# Information for Replacement of FR-A500(L) Series with FR-A800 Series (375K, 450K)

Size, connection, parameters, options concerning replacement are stated on the following pages.

## 1. REPLACING INVERTER

The FR-A800 series inverter 315K to 500K is a separated converter type, which consists of an inverter unit (FR-A842) and a converter unit (FR-CC2).

The FR-A800 series has two specifications types: FM type and CA type.
When replacing the FR-A500L series of the Japanese specifications, select the FM type (FR-A842-[][][]K-1).
When the FR-A500L series is replaced with the FR-A800 series, the FR-A800 series does not support some FR-A500L series functions. For the unsupported functions, refer to section 4.2.

## 2. SIZE

When the FR-A500L series is replaced with the FR-A800 series, the FR-A800 series 315K or higher has different installation size from that of the corresponding FR-A500L series.
For more information about the product size, refer to the outline dimension drawings on the following pages.

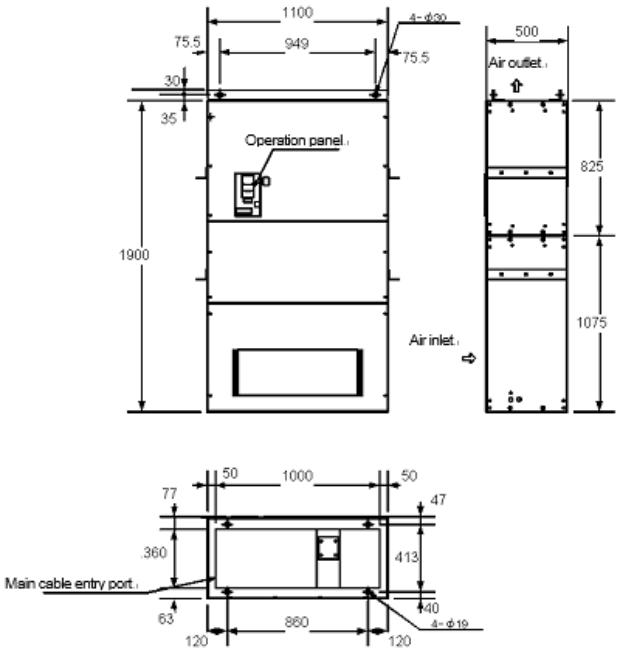
| Existing inverter | Replacing inverter | Installation size |
|---|---|---|
| FR-A540L-375K | FR-A842-355K + FR-CC2-H355K (*) | Different size |
| | FR-A842-400K + FR-CC2-H400K (*) | |
| FR-A540L-450K | FR-A842-450K + FR-CC2-H450K | |

* Select the inverter according to the capacity of the motor driven by the inverter.
  Consider the difference between the inverter rated currents.

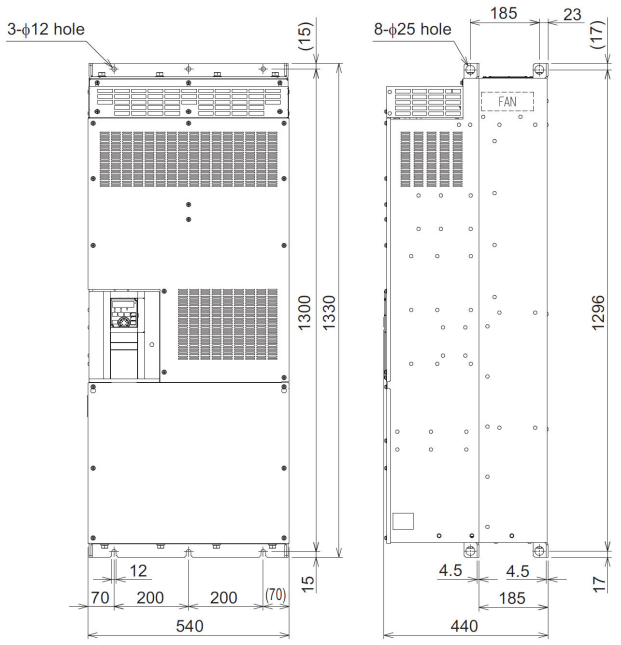
| Inverter | Rated current |
|---|---|
| FR-A540L-375K | 722 A |
| FR-A842-355K<br>FR-CC2-H355K | 683 A |
| FR-A842-400K<br>FR-CC2-H400K | 770 A |

Outline dimension drawings (Unit: mm)

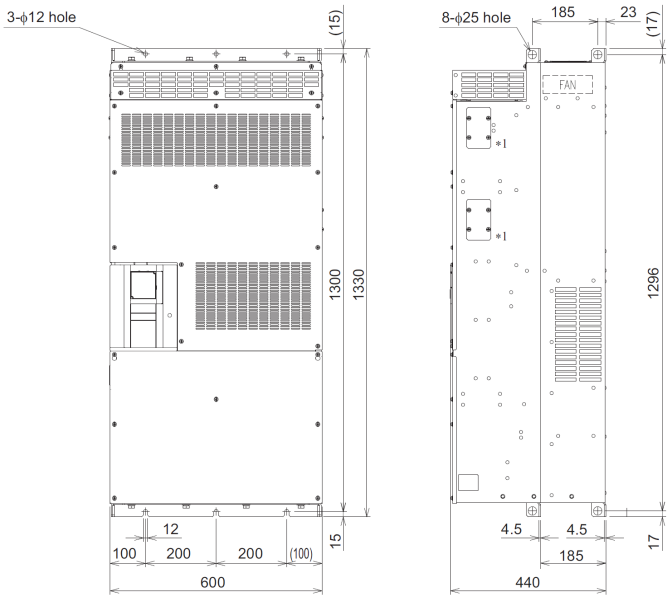
■ FR-A540L-375K



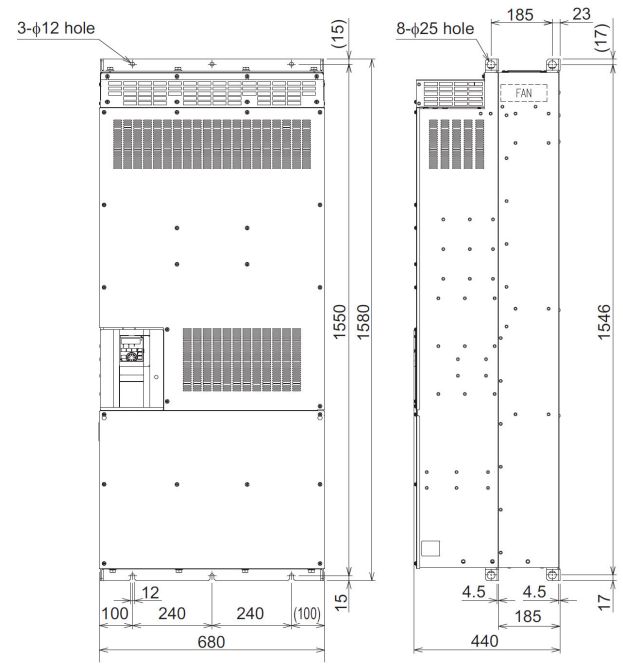

■ FR-A842-355K (Inverter unit)



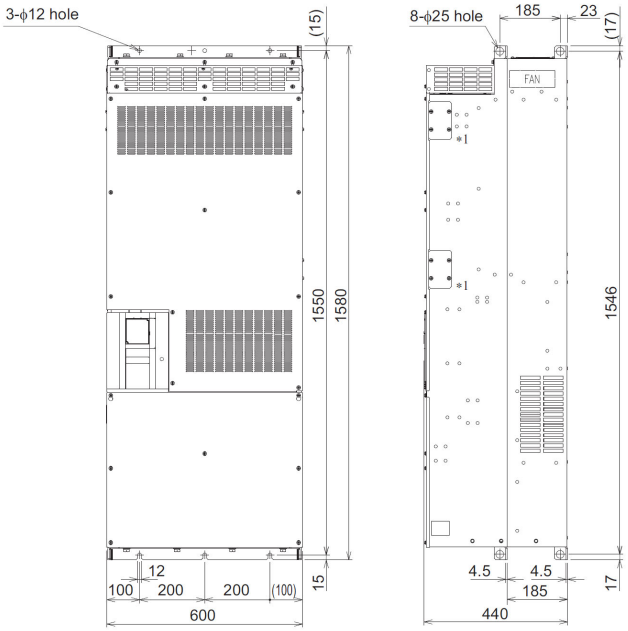

■ FR-CC2-H355K (Converter unit)



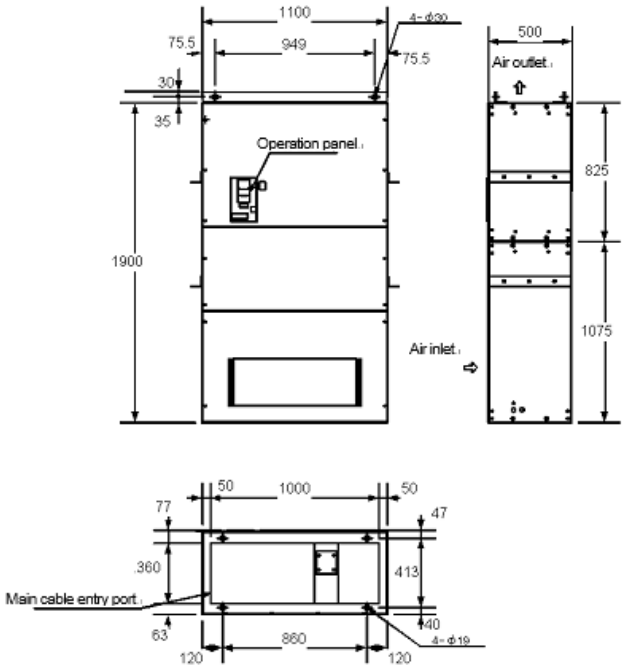
■ FR-A842-400K (Inverter unit)



