>b037 DISP Mode ALL	ALL(all display) / FUNCTION(each function display) / USER(user setting / main setting)

(NOTE 1) SJ300 series only .

(NOTE 2) L300P series : 0.5* rated current-1.50* rated current(A)

(7/15)

No.	Function name	Display	Data range
136	Torque limit mode selection	>b040 TRQ_LIMIT Mode 4-SET	4-SET(4 quadrant mode) / TM(terminal operation) / O2 (Analog input) / OP1(Option 1) / OP2(option 2) (NOTE 1)
137	Torque limit level 1 setting (Forward-regenerating at 4 quadrant mode	>b041 TRQ_LIMIT LEVEL1 150%	0 - 200(%),no(invalid) (NOTE 1)
138	Torque limit level 2 (Reverse-regenerating at 4 quadrant mode)	>b042 TRQ_LIMIT LEVEL2 150%	0 - 200(%),no(invalid) (NOTE 1)
139	Torque limit level 3 (Reverse-driving at 4 quadrant mode)	>b043 TRQ_LIMIT LEVEL3 150%	0 - 200(%),no(invalid) (NOTE 1)
140	Torque limit level 4 setting (Forward-regenerating at 4 quadrant mode	>b044 TRQ_LIMIT LEVEL4 150%	0 - 200(%),no(invalid) (NOTE 1)
141	Torque LAD-STOP selection	>b045 TRQ_LIMIT SELECT OFF	OFF(invalid) / ON(valid) (NOTE 1)
142	Reverse run prevention selection	>b046 LIMIT PREV OFF	OFF(invalid) / ON(valid) (NOTE 1)
143	Selection of non-stop function at instantaneous power failure	>b050 IPS-DECEL Mode OFF	OFF(invalid) / ON(valid) (NOTE 1)

144	Start voltage of non-stop function setting	>b051 IPS-DECEL V1 0000.0Vdc	0.0 - 999.9(V) (NOTE 1)
145	OV LAD-STOP level of non-stop function setting	>b052 IPS-DECEL V2 0000.0Vdc	0.0 - 999.9(V) (NOTE 1)
146	Deceleration time of non-stop function setting	>b053 IPS-DECEL TIME 1.00s	0.01- 3600.00(s) (NOTE 1)
147	Deceleration frequency width of non-stop function setting	>b054 IPS-DECEL DEC-F 00.00Hz	0.0 - 10.00(Hz) (NOTE 1)
148	AM adjustment	>b080 AM-MONITOR ADJUST 180	0 – 255
149	FM adjustment	>b081 FM-MONITOR ADJUST 060	0 – 255
150	Start frequency adjustment	>b082 fmin F 00.50Hz	0.10 - 9.99(Hz)
151	Carrier frequency setting	>b083 CARRIER F 05.0kHz	0.5 - 15.0(kHz) (Derating) (NOTE 2)
152	Initialize mode	>b084 INITIAL MODE TRP	TRP(trip history clear) / DATA(data initialization) / TRP/DATA(trip history clear + data initialization)
153	Country code for initialization	>b085 INITIAL SELECT JPN	JPN / EC / USA
154	Frequency scalar conversion factor	>b086 F-CONV Gain 001.0	0.1 - 99.9

(NOTE 1) SJ300 series only .

(NOTE 2) L300P series : 0.5 – 12.0kHz (Derating)

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No.	Function name	Display	Data range
155	Stop key enable	>b087 STOP-SW SELECT OFF	ON(valid) / OFF(invalid)
156	Resume on FRS cancellation mode	>b088 RUN FRS ZST	ZST(OHz start) / fST(Strat f-equaling)
157	BDR usage ratio	>b090 BRD %ED 000.0%	0.0 - 100.0(%)
158	Stop mode selection	>b091 RUN STOP DEC	DEC(deceleration stop) / FRS(Free-run stop)
159	Cooling fun control	>b092 INITIAL FAN-CTL OFF	OFF(always ON) / ON(ON during run, After power ON, then for 5 minutes on stop is implied.)
160	BRD selection	>b095 BRD Mode OFF	OFF(invalid) / ON_STPOFF(valid<invalid During stop>) / ON_STPON(valid<valid During stop>)
161	BED ON level	>b096 BRD LEVEL 0360Vdc	330-380/660-760(Vdc)
162	Thermistor selection	>b098 THERM SELECT OFF	OFF(invalid) / PTC(positive temperature coefficient enable) / NTC(NTC enable)
163	Thermistor error level	>b099 THERM LEVEL 3000ohm	0 - 9999(ohm)
164	Free V/F frequency 1	>b100 FREE_V/F F1 0000Hz	0 - Free V/F frequency2(Hz)