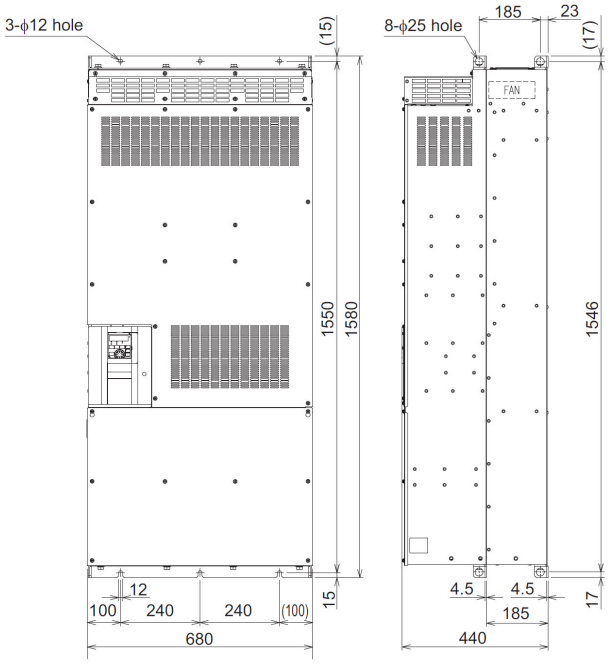

■ FR-CC2-H400K (Converter unit)



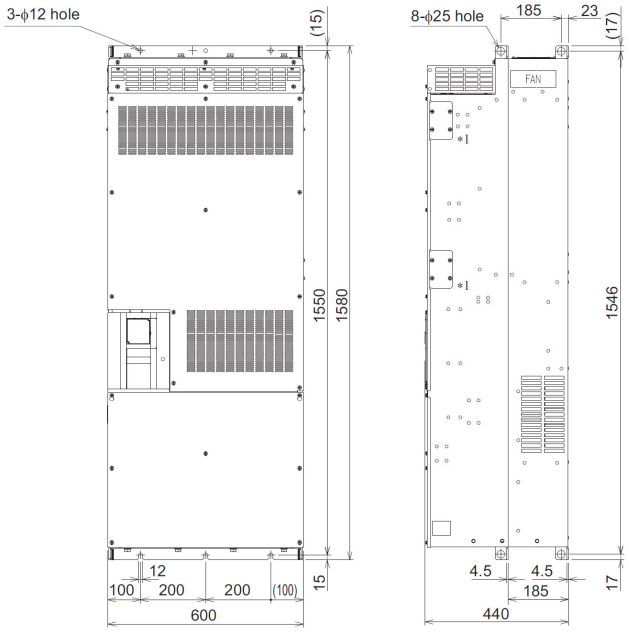
■ FR-A540L-450K




■ FR-A842-450K (Inverter unit)




■ FR-CC2-H450K (Converter unit)



## 3. WIRING

The wiring of the new inverters can follow the one of the existing inverters as the terminal names between them are almost the same.

| Type | | A500L terminal name | A842 compatible terminal name | CC2 compatible terminal name |
|---|---|---|---|---|
| Main circuit | | R, S, T | — | R/L1, S/L2, T/L3 |
| | | U, V, W | U, V, W | — |
| | | R1, S1 | R1/L11, S1/L21 | R1/L11, S1/L21 |
| | | P/+, PR | — | — |
| | | P/+, N/- | P/+, N/- | P/+, N/- |
| | | P/+, P1 | — | P1*1 |
| | | PR, PX | — | — |
| | | ⏚ | ⏚ | ⏚ |
| Control circuit / input signal | Contact | STF | STF | — |
| | | STR | STR | — |
| | | STOP | STP (STOP) | — |
| | | RH | RH | — |
| | | RM | RM | — |
| | | RL | RL | — |
| | | JOG | JOG | — |
| | | RT | RT | — |
| | | AU | AU | — |
| | | CS | CS | — |
| | | MRS | MRS | — |
| | | RES | RES | RES |
| | | SD | SD | SD |
| | | PC | PC | PC |
| Analog | Frequency setting | 10E | 10E | — |
| | | 10 | 10 | — |
| | | 2 | 2 | — |
| | | 4 | 4 | — |
| | | 1 | 1 | — |
| | | 5 | 5 | — |
| Control circuit output signal | Contact | A, B, C | A1, B1, C1 | A1, B1, C1 |
| | Open collector | RUN | RUN | — |
| | | SU | SU | — |
| | | OL | OL | — |
| | | IPF | IPF | IPF |
| | | FU | FU | — |
| | | SE | SE | SE |
| | Pulse | FM | FM | — |
| | Analog | AM | AM | — |
| Communication | RS-485 | PU connector | PU connector | PU connector |

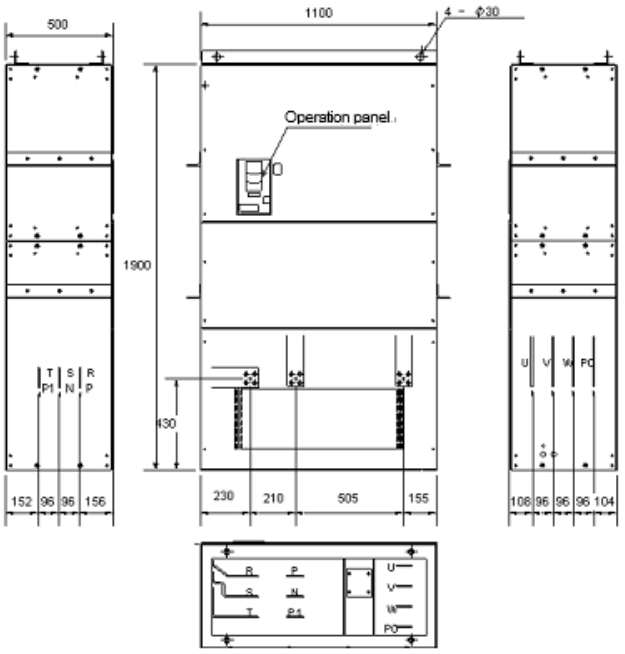
*1) Connection is not available.

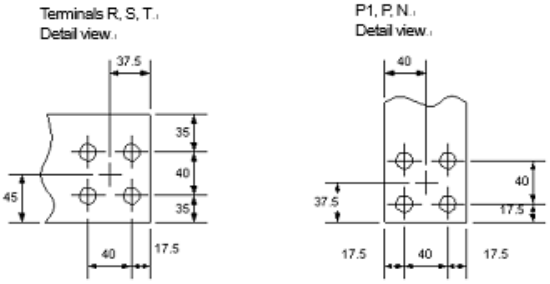
Main circuit terminal layout

The following shows the main circuit terminal layouts of the FR-A500L series and FR-A800 series.
The main circuit terminal layout and the position of the earth (ground) terminal may differ depending on the capacity. Check the terminal names and positions before performing wiring.
When the cable used for the FR-A500L series is too short for the FR-A800 series, prepare the longer one.
The terminal screw size may differ depending on the capacity. Check the terminal screw size before performing wiring.

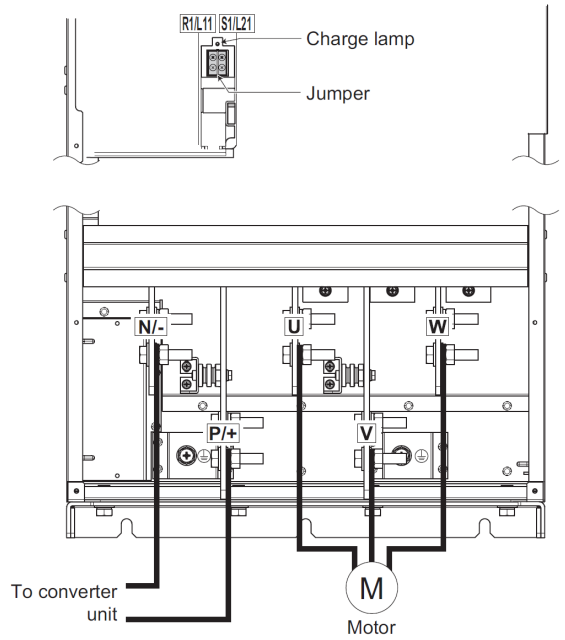
[400 V class]

■ FR-A540L-375K, 450K

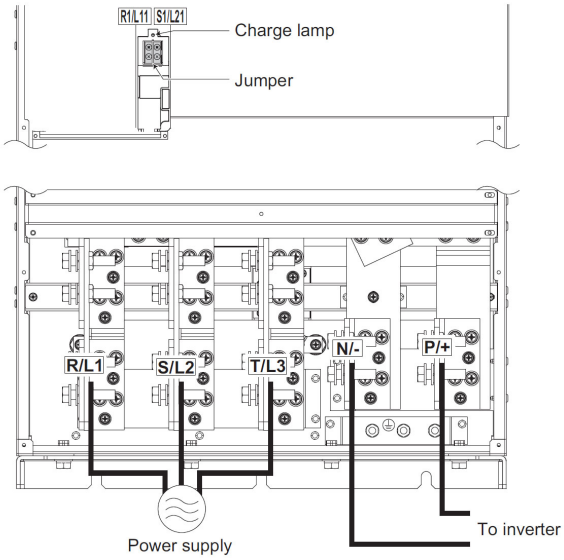


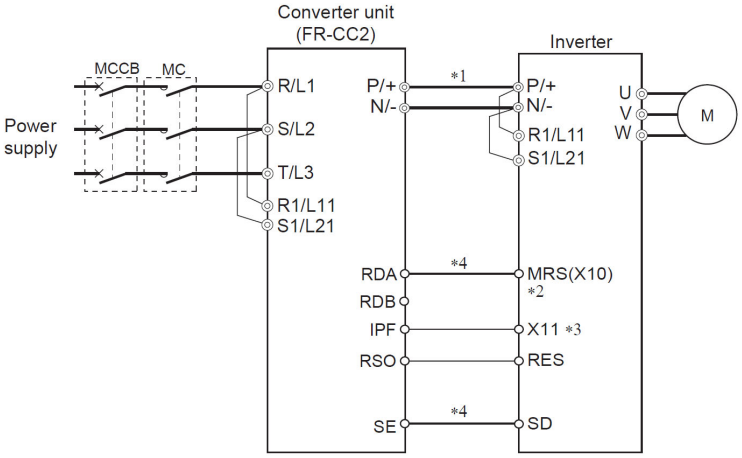




■ FR-A842-355K to 450K (Inverter unit)




■ FR-CC2-H355K to H450K (Converter unit)






*1 Do not install an MCCB across the terminals P/+ and N/- (across terminals P and P/+ or across N and N/-). Connecting the opposite polarity of terminals N/- and P/+ will damage the inverter.