165	Free V/F voltage 1	>b101 FREE_V/F V1 000.0V	0 - 800.0(V)
166	Free V/F frequency 2	>b102 FREE_V/F F2 0000Hz	0 - Free V/F frequency3(Hz)
167	Free V/F voltage 2	>b103 FREE_V/F V2 000.0V	0 - 800.0(V)
168	Free V/F frequency 3	>b104 FREE_V/F F3 0000Hz	0 - Free V/F frequency4(Hz)
169	Free V/F voltage 3	>b105 FREE_V/F V3 000.0V	0 - 800.0(V)
170	Free V/F frequency 4	>b106 FREE_V/F F4 0000Hz	0 - Free V/F frequency5(Hz)
171	Free V/F voltage 4	>b107 FREE_V/F V4 000.0V	0 - 800.0(V)
172	Free V/F frequency 5	>b108 FREE_V/F F5 0000Hz	0 - Free V/F frequency6(Hz)
173	Free V/F voltage 5	>b109 FREE_V/F V5 000.0V	0 - 800.0(V)
174	Free V/F frequency 6	>b110 FREE_V/F F6 0000Hz	0 - Free V/F frequency7(Hz)
175	Free V/F voltage 6	>b111 FREE_V/F V6 000.0V	0 - 800.0(V)
176	Free V/F frequency 7	>b112 FREE_V/F F7 0000Hz	0 - 400(Hz)
177	Free V/F voltage 7	>b113 FREE_V/F V7 000.0V	0 - 800.0(V)
178	Braking control selection	>b120 BRAKE Mode OFF	OFF(invalid) / ON(valid) (NOTE 1)
179	Waiting time for releasing braking conformation	>b121 BRAKE STA-WAIT 0.00s	0.00- 5.00(s) (NOTE 1)

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
180	Waiting time for acceleration	>b122 BRAKE ACC-WAIT 0.00s	0.00 – 5.00(s) (NOTE 1)
181	Waiting time for stop	>b123 BRAKE STP-WAIT 0.00s	0.00 – 5.00(s) (NOTE 1)
182	Waiting time for signal conformation	>b124 BRAKE BRK-WAIT 0.00s	0.00 – 5.00(s) (NOTE 1)
183	Releasing frequency	>b125 BRAKE OPEN-F 000.00Hz	0.00 - 400.00(Hz) (NOTE 1)
184	Releasing current	>b126 BRAKE OPEN-A 0000.0A	0.00*rated current-2.00*rated current(A) (NOTE 1)
185	Intelligent input 1 setting	>C001 IN-TM 1 RS	RV(Reverse is valid) / CF1(Multi-speed1) / CF2(Multi-speed2) / CF3(Multi-speed3) /
186	Intelligent input 2 setting	>C002 IN-TM 2 AT	CF4(Multi-speed4) / JG(Jogging) / DB(External DC braking) / SET(2nd control) /
187	Intelligent input 3 setting	>C003 IN-TM 3 JG	2CH(two-stage adjustable speed) / FRS(Free-run) / EXT(External trip) /
188	Intelligent input 4 setting	>C004 IN-TM 4 FRS	USP(Unattended start protection) / CS(Commercial change) / SFT(software lock)
189	Intelligent input 5 setting	>C005 IN-TM 5 2CH	/ AT(Analog input voltage/current select) / SET3(3rd control) / RS(Reset inverter) /