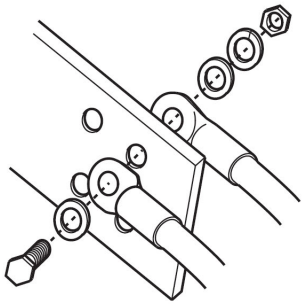
*2 For the terminal used for the X10 signal input, set "10" in any of **Pr.178 to Pr.189 (input terminal function selection)** to assign the function. (The X10 signal is assigned to the terminal MRS in the initial setting.)
For the X10 signal, NC contact input specification is selected in the initial setting. Set **Pr.599** = "0" to change the input specification to NO contact.

*3 For the terminal used for the X11 signal input, set "11" in any of **Pr.178 to Pr.189 (input terminal function selection)** to assign the function. For RS-485 or any other communication where the start command is only transmitted once, use the X11 signal to save the operation mode at the time of an instantaneous power failure.

*4 Always connect the terminal RDA of the converter unit and the terminal MRS (X10) of the inverter, and the terminal SE of the converter unit and the terminal SD (sink logic) of the inverter. Not connecting these terminals may damage the converter unit.

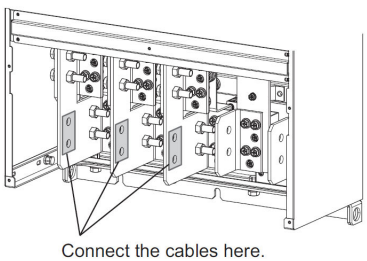
**NOTE**

- Make sure the power cables are connected to the R/L1, S/L2, and T/L3. (Phase need not be matched.) Never connect the power cable to the U, V, and W of the inverter. Doing so will damage the inverter.
- Connect the motor to U, V, and W of the inverter. (Connect the motor in the correct phase sequence.)
- When wiring the main circuit conductor, tighten a nut from the right side of the conductor.
  When wiring two wires, place wires on both sides of the conductor. (Refer to the drawing below.)
  For wiring, use bolts (nuts) provided with the converter unit.



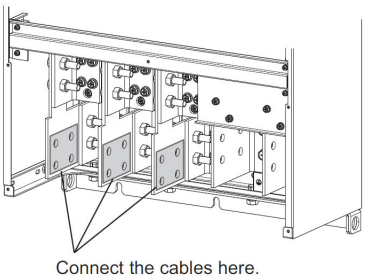
- When wiring cables to the main circuit conductor (R/L1, S/L2, T/L3) of the converter unit (FR-CC2), use the bolts (nuts) for main circuit wiring, which are provided on the front side of the conductor.

FR-CC2-H315K, H355K



Connect the cables here.

FR-CC2-H400K to H500K

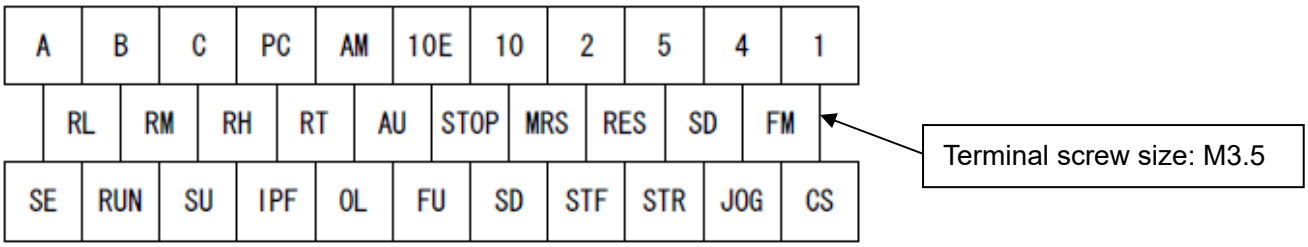


Connect the cables here.

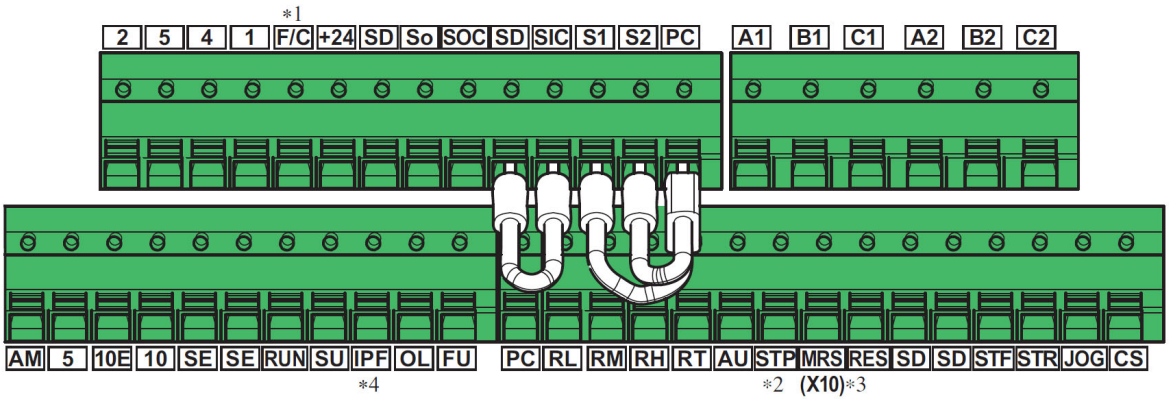
Control circuit terminal layout

The following shows the control circuit terminal layouts of the FR-A500L series and the FR-A800 series. The control circuit terminal layout differs between the FR-A500L and the FR-A800 series. Check the terminal names and positions before performing wiring.

■ Control circuit terminal layout of the FR-A500L series




■ Control circuit terminal layout of the FR-A800 series




*1 This terminal operates as the terminal FM for the FM type, and as the terminal CA for the CA type.
*2 Represents the terminal STOP.
*3 The X10 signal is assigned in the initial setting.
*4 No signal is assigned in the initial setting.

The control circuit terminal block intercompatibility attachment (FR-A8TAT) can be used for installing control circuit terminal blocks of the FR-A500(L) series. However, some restrictions apply for the installation. Refer to the FR-A8TAT Instruction Manual.

## ◆Wiring method

• Power supply connection

For the control circuit wiring, strip off the sheath of a cable, and use it with a blade terminal. For a single wire, strip off the sheath of the wire and apply directly.

Insert the blade terminal or the single wire into a socket of the terminal.

(1)Strip off the sheath for the below length. If the length of the sheath peeled is too long, a short circuit may occur with neighboring wires. If the length is too short, wires might come off.

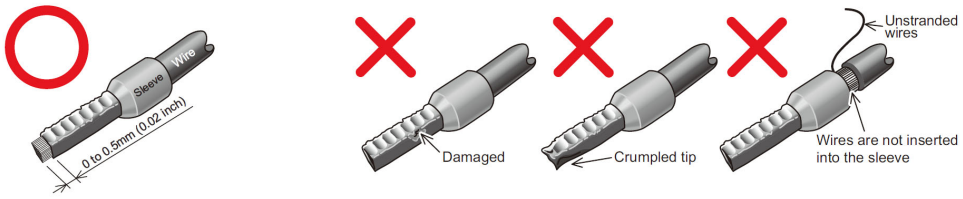
Wire the stripped cable after twisting it to prevent it from becoming loose. In addition, do not solder it.

Cable stripping size


(2)Crimp the blade terminal.

Insert wires to a blade terminal, and check that the wires come out for about 0 to 0.5 mm from a sleeve.

Check the condition of the blade terminal after crimping. Do not use a blade terminal of which the crimping is inappropriate, or the face is damaged.




• Blade terminals commercially available (as of February 2012)

Phoenix Contact Co., Ltd.

| Cable gauge ($mm^2$) | Blade terminal model | | | Crimping tool name |
|---|---|---|---|---|
| | With insulation sleeve | Without insulation sleeve | For UL wire*1 | |
| 0.3 | AI 0,5-10WH | — | — | CRIMPFOX 6 |
| 0.5 | AI 0,5-10WH | — | AI 0,5-10WH-GB | |
| 0.75 | AI 0,75-10GY | A 0,75-10 | AI 0,75-10GY-GB | |
| 1 | AI 1-10RD | A 1-10 | AI 1-10RD/1000GB | |
| 1.25, 1.5 | AI 1,5-10BK | A 1,5-10 | AI 1,5-10BK/1000GB*2 | |
| 0.75 (for two wires) | AI-TWIN 2 × 0,75-10GY | — | — | |

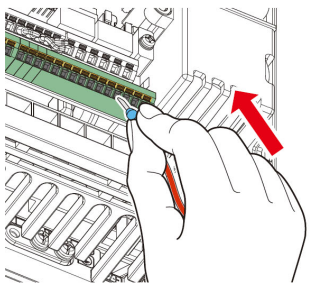
*1 A blade terminal with an insulation sleeve compatible with the MTW wire which has a thick wire insulation.

*2 Applicable for the terminal A1, B1, C1, A2, B2, C2.

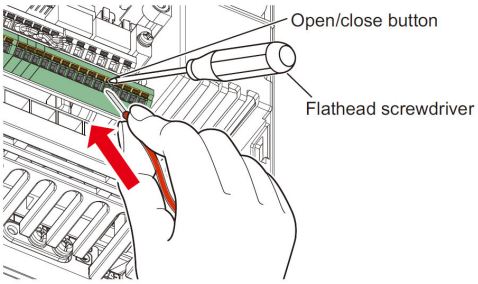
NICHIFU Co., Ltd.

| Cable gauge ($mm^2$) | Blade terminal product number | Insulation product number | Crimping tool product number |
|---|---|---|---|
| 0.3 to 0.75 | BT 0.75-11 | VC 0.75 | NH 69 |

(3)Insert the wires into a socket.



When using a single wire or stranded wires without a blade terminal, push the open/close button all the way down with a flathead screwdriver, and insert the wire.

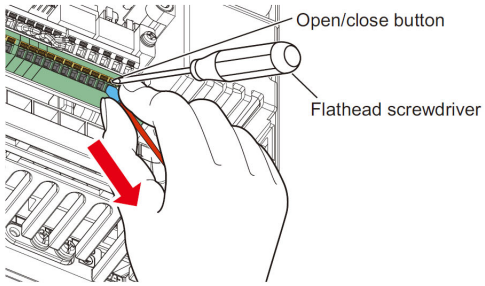



**NOTE**

- When using stranded wires without a blade terminal, twist enough to avoid short circuit with a nearby terminals or wires.
- Place the flathead screwdriver vertical to the open/close button. In case the blade tip slips, it may cause an inverter damage or injury.

• Wire removal

Pull the wire while pushing the open/close button all the way down firmly with a flathead screwdriver.




**NOTE**

- Pulling out the wire forcefully without pushing the open/close button all the way down may damage the terminal block.
- Use a small flathead screwdriver (tip thickness: 0.4 mm/tip width: 2.5 mm).
  If a flathead screwdriver with a narrow tip is used, terminal block may be damaged.
  Commercially available products (as of February 2012)

| Name | Model | Manufacturer |
|---|---|---|
| Driver | SZF<br>0- 0,4 × 2,5 | Phoenix Contact Co., Ltd. |

- Place the flathead screwdriver vertical to the open/close button. In case the blade tip slips, it may cause an inverter damage or injury.

# 4. PARAMETER

## 4. 1. Parameter List

Although most parameter numbers are the same, some setting values differ. Refer to the following table to set the parameters.

**List of FR-A800 series parameters compatible with the FR-A500L series**

The following table shows the parameter settings required when replacing FR-A500L series inverters with FR-A800 series inverters.
When an FR-A500L series parameter is set to a value other than the initial value, set the corresponding FR-A800 series parameter according to the following table.
When an FR-A500L series parameter is set to an initial value, it is usually not necessary to change the corresponding FR-A800 series parameter setting.
The parameters with △ are used for adjustment. Set them as required.
The parameter replacement following the table below does not guarantee the inverter characteristics or performance.

The parameter number of the ▭ parameters differs from that of the FR-A500L series inverter.

Setting ◎: Set the FR-A500L parameter as it is.
△: Change the FR-A500L parameter and set.
×: Adjust or set the FR-A800 parameter.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 0 | Torque boost (manual) | 0% to 30% | 0.75K or lower: 6%<br>1.5K to 3.7K: 4%<br>5.5K to 7.5K: 3%<br>11K or higher: 2% | 0 | Torque boost (manual) | 0% to 30% | 0.75K or lower: 6%<br>1.5K to 3.7K: 4%<br>5.5K to 7.5K: 3%<br>11K to 55K: 2%<br>75K or higher: 1% | △ | |
| 1 | Maximum frequency | 0 to 120 Hz | 120 Hz | 1 | Maximum frequency | 0 to 120 Hz | 55K or lower: 120 Hz<br>75K or higher: 60 Hz | ◎ | |
| 2 | Minimum frequency | 0 to 120 Hz | 0 Hz | 2 | Minimum frequency | 0 to 120 Hz | 0 Hz | ◎ | |
| 3 | Base frequency | 0 to 400 Hz | 60 Hz | 3 | Base frequency | 0 to 590 Hz | 60 Hz | ◎ | |
| 4 | Multi-speed setting (high speed) | 0 to 400 Hz | 60 Hz | 4 | Multi-speed setting (high speed) | 0 to 590 Hz | 60 Hz | ◎ | |
| 5 | Multi-speed setting (middle speed) | 0 to 400 Hz | 30 Hz | 5 | Multi-speed setting (middle speed) | 0 to 590 Hz | 30 Hz | ◎ | |
| 6 | Multi-speed setting (low speed) | 0 to 400 Hz | 10 Hz | 6 | Multi-speed setting (low speed) | 0 to 590 Hz | 10 Hz | ◎ | |
| 7 | Acceleration time | 0 to 3600 s/<br>0 to 360 s | 7.5K or lower: 5 s<br>11K or higher: 15 s | 7 | Acceleration time | 0 to 3600 s | 7.5K or lower: 5 s<br>11K or higher: 15 s | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 8 | Deceleration time | 0 to 3600 s/<br>0 to 360 s | 7.5K or lower: 5 s<br>11K or higher: 15 s | 8 | Deceleration time | 0 to 3600 s | 7.5K or lower: 5 s<br>11K or higher: 15 s | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 9 | Electronic thermal O/L relay | 0 to 500 A | Rated output current | 9 | Electronic thermal O/L relay | 55K or lower: 0 to 500 A<br>75K or higher: 0 to 3600 A | Rated output current | ◎ | Set the rated motor current. |
| 10 | DC injection brake operation frequency | 0 to 120 Hz, 9999 | 3 Hz | 10 | DC injection brake operation frequency | 0 to 120 Hz, 9999 | 3 Hz | ◎ | |
| 11 | DC injection brake operation time | 0 to 10 s, 8888 | 0.5 s | 11 | DC injection brake operation time | 0 to 10 s, 8888 | 0.5 s | ◎ | |
| 12 | DC injection brake voltage | 0% to 30% | 7.5K or lower: 4%<br>11K or higher: 2% | 12 | DC injection brake operation voltage | 0% to 30% | 7.5K or lower: 4%<br>11K to 55K: 2%<br>75K or higher: 1% | △ | |
| 13 | Starting frequency | 0 to 60 Hz | 0.5 Hz | 13 | Starting frequency | 0 to 60 Hz | 0.5 Hz | ◎ | |
| 14 | Load pattern selection | 0 to 5 | 0 | 14 | Load pattern selection | 0 to 5, 12 to 15 | 0 | ◎ | |
| 15 | Jog frequency | 0 to 400 Hz | 5 Hz | 15 | Jog frequency | 0 to 590 Hz | 5 Hz | ◎ | |
| 16 | Jog acceleration/deceleration time | 0 to 3600 s/<br>0 to 360 s | 0.5 s | 16 | Jog acceleration/deceleration time | 0 to 3600 s | 0.5 s | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 17 | MRS input selection | 0, 2 | 0 | 17 | MRS input selection | 0, 2, 4 | 0 | ◎ | |
| 18 | High-speed maximum frequency | 120 to 400 Hz | 120 Hz | 18 | High speed maximum frequency | 0 to 590 Hz | 55K or lower: 120 Hz<br>75K or higher: 60 Hz | ◎ | |
| 19 | Base frequency voltage | 0 to 1000 V, 8888, 9999 | 9999 | 19 | Base frequency voltage | 0 to 1000 V, 8888, 9999 | 9999 | ◎ | |