No.	Function name	Display		Data range
190	Intelligent input 6 setting (NOTE 1)	>C006 6	IN-TM CF2	SET3(3rd control) / RS(Reset inverter) / STA(3wire run) / STP(3wire keep) / F/R(3wire forward/reverse) / PiD(PiD selection valid invalid) / PIDC(PID integrating reset) / CAS(Control gain switch function) / UP(Remote control UP function) / DWN(Remote control DOWN function) / UDC(Remote control data clear) / OPE(Operating by operator select) / SF1(Multi-speed bit1) / SF2(Multi-speed bit2) / SF3(Multi-speed bit3) / SF4(Multi-seed bit4) / SF5(Multi-speed bit5) / SF6(Multi-speed bit6) / SF7(Multi-speed bit7) / OLR(Overload restriction change) / TL(Torque limit select) / TRQ1(Torque limit switch1) / TRQ2(Torque limit switch2) / PPI(P/PI switch) / BOK(Braking conformation) / ORT(Orientation) / LAC(LAD cancel) / PCLR(Position error clear) / STAT(Permission of pulse train) / no(No assign)
191	Intelligent input 7 setting (NOTE 1)	>C007 7	IN-TM CF1	
192	Intelligent input 8 setting (NOTE 1)	>C008 8	IN-TM RV	
				(NOTE 2)
193	Intelligent input 1 a/b (NO/NC) selection	>C011 O/C-1	IN-TM NO	NO : NO NC : NC
194	Intelligent input 2 a/b (NO/NC) selection	>C012 O/C-2	IN-TM NO	NO : NO NC : NC
195	Intelligent input 3 a/b (NO/NC) selection	>C013 O/C-3	IN-TM NO	NO : NO NC : NC
196	Intelligent input 4 a/b (NO/NC) selection	>C014 O/C-4	IN-TM NO	NO : NO NC : NC
197	Intelligent input 5 a/b (NO/NC) selection	>C015 O/C-5	IN-TM NO	NO : NO NC : NC

(NOTE 1) SJ300 series only .

(NOTE 2) L300P series : RV / CF1-CF4 / JG / DB / SET / 2CH / FRS / EXT / USP / CS / SFT / AT / RS / STA / STP / F/R / PID / PIDC / UP / DWN / UDC / OPE / SF1-SF7 / OLR / no

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No.	Function name	Display		Data range
198	Intelligent input 6 a/b (NO/NC) selection	>C016 O/C-6	IN-TM NO	NO : NO NC : NC (NOTE 1)
199	Intelligent input 7 a/b (NO/NC) selection	>C017 O/C-7	IN-TM NO	NO : NO NC : NC (NOTE 1)
200	Intelligent input 8 a/b (NO/NC) selection	>C018 O/C-8	IN-TM NO	NO : NO NC : NC (NOTE 1)

201	Input FW a/b (NO/NC) selection	>C019 IN-TM O/C-FW NO	NO : NO NC : NC
202	Intelligent output 11 setting	>C021 OUT-TM 11 FA1	RUN(running) / FA1(Frequency arrival type1 signal) / FA2(over setting frequency) / OL(Overload advance notice signal) / OD(Output deviation for PID control) / AL(Alarm signal) / FA3(Only setting frequency) / OTQ(Over-torque signal) / IP(On instantaneous stop) / UV(Under voltage) / TRQ(Torque limit) / RNT(RUN time over) / ONT(ON time over) / THM(thermal caution) / BRK(Brake release signal) / BER(Brake error signal) / ZS(Zero speed detect signal) / DSE(Speed error over signal) / POK(Positioning completion signal) / FA4(Over frequency 2 signal) / FA5(Only setting frequency) / OL2(Overload advance notice signal 2) (Intelligent output terminal 11-13 or 11-14 becomes AC0-AC2 or AC0-AC3 (Can; Alarm cord output) forcibly when alarm code output is selected in C062) (NOTE 2)
203	Intelligent output 12 setting	>C022 OUT-TM 12 RUN	
204	Intelligent output 13 setting (NOTE 1)	>C023 OUT-TM 13 OL	
205	Intelligent output 14 setting (NOTE 1)	>C024 OUT-TM 14 OTQ	
206	Intelligent output 15 setting (NOTE 1)	>C025 OUT-TM 15 IP	
207	Alarm relay output	>C026 OUT-TM AL AL	
208	FM selection	>C027 FM-MONITOR KIND A-F	A-F(Output frequency) / A(Output current) / T(Output torque) / D-F(Digital output frequency) / V(Output voltage) / P(Input electric power) / THM(:thermal load rate) / LAD(LAD frequency) (NOTE 3)
209	AM selection	>C028 AM-MONITOR KIND A-F	A-F(Output frequency) / A(Output current) / T(Output torque) / V(Output voltage) / P(Input electric power)/ THM(thermal load rate) / LAD(LAD frequency) (NOTE 3)
210	AM selection	>C029 AMI-MON KIND A-F	A-F(Output frequency) / A(Output current) / T(Output torque) / V(Output voltage) / P(Input electric power)/ THM(thermal load rate) / LAD(LAD frequency) (NOTE 3)
211	Intelligent output 11 a/b	>C031 OUT-TM O/C-11 NO	NO : NO NC : NC
212	Intelligent output 12 a/b	>C032 OUT-TM O/C-12 NO	NO : NO NC : NC
213	Intelligent output 13 a/b	>C033 OUT-TM O/C-13 NO	NO : NO NC : NC (NOTE 1)
214	Intelligent output 14 a/b	>C034 OUT-TM O/C-14 NO	NO : NO NC : NC (NOTE 1)
215	Intelligent output 15 a/b	>C035 OUT-TM O/C-15 NO	NO : NO NC : NC (NOTE 1)

(NOTE 1) SJ300 series only .