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 20 | Acceleration/deceleration reference frequency | 1 to 400 Hz | 60 Hz | 20 | Acceleration/deceleration reference frequency | 1 to 590 Hz | 60 Hz | ◎ | |
| 21 | Acceleration/deceleration time increments | 0, 1 | 0 | 21 | Acceleration/deceleration time increments | 0, 1 | 0 | ◎ | |
| 22 | Stall prevention operation level | 0% to 200%, 9999 | 150% | 22 | Stall prevention operation level | 0% to 400% | 150%* | △ | When the FR-A500L setting is other than "9999", set the same value for the FR-A800. When the FR-A500L setting is "9999", set Pr.810 = "1" and Pr.868 = "4" for the FR-A800. |
| | | | | 810 | Torque limit input method selection | 0, 1 | 0 | × | |
| | | | | 868 | Terminal 1 function assignment | 0 to 6, 9999 | 0 | × | |
| 23 | Stall prevention operation level compensation factor at double speed | 0% to 200%, 9999 | 9999 | 23 | Stall prevention operation level compensation factor at double speed | 0% to 200%, 9999 | 9999 | ◎ | |
| 24 | Multi-speed setting (speed 4) | 0 to 400 Hz, 9999 | 9999 | 24 | Multi-speed setting (speed 4) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 25 | Multi-speed setting (speed 5) | 0 to 400 Hz, 9999 | 9999 | 25 | Multi-speed setting (speed 5) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 26 | Multi-speed setting (speed 6) | 0 to 400 Hz, 9999 | 9999 | 26 | Multi-speed setting (speed 6) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 27 | Multi-speed setting (speed 7) | 0 to 400 Hz, 9999 | 9999 | 27 | Multi-speed setting (speed 7) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 28 | Multi-speed input compensation | 0, 1 | 0 | 28 | Multi-speed input compensation selection | 0, 1 | 0 | ◎ | |
| 29 | Acceleration/deceleration pattern | 0, 1, 2, 3 | 0 | 29 | Acceleration/deceleration pattern selection | 0 to 6 | 0 | ◎ | |
| 30 | Regenerative function selection | 0, 1, 2 | 0 | 30 | Regenerative function selection | 2, 10, 11, 102, 110, 111 | 10 | △ | Change the FR-A500L setting as follows.<br>0 → 10. 1 → 11.<br>For other than the above, the FR-A500L setting can be used as is. |
| 31 | Frequency jump 1A | 0 to 400 Hz, 9999 | 9999 | 31 | Frequency jump 1A | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 32 | Frequency jump 1B | 0 to 400 Hz, 9999 | 9999 | 32 | Frequency jump 1B | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 33 | Frequency jump 2A | 0 to 400 Hz, 9999 | 9999 | 33 | Frequency jump 2A | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 34 | Frequency jump 2B | 0 to 400 Hz, 9999 | 9999 | 34 | Frequency jump 2B | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 35 | Frequency jump 3A | 0 to 400 Hz, 9999 | 9999 | 35 | Frequency jump 3A | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 36 | Frequency jump 3B | 0 to 400 Hz, 9999 | 9999 | 36 | Frequency jump 3B | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 37 | Speed display | 0, 1 to 9998 | 0 | 37 | Speed display | 0, 1 to 9998 | 0 | ◎ | When the machine speed display is selected in the parameter frequency setting, select the frequency display to change the setting. After the setting, select the machine speed display again. |
| 41 | Up-to-frequency sensitivity | 0% to 100% | 10% | 41 | Up-to-frequency sensitivity | 0% to 100% | 10% | ◎ | |
| 42 | Output frequency detection | 0 to 400 Hz | 6 Hz | 42 | Output frequency detection | 0 to 590 Hz | 6 Hz | ◎ | |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 43 | Output frequency detection for reverse rotation | 0 to 400 Hz, 9999 | 9999 | 43 | Output frequency detection for reverse rotation | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 44 | Second acceleration/deceleration time | 0 to 3600 s/<br>0 to 360 s | 5 s | 44 | Second acceleration/deceleration time | 0 to 3600 s | 5 s | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 45 | Second deceleration time | 0 to 3600 s/<br>0 to 360 s, 9999 | 9999 | 45 | Second deceleration time | 0 to 3600 s, 9999 | 9999 | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 46 | Second torque boost | 0% to 30%, 9999 | 9999 | 46 | Second torque boost | 0% to 30%, 9999 | 9999 | ◎ | |
| 47 | Second V/F (base frequency) | 0 to 400 Hz, 9999 | 9999 | 47 | Second V/F (base frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 48 | Second stall prevention operation current | 0% to 200% | 150% | 48 | Second stall prevention operation level | 0% to 400% | 150%* | ◎ | |
| 49 | Second stall prevention operation frequency | 0 to 400 Hz, 9999 | 0 | 49 | Second stall prevention operation frequency | 0 to 590 Hz, 9999 | 0 | ◎ | |
| 50 | Second output frequency detection | 0 to 400 Hz | 30 Hz | 50 | Second output frequency detection | 0 to 590 Hz | 30 Hz | ◎ | |
| 52 | DU/PU main display data selection | 0 to 20, 22, 23, 24, 25, 100 | 0 | 52 | Operation panel main monitor selection | 0, 5 to 14, 17 to 20, 22 to 35, 38, 40 to 45, 50 to 57, 61, 62, 64, 67, 87 to 98, 100 | 0 | ◎ | The setting value "9" cannot be selected with the FR-A800. |
| 53 | PU level display data selection | 0 to 3, 5 to 14, 17, 18 | 1 | — | — | — | — | × | This parameter is not available for the FR-A800. |
| 54 | FM terminal function selection | 1 to 3, 5 to 14, 17, 18, 21 | 1 | 54 | FM/CA terminal function selection | 1 to 3, 5 to 14, 17, 18, 21, 24, 32 to 34, 50, 52, 53, 61, 62, 67, 70 87 to 90, 92, 93, 95, 97, 98 | 1 | ◎ | The setting value "9" cannot be selected with the FR-A800. |
| 55 | Frequency monitoring reference | 0 to 400 Hz | 60 Hz | 55 | Frequency monitoring reference | 0 to 590 Hz | 60 Hz | ◎ | |
| 56 | Current monitoring reference | 0 to 500 A | Rated output current | 56 | Current monitoring reference | 55K or lower: 0 to 500 A<br>75K or higher: 0 to 3600 A | Rated output current | ◎ | |
| 57 | Restart coasting time | 0, 0.1 to 5 s, 9999 | 9999 | 57 | Restart coasting time | 0, 0.1 to 30 s, 9999 | 9999 | ◎ | When Pr.57 of the FR-A500L is not set to "9999", set Pr.57 of the FR-CC2 to "0". If the CS signal is not assigned to any input terminal, the restart operation is enabled at all times by setting Pr.57 in the FR-A800. |
| 58 | Restart cushion time | 0 to 60 s | 1.0 s | 58 | Restart cushion time | 0 to 60 s | 1.0 s | ◎ | |
| 59 | Remote setting function selection | 0, 1, 2 | 0 | 59 | Remote setting function selection | 0 to 3, 11 to 13 | 0 | ◎ | |
| 60 | Intelligent mode selection | 0 to 8 | 0 | 60 | Energy saving control selection | 0, 4, 9 | 0 | △ | When the FR-A500L setting is "0 or 4", set the same value. When the setting is other than "0 or 4", use Pr.292 for setting the value. |
| | | | | 292 | Automatic acceleration/deceleration | 0, 1, 3, 5 to 8, 11 | 0 | △ | When the FR-A500L setting is "1, 3, 5, 6, 7 or 8", set the same value. When the setting is "2", set Pr.292 = "1", Pr.62 = 180%, and Pr.63 = 180% for the FR-A800. |
| 61 | Reference I for intelligent mode | 0 to 500 A, 9999 | 9999 | 61 | Reference current | 55K or lower: 0 to 500 A, 9999<br>75K or higher: 0 to 3600 A, 9999 | 9999 | ◎ | When the FR-A540L-375K setting is "9999", set the rated current value of the A540L-375K for the FR-A800. Adjust the setting value for the FR-A842-355K, as the rated current value of the FR-A540-375K is large. |
| 62 | Ref. I for intelligent mode accel. | 0% to 200%, 9999 | 9999 | 62 | Reference current value at acceleration | 0% to 400%, 9999 | 9999 | ◎ | |
| 63 | Ref. I for intelligent mode decel. | 0% to 200%, 9999 | 9999 | 63 | Reference current value at deceleration | 0% to 400%, 9999 | 9999 | ◎ | |
| 64 | Starting frequency for elevator mode | 0 to 10 Hz, 9999 | 9999 | 64 | Starting frequency for elevator mode | 0 to 10 Hz, 9999 | 9999 | ◎ | |
| 65 | Retry selection | 0 to 5 | 0 | 65 | Retry selection | 0 to 5 | 0 | ◎ | |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 66 | Stall prevention operation level reduction starting frequency | 0 to 400 Hz | 60 Hz | 66 | Stall prevention operation reduction starting frequency | 0 to 590 Hz | 60 Hz | ◎ | |
| 67 | Number of retries at alarm occurrence | 0 to 10, 101 to 110 | 0 | 67 | Number of retries at fault occurrence | 0 to 10, 101 to 110 | 0 | ◎ | Set Pr.67 of the FR-CC2 to match the setting of the FR-A500L. |
| 68 | Retry waiting time | 0 to 10 s | 1 s | 68 | Retry waiting time | 0.1 to 600 s | 1 s | ◎ | Set Pr.68 of the FR-CC2 to match the setting of the FR-A500L. |
| 69 | Retry count display erasure | 0 | 0 | 69 | Retry count display erase | 0 | 0 | ◎ | Set Pr.69 of the FR-CC2 to match the setting of the FR-A500L. |
| 70 | Special regenerative brake duty | 0.4K to 1.5K: 0% to 15%<br>2.2K to 7.5K: 0% to 30%<br>11K or higher: 0% | 0% | — | — | — | — | × | This parameter is not available for the FR-A800. |
| 71 | Applied motor | 0 to 8, 13 to 18, 20, 23, 24 | 0 | 71 | Applied motor | 0 to 6, 13 to 16, 20, 23, 24, 30, 33, 34, 40, 43, 44, 50, 53, 54, 70, 73, 74, 330, 333, 334, 8090, 8093, 8094, 9090, 9093, 9094 | 0 | △ | FR-A500L → FR-A800<br>The values in parentheses are for when Pr.96 of the FR-A500L is set to "3 or 103".<br>7 → 5 (3)<br>8 → 6 (3)<br>17 → 15 (13)<br>18 → 16 (13) |
| 72 | PWM frequency selection | 0 to 15 | 2 | 72 | PWM frequency selection | 55K or lower: 0 to 15<br>75K or higher: 0 to 6, 25 | 2 | ◎ | |
| 73 | 0-5V/0-10V selection | 0 to 5, 10 to 15 | 1 | 73 | Analog input selection | 0 to 7, 10 to 17 | 1 | ◎ | |
| 74 | Filter time constant | 0 to 8 | 1 | 74 | Input filter time constant | 0 to 8 | 1 | ◎ | |
| 75 | Reset selection/disconnected PU detection/PU stop selection | 0 to 3, 14 to 17 | 14 | 75 | Reset selection/disconnected PU detection/PU stop selection | 55K or lower: 0 to 3, 14 to 17<br>75K or higher: 0 to 3, 14 to 17, 100 to 103, 114 to 117 | 14 | ◎ | |
| 76 | Alarm code output selection | 0, 1, 2, 3 | 0 | 76 | Fault code output selection | 0, 1, 2 | 0 | △ | For the FR-A800, Pr.76 cannot be set to "3" because the program operation function was deleted. |
| 77 | Parameter write disable selection | 0, 1, 2 | 0 | 77 | Parameter write selection | 0, 1, 2 | 0 | ◎ | |
| 78 | Reverse rotation prevention selection | 0, 1, 2 | 0 | 78 | Reverse rotation prevention selection | 0, 1, 2 | 0 | ◎ | |
| 79 | Operation mode selection | 0 to 8 | 0 | 79 | Operation mode selection | 0 to 4, 6, 7 | 0 | △ | For the FR-A800, Pr.79 cannot be set to "5" because the program operation function was deleted. When the FR-A500L setting is "8", set "0" for the FR-A800 and assign the X16 signal to the control input terminal. |
| 80 | Motor capacity | 0.4 to 55 kW, 9999 | 9999 | 80 | Motor capacity | 55K or lower: 0.4 to 55 kW, 9999<br>75K or higher: 0 to 3600 kW, 9999 | 9999 | ◎ | |
| 81 | Number of motor poles | 2, 4, 6, 12, 14, 16, 9999 | 9999 | 81 | Number of motor poles | 2, 4, 6, 8, 10, 12, 9999 | 9999 | △ | The setting values "2 to 6" and "9999" can be set as is, but "12 to 16" must be set after subtracting 10. |
| (82) | Motor excitation current | 0 to ****, 9999 | 9999 | 82 | Motor excitation current | 55K or lower: 0 to 500 A, 9999<br>75K or higher: 0 to 3600 A, 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again. |
| 83 | Rated motor voltage | 0 to 1000 V | 200 V class: 200 V<br>400 V class: 400 V | 83 | Rated motor voltage | 0 to 1000 V | 200 V class: 200 V<br>400 V class: 400 V | ◎ | |
| 84 | Rated motor frequency | 50 to 120 Hz | 60 Hz | 84 | Rated motor frequency | 10 to 400 Hz, 9999 | 9999 | ◎ | |
| 89 | Speed control gain | 0% to 200% | 100% | 89 | Speed control gain | 0% to 200%, 9999 | 9999 | ◎ | The value can be read when Pr.77 = "801" for the FR-A500L. |

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| (90) | Motor constant R1 | 0 to ****, 9999 | 9999 | 90 | Motor constant R1 | 55K or lower: 0 to 50 Ω, 9999<br>75K or higher: 0 to 400 mΩ, 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again. |
| (91) | Motor constant R2 | 0 to ****, 9999 | 9999 | 91 | Motor constant R2 | 55K or lower: 0 to 50 Ω, 9999<br>75K or higher: 0 to 400 mΩ, 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again. |
| (92) | Motor constant L1 | 0 to ****, 9999 | 9999 | 92 | Motor constant L1 | 55K or lower: 0 to 50 Ω<br>(0 to 1000 mH), 9999<br>75K or higher: 0 to 3600 mΩ<br>(0 to 400 mH), 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again.<br>For the 75K or higher and Pr.71 = "5, 6, 15, or 16", set after rounding up two decimal places. |
| (93) | Motor constant L2 | 0 to ****, 9999 | 9999 | 93 | Motor constant L2 | 55K or lower: 0 to 50 Ω<br>(0 to 1000 mH), 9999<br>75K or higher: 0 to 3600 mΩ<br>(0 to 400 mH), 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again. For the 75K or higher and Pr.71 = "5, 6, 15, or 16", set after rounding up two decimal places. |
| (94) | Motor constant X | 0 to ****, 9999 | 9999 | 94 | Motor constant X | 0% to 100%, 9999 | 9999 | △ | The value can be read when Pr.77 = "801" for the FR-A500L.<br>To use this parameter of the FR-A800, set Pr.71 = "4 or 14" or perform auto tuning again. |
| 95 | Online auto tuning selection | 0, 1 | 0 | 95 | Online auto tuning selection | 0 to 2 | 0 | ◎ | |
| 96 | Auto tuning setting/status | 0, 1, 101 | 0 | 96 | Auto tuning setting/status | 0, 1, 11, 101 | 0 | △ | If auto tuning has been performed, perform tuning again as required. |
| 100 | V/F1 (first frequency) | 0 to 400 Hz, 9999 | 9999 | 100 | V/F1 (first frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 101 | V/F1 (first frequency voltage) | 0 to 1000 V | 0 | 101 | V/F1 (first frequency voltage) | 0 to 1000 V | 0 V | ◎ | |
| 102 | V/F2 (second frequency) | 0 to 400 Hz, 9999 | 9999 | 102 | V/F2 (second frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 103 | V/F2 (second frequency voltage) | 0 to 1000 V | 0 | 103 | V/F2 (second frequency voltage) | 0 to 1000 V | 0 V | ◎ | |
| 104 | V/F3 (third frequency) | 0 to 400 Hz, 9999 | 9999 | 104 | V/F3 (third frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 105 | V/F3 (third frequency voltage) | 0 to 1000 V | 0 | 105 | V/F3 (third frequency voltage) | 0 to 1000 V | 0 V | ◎ | |
| 106 | V/F4 (fourth frequency) | 0 to 400 Hz, 9999 | 9999 | 106 | V/F4 (fourth frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 107 | V/F4 (fourth frequency voltage) | 0 to 1000 V | 0 | 107 | V/F4 (fourth frequency voltage) | 0 to 1000 V | 0 V | ◎ | |
| 108 | V/F5 (fifth frequency) | 0 to 400 Hz, 9999 | 9999 | 108 | V/F5 (fifth frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 109 | V/F5 (fifth frequency voltage) | 0 to 1000 V | 0 | 109 | V/F5 (fifth frequency voltage) | 0 to 1000 V | 0 V | ◎ | |
| 110 | Third acceleration/deceleration time | 0 to 3600 s/<br>0 to 360 s, 9999 | 9999 | 110 | Third acceleration/deceleration time | 0 to 3600 s, 9999 | 9999 | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 111 | Third deceleration time | 0 to 3600 s/<br>0 to 360 s, 9999 | 9999 | 111 | Third deceleration time | 0 to 3600 s, 9999 | 9999 | ◎ | Changing Pr.21 after setting this parameter will change the set value. |
| 112 | Third torque boost | 0% to 30%, 9999 | 9999 | 112 | Third torque boost | 0% to 30%, 9999 | 9999 | ◎ | |
| 113 | Third V/F (base frequency) | 0 to 400 Hz, 9999 | 9999 | 113 | Third V/F (base frequency) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 114 | Third stall prevention operation current | 0% to 200% | 150% | 114 | Third stall prevention operation level | 0% to 400% | 150%* | ◎ | |
| 115 | Third stall prevention operation frequency | 0 to 400 Hz | 0 | 115 | Third stall prevention operation frequency | 0 to 590 Hz | 0 | ◎ | |
| 116 | Third output frequency detection | 0 to 400 Hz, 9999 | 9999 | 116 | Third output frequency detection | 0 to 590 Hz | 60 Hz | △ | When the FR-A500L setting is "9999", use the initial setting for the FR-A800. |
| 117 | Communication station number | 0 to 31 | 0 | 117 | PU communication station number | 0 to 31 | 0 | ◎ | |
| 118 | Communication speed | 48, 96, 192 | 192 | 118 | PU communication speed | 48, 96, 192, 384, 576, 768, 1152 | 192 | ◎ | |
| 119 | Stop bit length / data length | 0, 1, 10, 11 | 1 | 119 | PU communication stop bit length | 0, 1, 10, 11 | 1 | ◎ | |
| 120 | Parity check presence/absence | 0, 1, 2 | 2 | 120 | PU communication parity check | 0, 1, 2 | 2 | ◎ | |
| 121 | Number of communication retries | 0 to 10, 9999 | 1 | 121 | PU communication retry count | 0 to 10, 9999 | 1 | ◎ | |
| 122 | Communication check time interval | 0, 0.1 to 999.8 s, 9999 | 0 | 122 | PU communication check time interval | 0, 0.1 to 999.8 s, 9999 | 9999 | △ | The initial value for the FR-A800 has been changed. |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 123 | Waiting time setting | 0 to 150 ms, 9999 | 9999 | 123 | PU communication waiting time setting | 0 to 150 ms, 9999 | 9999 | ◎ | |
| 124 | CR, LF presence/absence selection | 0, 1, 2 | 1 | 124 | PU communication CR/LF selection | 0, 1, 2 | 1 | ◎ | |
| 128 | PID action selection | 10, 11, 20, 21 | 10 | 128 | PID action selection | 0, 10, 11, 20, 21, 40 to 43, 50, 51, 60, 61, 70, 71, 80, 81, 90, 91, 100, 101, 1000, 1001, 1010, 1011, 2000, 2001, 2010, 2011 | 0 | △ | When "14" (X14 signal) is not set in any parameter from Pr.180 to Pr.186, or when PID control is not used even if "14" (X14 signal) is set in any parameter from Pr.180 to Pr.186 in the FR-A800, set "0" in Pr.128 in the FR-A800. When the X14 signal is not assigned to any input terminal, just set a value in Pr.128 to enable PID control in the FR-A800. |
| 129 | PID proportional band | 0.1% to 1000%, 9999 | 100% | 129 | PID proportional band | 0.1% to 1000%, 9999 | 100% | ◎ | |
| 130 | PID integral time | 0.1 to 3600 s, 9999 | 1 s | 130 | PID integral time | 0.1 to 3600 s, 9999 | 1 s | ◎ | |
| 131 | Upper limit | 0% to 100%, 9999 | 9999 | 131 | PID upper limit | 0% to 100%, 9999 | 9999 | ◎ | |
| 132 | Lower limit | 0% to 100%, 9999 | 9999 | 132 | PID lower limit | 0% to 100%, 9999 | 9999 | ◎ | |
| 133 | PID action set point for PU operation | 0% to 100% | 0% | 133 | PID action set point | 0% to 100%, 9999 | 9999 | △ | To use the value input via terminal 2 as a set point for the FR-A800 inverters, set "9999". When the value other than "9999" is set, the set value will be also used as a set point during operations other than the PU operation. |
| 134 | PID differential time | 0.01 to 10.00 s, 9999 | 9999 | 134 | PID differential time | 0.01 to 10.00 s, 9999 | 9999 | ◎ | |
| 135 | Commercial power supply-inverter switch-over sequence output terminal selection | 0, 1 | 0 | 135 | Electronic bypass sequence selection | 0, 1 | 0 | ◎ | |
| 136 | MC switchover interlock time | 0 to 100.0 s | 1.0 s | 136 | MC switchover interlock time | 0 to 100.0 s | 1.0 s | ◎ | |
| 137 | Start waiting time | 0 to 100.0 s | 0.5 s | 137 | Start waiting time | 0 to 100.0 s | 0.5 s | ◎ | |
| 138 | Commercial power supply-inverter switch-over selection at alarm occurrence | 0, 1 | 0 | 138 | Bypass selection at a fault | 0, 1 | 0 | ◎ | |
| 139 | Automatic inverter-commercial power supply switch-over frequency | 0 to 60.00 Hz, 9999 | 9999 | 139 | Automatic switchover frequency from inverter to bypass operation | 0 to 60.00 Hz, 9999 | 9999 | ◎ | |
| 140 | Backlash acceleration stopping frequency | 0 to 400 Hz | 1 Hz | 140 | Backlash acceleration stopping frequency | 0 to 590 Hz | 1 Hz | ◎ | The setting is valid when Pr.29 = "3". |
| 141 | Backlash acceleration stopping time | 0 to 360 s | 0.5 s | 141 | Backlash acceleration stopping time | 0 to 360 s | 0.5 s | ◎ | The setting is valid when Pr.29 = "3". |
| 142 | Backlash deceleration stopping frequency | 0 to 400 Hz | 1 Hz | 142 | Backlash deceleration stopping frequency | 0 to 590 Hz | 1 Hz | ◎ | The setting is valid when Pr.29 = "3". |
| 143 | Backlash deceleration stopping time | 0 to 360 s | 0.5 s | 143 | Backlash deceleration stopping time | 0 to 360 s | 0.5 s | ◎ | The setting is valid when Pr.29 = "3". |
| 144 | Speed setting switch-over | 0, 2, 4, 6, 8, 10 102, 104, 106, 108, 110 | 4 | 144 | Speed setting switchover | 0, 2, 4, 6, 8, 10, 102, 104, 106, 108, 110, 112 | 4 | ◎ | |
| 145 | PU display language selection | 0 to 7 | 0 | 145 | PU display language selection | 0 to 7 | 1 | △ | The initial value for the FR-A800 has been changed. |
| 148 | Stall prevention operation level at 0V input | 0% to 200% | 150% | 148 | Stall prevention level at 0 V input | 0% to 400% | 150%* | ◎ | |
| 149 | Stall prevention operation level at 10V input | 0% to 200% | 200% | 149 | Stall prevention level at 10 V input | 0% to 400% | 200%* | ◎ | |
| 150 | Output current detection level | 0% to 200% | 150% | 150 | Output current detection level | 0% to 400% | 150%* | ◎ | |
| 151 | Output current detection period | 0 to 10 s | 0 | 151 | Output current detection signal delay time | 0 to 10 s | 0 | ◎ | |
| 152 | Zero current detection level | 0% to 200% | 5.0% | 152 | Zero current detection level | 0% to 400% | 5%* | ◎ | |
| 153 | Zero current detection period | 0 to 1 s | 0.5 s | 153 | Zero current detection time | 0 to 10 s | 0.5 s | ◎ | |
| 154 | Voltage reduction selection during stall prevention operation | 0, 1 | 1 | 154 | Voltage reduction selection during stall prevention operation | 0, 1, 10, 11 | 1 | ◎ | |
| 155 | RT signal activated condition | 0, 10 | 0 | 155 | RT signal function validity condition selection | 0, 10 | 0 | ◎ | |
| 156 | Stall prevention operation selection | 0 to 31, 100, 101 | 0 | 156 | Stall prevention operation selection | 0 to 31, 100, 101 | 0 | ◎ | |
| 157 | OL signal waiting time | 0 to 25 s, 9999 | 0 | 157 | OL signal output timer | 0 to 25 s, 9999 | 0 s | ◎ | |
| 158 | AM terminal function selection | 1 to 3, 5 to 14, 17, 18, 21 | 1 | 158 | AM terminal function selection | 1 to 3, 5 to 14, 17, 18, 21, 24 32 to 34, 50, 52 to 54, 61, 62, 67, 70, 87 to 90, 91 to 98 | 1 | ◎ | The setting value "9" cannot be selected with the FR-A800. |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 160 | User group read selection | 0, 1, 10, 11 | 0 | 160 | User group read selection | 0, 1, 9999 | 0 | △ | The user group 2 was deleted for the FR-A800. |
| 162 | Automatic restart after instantaneous power failure selection | 0, 1 | 0 | 162 | Automatic restart after instantaneous power failure selection | 0 to 3, 10 to 13 | 0 | ◎ | |
| 163 | First cushion time for restart | 0 to 20 s | 0 s | 163 | First cushion time for restart | 0 to 20 s | 0 s | ◎ | |
| 164 | First cushion voltage for restart | 0% to 100% | 0% | 164 | First cushion voltage for restart | 0% to 100% | 0% | ◎ | |
| 165 | Restart stall prevention operation level | 0% to 200% | 150% | 165 | Stall prevention operation level for restart | 0% to 400% | 150%* | ◎ | |
| 170 | Watt-hour meter clear | 0 | 0 | 170 | Watt-hour meter clear | 0, 10, 9999 | 9999 | × | Setting not required |
| 171 | Actual operation hour meter clear | 0 | 0 | 171 | Operation hour meter clear | 0, 9999 | 9999 | × | Setting not required |
| 173 | User group 1 registration | 0 to 999 | 0 | 173 | User group registration | 0 to 1999, 9999 | 9999 | × | Set the parameter as required. |
| 174 | User group 1 deletion | 0 to 999, 9999 | 0 | 174 | User group clear | 0 to 1999, 9999 | 9999 | × | |
| 175 | User group 2 registration | 0 to 999 | 0 | — | | | | × | Not available for the FR-A800 |
| 176 | User group 2 deletion | 0 to 999, 9999 | 0 | — | | | | × | Not available for the FR-A800 |
| 180 | RL terminal function selection | 0 to 99, 9999 | 0 | 180 | RL terminal function selection | 0 to 20, 22 to 28, 37, 42 to 47, 50, 51, 62, 64 to 69, 72 to 74, 76 to 80, 87, 92 to 96, 9999 | 0 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 181 | RM terminal function selection | 0 to 99, 9999 | 1 | 181 | RM terminal function selection | | 1 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 182 | RH terminal function selection | 0 to 99, 9999 | 2 | 182 | RH terminal function selection | | 2 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 183 | RT terminal function selection | 0 to 99, 9999 | 3 | 183 | RT terminal function selection | | 3 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 184 | AU terminal function selection | 0 to 99, 9999 | 4 | 184 | AU terminal function selection | | 4 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 185 | JOG terminal function selection | 0 to 99, 9999 | 5 | 185 | JOG terminal function selection | | 5 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| 186 | CS terminal function selection | 0 to 99, 9999 | 6 | 186 | CS terminal function selection | | 6 | ◎ | The setting values "70 and 71" cannot be selected with the FR-A800. |
| — | — | — | — | 187 | MRS terminal function selection | | 10 | △ | The setting values "70 and 71" cannot be selected with the FR-A800. Change the setting to "10" to enable output shutoff when disconnection occurs while the output enable signal (RDY) from the FR-CC2 is connected. |
| 190 | RUN terminal function selection | 0 to 199, 9999 | 0 | 190 | RUN terminal function selection | 0 to 8, 10 to 20, 22, 25 to 28, 30 to 36, 38 to 54, 56, 57, 60, 61, 63, 64, 67, 68, 70, 79, 84, 85, 90 to 99, 100 to 108, 110 to 116, 120, 122, 125 to 128, 130 to 136, 138 to 154, 156, 157, 160, 161, 163, 164, 167, 168, 170, 179, 184, 185, 190 to 199, 200 to 208, 300 to 308, 9999 | 0 | ◎ | The setting values "2, 7, 46, 85, 87, 89, 102, 107, 146, 185, 187, and 189" cannot be selected with the FR-A800. When "2 or 102" is set for the FR-A500L, set the value for the FR-A800 using the FR-CC2. |
| 191 | SU terminal function selection | 0 to 199, 9999 | 1 | 191 | SU terminal function selection | | 1 | ◎ | |
| 192 | IPF terminal function selection | 0 to 199, 9999 | 2 | 192 | IPF terminal function selection | | 9999 | △ | |
| 193 | OL terminal function selection | 0 to 199, 9999 | 3 | 193 | OL terminal function selection | | 3 | ◎ | |
| 194 | FU terminal function selection | 0 to 199, 9999 | 4 | 194 | FU terminal function selection | | 4 | ◎ | |
| 195 | A, B, C terminal function selection | 0 to 199, 9999 | 99 | 195 | ABC1 terminal function selection | 0 to 8, 10 to 20, 22, 25 to 28, 30 to 36, 38 to 54, 56, 57, 60, 61, 63, 64, 67, 68, 70, 79, 84, 85, 90 to 99, 100 to 108, 110 to 116, 120, 122, 125 to 128, 130 to 136, 138 to 154, 156, 157, 160, 161, 163, 164, 167, 168, 170, 179, 184, 185, 190 to 199, 200 to 208, 300 to 308, 9999 | 99 | ◎ | The setting values "2, 7, 46, 85, 87, 89, 102, 107, 146, 185, 187, and 189" cannot be selected with the FR-A800. |
| 199 | User's initial value setting | 0 to 999, 9999 | 0 | — | | | | × | Not available for the FR-A800 |
| 200 | Programmed operation minute/second selection | 0 to 3 | 0 | — | | | | × | Not available for the FR-A800 |
| 201 to 210 | Program set 1, 1 to 10 | 0 to 2<br>0 to 400 Hz, 9999<br>0 to 99.59 | 0<br>9999<br>0 | — | | | | × | Not available for the FR-A800 |
| 211 to 220 | Program set 2, 11 to 20 | 0 to 2<br>0 to 400 Hz, 9999<br>0 to 99.59 | 0<br>9999<br>0 | — | | | | × | Not available for the FR-A800 |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 221 to 230 | Program set 3, 21 to 30 | 0 to 2<br>0 to 400 Hz, 9999<br>0 to 99.59 | 0<br>9999<br>0 | — | | | | × | Not available for the FR-A800 |
| 231 | Timer setting | 0 to 99.59 | 0 | — | | | | × | Not available for the FR-A800 |
| 232 | Multi-speed setting (speed 8) | 0 to 400 Hz, 9999 | 9999 | 232 | Multi-speed setting (speed 8) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 233 | Multi-speed setting (speed 9) | 0 to 400 Hz, 9999 | 9999 | 233 | Multi-speed setting (speed 9) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 234 | Multi-speed setting (speed 10) | 0 to 400 Hz, 9999 | 9999 | 234 | Multi-speed setting (speed 10) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 235 | Multi-speed setting (speed 11) | 0 to 400 Hz, 9999 | 9999 | 235 | Multi-speed setting (speed 11) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 236 | Multi-speed setting (speed 12) | 0 to 400 Hz, 9999 | 9999 | 236 | Multi-speed setting (speed 12) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 237 | Multi-speed setting (speed 13) | 0 to 400 Hz, 9999 | 9999 | 237 | Multi-speed setting (speed 13) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 238 | Multi-speed setting (speed 14) | 0 to 400 Hz, 9999 | 9999 | 238 | Multi-speed setting (speed 14) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 239 | Multi-speed setting (speed 15) | 0 to 400 Hz, 9999 | 9999 | 239 | Multi-speed setting (speed 15) | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 240 | Soft-PWM setting | 0, 1, 10, 11 | 1 | 240 | Soft-PWM operation setting | 0, 1 | 1 | △ | The FR-A800 settings corresponding to the FR-A500L settings are as follows.<br>0, 10 ⟶ 0. 1, 11 ⟶ 1. |
| 244 | Cooling fan operation selection | 0, 1 | 0 | 244 | Cooling fan operation selection | 0, 1, 101 to 105 | 1 | △ | The initial value for the FR-A800 has been changed. |
| 250 | Stop selection | 0 to 100 s, 9999 | 9999 | 250 | Stop selection | 0 to 100 s,<br>1000 to 1100 s,<br>8888, 9999 | 9999 | ◎ | |
| 251 | Output phase failure protection selection | 0, 1 | 1 | 251 | Output phase loss protection selection | 0, 1 | 1 | ◎ | |
| 252 | Override bias | 0% to 200% | 50% | 252 | Override bias | 0% to 200% | 50% | ◎ | |
| 253 | Override gain | 0% to 200% | 150% | 253 | Override gain | 0% to 200% | 150% | ◎ | |
| 261 | Power failure stop selection | 0, 1 | 0 | 261 | Power failure stop selection | 0, 1, 2, 11, 12, 21, 22 | 0 | △ | Setting Pr.261 is required also in the FR-CC2 manufactured in August 2014 or later.<br><br>Changing Pr.21 after setting Pr.264 and Pr.265 will change the set values. |
| 262 | Subtracted frequency at deceleration start | 0 to 20 Hz | 3 Hz | 262 | Subtracted frequency at deceleration start | 0 to 20 Hz | 3 Hz | △ | |
| 263 | Subtraction starting frequency | 0 to 120 Hz, 9999 | 60 Hz | 263 | Subtraction starting frequency | 0 to 590 Hz, 9999 | 60 Hz | △ | |
| 264 | Power-failure deceleration time 1 | 0 to 3600 s/<br>0 to 360 s | 5 s | 264 | Power-failure deceleration time 1 | 0 to 3600 s | 5 s | △ | |
| 265 | Power-failure deceleration time 2 | 0 to 3600 s/<br>0 to 360 s, 9999 | 9999 | 265 | Power-failure deceleration time 2 | 0 to 3600 s, 9999 | 9999 | △ | |
| 266 | Power failure deceleration time switchover frequency | 0 to 400 Hz | 60 Hz | 266 | Power failure deceleration time switchover frequency | 0 to 590 Hz | 60 Hz | △ | |
| 270 | Stop-on contact/load torque high-speed frequency control selection | 0, 1, 2, 3 | 0 | 270 | Stop-on contact/load torque high-speed frequency control selection | 0, 1, 2, 3, 11, 13 | 0 | ◎ | |
| 271 | High-speed setting maximum current | 0% to 200% | 50% | 271 | High-speed setting maximum current | 0% to 400% | 50%* | ◎ | |
| 272 | Mid-speed setting minimum current | 0% to 200% | 100% | 272 | Middle-speed setting minimum current | 0% to 400% | 100%* | ◎ | |
| 273 | Current averaging range | 0 to 400 Hz, 9999 | 9999 | 273 | Current averaging range | 0 to 590 Hz, 9999 | 9999 | ◎ | |
| 274 | Current averaging filter constant | 1 to 4000 | 16 | 274 | Current averaging filter time constant | 1 to 4000 | 16 | ◎ | |
| 275 | Stop-on contact exciting current low-speed multiplying factor | 0% to 1000%, 9999 | 9999 | 275 | Stop-on contact excitation current low-speed multiplying factor | 50% to 300%, 9999 | 9999 | ◎ | |
| 276 | Stop-on-contact PWM carrier frequency | 0 to 15, 9999 | 9999 | 276 | PWM carrier frequency at stop-on contact | 55K or lower: 0 to 9, 9999<br>75K or higher: 0 to 4, 9999 | 9999 | △ | When "9" or more value is set for the FR-A500L, set "9" for the FR-A800. |
| 278 | Brake opening frequency | 0 to 30 Hz | 3 Hz | 278 | Brake opening frequency | 0 to 30 Hz | 3 Hz | ◎ | |
| 279 | Brake opening current | 0% to 200% | 130% | 279 | Brake opening current | 0% to 400% | 130%* | ◎ | |
| 280 | Brake opening current detection time | 0 to 2 s | 0.3 s | 280 | Brake opening current detection time | 0 to 2 s | 0.3 s | ◎ | |
| 281 | Brake operation time at start | 0 to 5 s | 0.3 s | 281 | Brake operation time at start | 0 to 5 s | 0.3 s | ◎ | |