(NOTE 2) L300P series : RUN / FA1 / FA2 / OL / OD / AL / FA3 / IP / UV / RNT / ONT / THM

(NOTE 3) L300P series : Except T (Output Torque)

No.	Function name	Display	Data range
216	Alarm relay output a/b	>C036 OUT-TM O/C-AL NC	NO : NO NC : NC
217	Overload advance notice signal output mode	>CO40 OL Mode CRT	ON(On accel. And decel,constant speed) / CRT(Only constant speed)
218	Overload advance notice level	>C041 OL LEVEL 0000.0A	0.0 - 2.0*rated current (A)
219	Frequency arrival setting for acceleration.	>C042 ARV ACC 0000.00Hz	0.00 - 400.00(Hz)
220	Arrival frequency setting for deceleration	>C043 ARV DEC 0000.00Hz	0.00 - 400.00(Hz)
221	PID deviation setting level	>C044 PID LEVEL 003.0%	0.0 - 100.0(%)
222	Frequency arrival for deceleration 2.	>C045 ARV ACC2 0000.00Hz	0.00 - 400.00(Hz) (NOTE 1)
223	Arrival frequency setting for deceleration 2.	>C046 ARV DEC2 0000.00Hz	0.00 - 400.00(Hz) (NOTE 1)
224	Over torque level setting (Forward-driving)	>C055 OV-TRQ FW-V 100%	0 – 200(%) (NOTE 1)
225	Over torque level setting (Reverse-regenerating)	>C056 OV-TRQ RV-R 100%	0 – 200(%) (NOTE 1)
226	Over torque level setting (Reverse-driving)	>C057 OV-TRQ RV-V 100%	0 – 200(%) (NOTE 1)
227	Over torque level setting (Forward-regenerating)	>C058 OV-TRQ FW-R 100%	0 – 200(%) (NOTE 1)
228	Thermal warning level setting	>C061 E-THM WARN 080%	0 – 100(%)
229	Alarm code selection	>C062 AL-CODE SELECT OFF	OFF(invalid) / 3BIT(3bit) / 4BIT(4bit) (NOTE 1)
230	Zero speed detection level setting	>C063 ZS LEVEL 000.00Hz	0.00 - 100.00(Hz) (NOTE 1)
231	Data command	>C070 PARAM SELECT REM	REM(Operator) / RS485(RS485) / OPT1(option1) / OPT2(option2)
232	Communicating transmission speed	>C071 RS485 BAU 4800bps	TEST(Loop-back test) 2400bps,4800bps,9600bps,19200bps
233	Communication code	>C072 RS485 ADDRESS 01	01 - 32
234	Communication bit	>C073 RS485 BIT 7BIT	7BIT(7bit) / 8BIT(8bit)
235	Communication parity	>C074 RS485 PARITY NO	NO(No parity name) / EVN(even parity) ODD(odd parity

236	Communication stop bit	>C075 RS485 STOPBIT 1BIT	1BIT (1bit) / 2BIT(2bit)
237	Communication waiting time	>C078 RS485 WAIT 0000ms	0 – 1000(ms)

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
238	O adjustment	>C081 O-ADJUST TOP 00000	0 – 65535
239	OI adjustment	>C082 OI-ADJUST TOP 00000	0 – 65535
240	O2 adjustment	>C083 O2-ADJUST TOP 00000	0 – 65535
241	Thermistor adjust-ment	>C085 THERM ADJUST 0105.0	0.0 – 1000.0
242	AM off set adjust-ment	>C086 AM-MONITOR OFFSET 00.0V	0.0 – 10.0(V)
243	AMi adjustment	>C087 AMI-MON ADJUST 080	0 – 255
244	Ami off set adjust-ment	>C088 AMI-MON OFFSET 04.0mA	0.0 – 20.0(mA)
245	Debug mode selection	>C091 INITIAL DEBG OFF	OFF(No display) / ON(display)
246	UP/DOWN selection	>C101 UP/DWN DATA NO-STR	NO-STR(No frequency data) STR(Keep frequency data)
247	Reset selection	>C102 RESET SELECT ON	ON(Trip cancel during ON) / OFF(Trip cancel during OFF) TRP(Valid only during trip<Cancel during ON>)
248	Reset f frequency matching selection	>C103 RESET f-Mode ZST	ZST(OHz star) / fST(Start f-equaling)
249	Overload advance notice level	>C111 OL LEVEL2 0000.0A	0.00 - 2.00*rated current(A) (NOTE 1)
250	O zero adjustment	>C121 O-ADJUST ZERO 00000	0 – 65535
251	OI zero adjustment	>C122 OI-ADJUST ZERO 00000	0 – 65535
252	O2 zero adjustment	>C123 O2-ADJUST ZERO 00000	0 – 65535
253	Autotuning selection	>H001 AUX AUTO NOR	NOR(Invalid) / NRT(Valid (the motor does not rotate))/AUT(Valid (the motor rotates)) (NOTE 1)
254	1st motor constant selection	>H002 AUX DATA NOR	NOR(Hitachi general purpose motor data) / AUT(Autotuning data) / ON-AUT(Autotuning data with online autotuning) (NOTE 1)
255	2nd motor constant selection	>H202 2AUX DATA NOR	NOR(Hitachi general purpose motor data) / AUT(Autotuning data) / ON-AUT(Autotuning data with online autotuning) (NOTE 1)
256	1st allowable motor selection	>H003 AUX K 005.50kW	0.20 - 75.0(kW)
257	2nd allowable motor selection	>H203 2AUX K 005.50kW	0.20 - 75.0(kW)
258	1st motor pole selection	>H004 AUX P 4P	2P,4P,6P,8P (pole)

No.	Function name	Display	Data range
259	2nd motor pole selection	>H204 2AUX P 4P	2P,4P,6P,8P (pole)
260	1st speed response setting	>H005 AUX KP 1.590	0.001 - 65.535 (NOTE 1)
261	2nd speed response setting	>H205 2AUX KP 1.590	0.001 - 65.535 (NOTE 1)

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
262	1st stabilized factor	>H006 AUX KCD 100	0 – 255
263	2nd stabilized factor	>H206 2AUX KCD 100	0 – 255
264	3rd stabilized factor	>H306 3AUX KCD 100	0 – 255 (NOTE 1)
265	1st motor constant R1	>H020 AUX R1 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
266	2nd motor constant R1	>H220 2AUX R1 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
267	1st motor constant R2	>H021 AUX R2 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
268	2nd motor constant R2	>H221 2AUX R2 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
269	1st motor constant L	>H022 AUX L 000.00mH	0.00 - 655.35(mH) (NOTE 1)
270	2nd motor constant L	>H222 2AUX L 000.00mH	0.00 - 655.35(mH) (NOTE 1)
271	1st motor constant IO	>H023 AUX I0 000.00A	0.00 - 655.35(A) (NOTE 1)
272	2nd motor constant IO	>H223 2AUX I0 000.00A	0.00 - 655.35(A) (NOTE 1)
273	1st motor constant J	>H024 AUX J 000.000	0.000 - 999.9000(kg m²) (NOTE 1)
274	2ND motor constant J	>H224 2AUX J 000.000	0.000 - 999.9000(kg m²) (NOTE 1)
275	1st motor constant R1 (Autotuning data)	>H030 AUX A-R1 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
276	2nd motor constant R1 (Autotuning data)	>H230 2AUX A-R1 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
277	1st motor constant R2 (Autotuning data)	>H031 AUX A-R2 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
278	2nd motor constant R2 (Autotuning data)	>H231 2AUX A-R2 00.000ohm	0.000 - 65.535(ohm) (NOTE 1)
279	1st motor constant L (Autotuning data)	>H032 AUX A-L 000.00mH	0.00 - 655.35(mH) (NOTE 1)
280	2ND motor constant L (Autotuning data)	>H232 2AUX A-L 000.00mH	0.00 - 655.35(mH) (NOTE 1)
281	1st motor constant IO(Autotuing data)	>H033 AUX A-I0 000.00A	0.00 - 655.35(A) (NOTE 1)
282	2nd motor constant IO(Autotuing data)	>H233 2AUX A-I0 000.00A	0.00 - 655.35(A) (NOTE 1)

No.	Function name	Display	Data range
283	1st motor constant J(Autotuing data)	>H034 AUX A-J 0000.00	0.000 - 999.9000(kg m²) (NOTE 1)
284	2nd motor constant J(Autotuing data)	>H234 2AUX A-J 0000.00	0.000 - 999.9000(kg m²) (NOTE 1)
285	1st PI-control propor-tion gain setting	>H050 AUX KSP 0100.0%	0.0 – 1000.0(%) (NOTE 1)
286	2nd PI-control propor-tion gain setting	>H250 2AUX KSP 0100.0%	0.0 – 1000.0(%) (NOTE 1)
287	1st PI-control integra-tion gain setting	>H051 AUX KSI 0100.0%	0.0 – 1000.0(%) (NOTE 1)

(NOTE 1) SJ300 series only .