* When 150% is set for the rated current of the FR-A540L-375K, set as follows: 150% × (A540L rated current) / (A842 rated current). Adjust the setting value for the FR-A842-355K, as the value calculated with the formula is large.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 282 | Brake operation frequency | 0 to 30 Hz | 6 Hz | 282 | Brake operation frequency | 0 to 30 Hz | 6 Hz | ◎ | |
| 283 | Brake operation time at stop | 0 to 5 s | 0.3 s | 283 | Brake operation time at stop | 0 to 5 s | 0.3 s | ◎ | |
| 284 | Deceleration detection function selection | 0, 1 | 0 | 284 | Deceleration detection function selection | 0, 1 | 0 | ◎ | |
| 285 | Overspeed detection frequency | 0 to 30 Hz, 9999 | 9999 | 285 | Overspeed detection frequency<br>(Speed deviation excess detection frequency) | 0 to 30 Hz, 9999 | 9999 | ◎ | |
| 286 | Droop gain | 0% to 100% | 0% | 286 | Droop gain | 0% to 100% | 0% | ◎ | |
| 287 | Droop filter constant | 0.00 to 1.00 s | 0.3 s | 287 | Droop filter time constant | 0 to 1 s | 0.3 s | ◎ | |
| 342 | E2PROM write selection | 0, 1 | 0 | 342 | Communication EEPROM write selection | 0, 1 | 0 | ◎ | |
| 503 | Capacitor life timer | — | — | 503 | Maintenance timer 1 | 0 (1 to 9998) | 0 | × | Setting not required |
| 504 | Capacitor life alarm output set time | 0 to 9998, (9999) | 876 | 504 | Maintenance timer 1 warning output set time | 0 to 9998, 9999 | 9999 | △ | When "9999" is set for the FR-A800, the function is disabled.<br>When "9999" is set for the FR-A500L, set "876" for the FR-A800. |
| 611 | Restart acceleration time | 0 to 3600 s, 9999 | 5.0 s | 611 | Acceleration time at a restart | 0 to 3600 s, 9999 | 9999 | ◎ | |
| 900 | FM terminal calibration | — | — | C0 (900) | FM/CA terminal calibration | — | — | × | Calibrate the parameter as required. |
| 901 | AM terminal calibration | — | — | C1 (901) | AM terminal calibration | — | — | × | Calibrate the parameter as required. |
| 902 | Frequency setting voltage bias | 0 to 60 Hz: 0 to 10 V | 0 Hz: 0 V | C2 (902) | Terminal 2 frequency setting bias frequency | 0 to 590 Hz | 0 Hz | △ | Set the parameter as required.<br>For the details, refer to section "5.12.5 Frequency setting voltage (current) bias and gain" and "5.12.6 Bias and gain for torque (magnetic flux) and set voltage (current)" of the Instruction Manual (Detailed). |
| | | | | C3 (902) | Terminal 2 frequency setting bias | 0% to 300% | 0% | △ | |
| 903 | Frequency setting voltage gain | 1 to 400 Hz: 0 to 10 V | 60 Hz: 5 V | 125 (903) | Terminal 2 frequency setting gain frequency | 0 to 590 Hz | 60 Hz | △ | |
| | | | | C4 (903) | Terminal 2 frequency setting gain | 0% to 300% | 100% | △ | |
| 904 | Frequency setting current bias | 0 to 60 Hz: 0 to 20 mA | 0 Hz: 4 mA | C5 (904) | Terminal 4 frequency setting bias frequency | 0 to 590 Hz | 0 Hz | △ | |
| | | | | C6 (904) | Terminal 4 frequency setting bias | 0% to 300% | 20% | △ | |
| 905 | Frequency setting current gain | 1 to 400 Hz: 0 to 20 mA | 60 Hz: 20 mA | 126 (905) | Terminal 4 frequency setting gain frequency | 0 to 590 Hz | 60 Hz | △ | |
| | | | | C7 (905) | Terminal 4 frequency setting gain | 0% to 300% | 100% | △ | |
| 990 | PU buzzer control | 0, 1 | 1 | 990 | PU buzzer control | 0, 1 | 1 | ◎ | |