No.	Function name	Display	Data range
288	2ndPI-control integra-tion gain setting	>H251 2AUX KSI 0100.0%	0.0 – 1000.0(%) (NOTE 1)
289	1st P-control propor-tion gain setting	>H052 AUX KSPP 01.00	0.00 - 10.00 (NOTE 1)
290	2nd P-control propor-tion gain setting	>H252 2AUX KSPP 01.00	0.00 - 10.00 (NOTE 1)
291	1st OHz-SLV limiter setting	>H060 AUX 0SLV-LMT 100%	0 – 100 (NOTE 1)
292	2nd OHz-SLV limiter setting	>H260 2AUX 0SLV-LMT 100%	0 – 100 (NOTE 1)
293	PI-control proportion Gain for switching	>H070 AUX CH-KSP 0100.0%	0.0 – 1000.0(%) (NOTE 1)
294	PI-control integration Gain for switching	>H071 AUX CH-KSI 0100.0%	0.0 – 1000.0(%) (NOTE 1)
295	P-control proportion Gain for switching	>H072 AUX CH-KSPP 01.00	0.00 - 10.00 (NOTE 1)
296	Option 1 operation selection on error	>P001 OPTION1 SELECT TRP	TRP / RUN
297	Option 2 operation selection on error	>P002 OPTION2 SELECT TRP	TRP / RUN
298	Feed-back option selection	>P010 FEEDBACK SELECT OFF	OFF(invalid) / ON(Valid) (NOTE 1)
299	Encoder pulse num-ber setting	>P011 FEEDBACK ENC-P 01024pls	128 - 65000 (Pulse) (NOTE 1)
300	Control mode selection	>P012 FEEDBACK CONTROL ASR	ASR(ASR mode) / APR(APR mode) (NOTE 1)
301	Pulse train input mode selection	>P013 FEEDBACK PULSE MD0	MD0(Mode 0) / MD1(Mode 1) / MD2(Mode 2) (NOTE 1)
302	Orientation stop position setting	>P014 FEEDBACK POS 00000pls	0 – 4095 (Pulse) (NOTE 1)
303	Orientation speed setting	>P015 FEEDBACK FC 005.00Hz	0.00 - 120.00(Hz) (NOTE 1)
304	Orientation direction selection	>P016 FEEDBACK TURN FW	FW(Forward) / RV(Reverse) (NOTE 1)

No.	Function name	Display	Data range
305	Orientation comple-tion range setting	>P017 FEEDBACK L 00005pls	0 – 10000 (pulse) (NOTE 1)
306	Orientation comple-tion delay time setting	>P018 FEEDBACK TW 000.00s	0.00 - 9.99(s) (NOTE 1)
307	Electronic gear position selection	>P019 FEEDBACK EGRP FB	FB(Feed back) / REF(Reference) (NOTE 1)
308	Electronic gear numerator of ratio setting	>P020 FEEDBACK EGR-N 0001	0 – 9999 (NOTE 1)
309	Electornic gear denominator of ratio setting	>P021 EEDBACK EGR-D 0001	0 – 9999 (NOTE 1)
310	Position control feed-forward gain setting	>P022 FEEDBACK FFWG 000.00	0.00 - 655.35 (NOTE 1)
311	Position control loop gain setting	>P023 FEEDBACK G 000.50	0.00 - 100.00 (NOTE 1)

(NOTE 1) SJ300 series only .

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No.	Function name	Display	Data range
312	Compensation of secondary resistor selection	>P025 FEEDBACK R2-ADJ OFF	OFF(Invalid) / ON(Valid) (NOTE 1)
313	Over-speed detect level setting	>P026 FEEDBACK 0SPD 135.0%	0.0 – 150.0(%) (NOTE 1)
314	Speed-error over detect level setting	>P027 FEEDBACK NER 7.5Hz	0.00 – 120.00(Hz) (NOTE 1)
315	Digtal input option input mode selection (Acc/Dec)	>P031 ACC/DEC SELECT REM	REM(operator) / OP1(option1) / OP2(option2)
316	Stop position setting for orientation input mode selection	>P032 P-SET SELECT REM	REM(operator) / OP1(option1) / OP2(option2) (NOTE 1)
317	User1 selection	>U001 USER 1 __no	no / d001-P032 (NOTE 2)
318	User2 selection	>U002 USER 2 __no	no / d001-P032 (NOTE 2)
319	User3 selection	>U003 USER 3 __no	no / d001-P032 (NOTE 2)
320	User4 selection	>U004 USER 4 __no	no / d001-P032 (NOTE 2)
321	User5 selection	>U005 USER 5 __no	no / d001-P032 (NOTE 2)
322	User6 selection	>U006 USER 6 __no	no / d001-P032 (NOTE 2)
323	User7 selection	>U007 USER 7 __no	no / d001-P032 (NOTE 2)
324	User8 selection	>U008 USER 8 __no	no / d001-P032 (NOTE 2)
325	User9 selection	>U009 USER 9 __no	no / d001-P032 (NOTE 2)
326	User10 selection	>U010 USER 10 __no	no / d001-P032 (NOTE 2)

327	User11 selection	>U011 11	USER __no	no / d001-P032	(NOTE 2)
328	User12 selection	>U012 12	USER __no	no / d001-P032	(NOTE 2)

(NOTE 1) SJ300 series only .
(NOTE 2) L300P series : no / d001 – P031

10.5 Diagnosis

（1）Inverter error message

Name	Description		Display of remote operator ERR1***
Over-current protection	Motor is restricted and decelerates rapidly, excessive current is drawn through the inverter and there is a risk of damage. Current protection circuit operates and the inverter output is switched off.	At constant Speed	OC. Drive
		On deceleration speed	OC. Decel
		On acceleration speed	OC. Accel
		Other	Over. C
Overload protection (NOTE1)	When the Inverter detects an overload in the motor, the internal electronic thermal overload operates and the inverter output is switched off.		Over. L
Braking resistor overload protection	When BRD exceeds the usage ratio of the regenerative braking resistor, the over-voltage circuit operates and the inverter output is switched off.		OL. BRD
Over-voltage protection	When regenerative energy from the motor exceeds the maximum level, the over-voltage circuit operates and the inverter output is switched off.		Over. V
EEPROM error (NOTE2)	When EEPROM in the inverter is subject to radiated noise or unusual temperature rises, the inverter output is switched off.		EEPROM
Under-voltage	When the incoming voltage of inverter is low, the control circuit can't operate correctly. The under-voltage circuit operates and the inverter output is switched off.		Under. V
CT error	When an abnormality occurs to a CT (current detector) in the inverter, the inverter output is switched off.		CT
CPU error	When a mistaken action causes an error to the in built CPU, the inverter output is switched off.		CPU
External trip	When a signal is given to the EXT intelligent input terminal, the inverter output is switched off. (on external trip function select)		EXTERNAL
USP error	This is the error displayed when the inverter power is restored while still in the RUN mode. (Valid when the USP function is selected)		USP
Ground fault protection	When power is turned ON, this detects ground faults between the inverter output and the motor.		GND. Flt
Incoming over-voltage protection	When the incoming voltage is higher than the specification value, this detects it for 60 seconds then the over-voltage circuit operates and the inverter output is switched off.		OV. SRC

NOTE1: After a trip occurs and 10 seconds pass, restart with reset operation.

NOTE2: When EEPROM error occurs, confirm the setting data again.

Name	Description	Display of remote operator ERR1***
Temporary power loss protection	When an instantaneous power failure occurs for more than 15ms, the inverter output is switched off. Once the instantaneous power failure wait time has elapsed and the power has not been restored it is regarded as a normal power failure. However, when the operation command is still ON with restart selection the inverter will restart. So please be careful of this.	Inst. P-F
Abnormal temperature	When main circuit temperature raises by stopping of cooling fan, the inverter output is switched off.	OH. FIN
Gate Allay error	Communication error between CPU and gate allay indicate	GA
Open-phase protection	When an open-phase on the input supply occurs the inverter output is switched off.	PH. Fail
IGBT error	When an instantaneous over-current is detected on the output the inverter output is switched off to protect the main devices.	IGBT
Thermistor error	When the Inverter detects a high resistance on the thermistor input from the motor the inverter output is switched off.	TH
Abnormal brake	When inverter cannot detect switching of the brake(ON/FF) after releasing the brake ,and for waiting for signal condition(b124) (When the braking control selection(b120) is enable.)	BRAKE
Option 1 error 0-9	These indicate the error of option 1. You can realize the details each instruction manual.	OP1- OP1-9
Option 2 error 0-9	These indicate the error of option 2. You can realize the details by each instruction manual.	OP2- OP2-9
During under-voltage waiting	When the incoming voltage of the inverter has dropped, the inverter output is switched off and the inverter waits.	UV. WAIT

（2） Inverter warning massages

Warning display condition			Remote operator (6 languages available)
Maximum frequency setting	<	Frequency upper limit setting	Fmax < Lim-H
	<	Frequency lower limit setting	Fmax < Lim-L
	<	Basic frequency setting	Fmax < F-Base
	<	Multi-speed frequency setting(0)	Fmax < FS
	<	Multi-speed frequency setting(1-15)	Fmax < SPEED
	<	Orientation speed setting	Fmax < ORT
2nd Maximum frequency setting	<	2nd Frequency upper limit setting	2Fmax < 2Lim-H
	<	2nd Frequency lower limit setting	2Fmax < 2Lim-L
	<	2nd Basic frequency setting	2Fmax < 2F-Base
	<	2nd Multi-speed frequency setting (0)	2Fmax < 2FS
	<	2nd Multi-speed frequency setting (1-15)	2Fmax < SPEED
	<	Orientation speed setting	2Fmax < ORT
3rd Maximum frequency setting	<	3rd Basic frequency setting	3Fmax < 3F-Base
	<	3rd Multi-speed frequency setting (0)	3Fmax < 3FS
	<	Multi-speed frequency setting(1-15)	3Fmax < SPEED
	<	Orientation speed setting	3Fmax < ORT
Frequency upper limit setting	<	Frequency lower limit setting	Lim-H < Lim-L
	<	Multi-speed frequency setting (0)	Lim-H < FS
	<	Multi-speed frequency setting (1-15)	Lim-H < SPEED
	<	Orientation speed setting	Lim-H < ORT
2nd Frequency upper limit setting	<	2nd Frequency lower limit setting	2Lim-H < 2Lim-L
	<	2nd Multi-speed frequency setting (0)	2Lim-H < 2FS
	<	Multi-speed frequency setting (1-15)	2Lim-H < SPEED
	<	Orientation speed setting	2Lim-H < ORT
Frequency lower limit setting	>	Frequency upper limit setting	Lim-L > Lim-H
	>	Multi-speed frequency setting (0)	Lim-L > FS
2nd Frequency lower limit setting	>	2nd Frequency upper limit setting	2Lim-L > 2Lim-H
	>	2nd Multi-speed frequency setting (0)	2Lim-L > FS
Starting frequency adjustment	>	Frequency lower limit setting	Fmin > Lim-L
	>	2nd Frequency lower limit setting	Fmin > 2Lim-L
	>	Multi-speed frequency setting(0)	Fmin > FS
	>	2nd Multi-speed frequency setting(0)	Fmin > 2FS
	>	3rd Multi-speed frequency setting(0)	Fmin > 3FS

	>	Multi-speed frequency setting(1-15)	Fmin > SPEED
	>	Jogging frequency setting	Fmin > JG
Jump frequency n +-Jump width n (n=1,2,3)	<	Multi-speed frequency setting(0)	Fjp <> FS
	>		
	<	2nd Multi-speed frequency setting(0)	Fjp <> 2FS
	>		
	<	3rd Multi-speed frequency setting(0)	Fjp <> 3FS
	>		
	<	Multi-speed frequency setting(1-15)	Fjp <> SPEED
	>		

Warning display condition			Remote operator (6 languages available)
Free V/F frequency setting 1	>	Free V/F frequency setting 2 - 7	v/f-FREE
Free V/F frequency setting 2	>	Free V/F frequency setting 3 - 7	v/f-FREE
Free V/F frequency setting 3	>	Free V/F frequency setting 4 - 7	v/f-FREE
Free V/F frequency setting 4	>	Free V/F frequency setting 5 - 7	v/f-FREE
Free V/F frequency setting 5	>	Free V/F frequency setting 6 , 7	v/f-FREE
Free V/F frequency setting 6	>	Free V/F frequency setting 7	v/f-FREE
Free electronic thermal Frequency setting 1	>	Free electronic thermal Frequency setting 2 , 3	Eth-FREE
Free electronic thermal Frequency setting2	>	Free electronic thermal Frequency setting 3	Eth-FREE