## List of FR-A8NC parameters compatible with the FR-A5NC

The following table shows the parameter settings of the FR-A800 series inverter required when replacing an FR-A5NC with an FR-A8NC.
When an FR-A500L series parameter is set to a value other than the initial value, set the corresponding FR-A800 parameter according to the following table.
When an FR-A500L series parameter is set to an initial value, it is usually not necessary to change the corresponding FR-A800 parameter setting.

The parameter number of the ▭ parameters differs from that of the FR-A500L series inverter.

Setting ◎: Set the FR-A500L parameter as it is.
△: Change the FR-A500L parameter and set.
×: Adjust or set the FR-A800 parameter.

| FR-A500L parameter list | | | | FR-A800 compatible parameter | | | | Parameter setting | |
|---|---|---|---|---|---|---|---|---|---|
| Pr. | Name | Setting range | Initial value | Pr. | Name | Setting range | Initial value | Setting | Remarks |
| 338 | Operation command source | 0, 1 | 0 | 338 | Communication operation command source | 0, 1 | 0 | × | The command source of terminals MRS, RES, and terminal 1 differs between the FR-A800 and the FR-A500L. |
| 339 | Speed command source | 0, 1 | 0 | 339 | Communication speed command source | 0, 1, 2 | 0 | | |
| 340 | Link startup mode selection | 0 to 2, 10, 12, 20, 22 | 0 | 340 | Communication startup mode selection | 0, 1, 2, 10, 12 | 0 | × | The setting values "20 and 22" cannot be used with the FR-A800. Operations differ by the combination of the X66 signal, Pr.79, and Pr.340. |
| 349 | Error reset selection during CC-Link communication | 0, 1 | 0 | 349 | Communication reset selection | 0, 1 | 0 | ◎ | |
| 500 | Communication error recognition waiting time | 0 to 999.8 s | 0 s | 500 | Communication error execution waiting time | 0 to 999.8 s | 0 s | ◎ | |
| 501 | Communication error occurrence count display | 0 | 0 | 501 | Communication error occurrence count display | 0 | 0 | ◎ | |
| 502 | Communication error time stop mode selection | 0 to 2 | 0 | 502 | Stop mode selection at communication error | 0 to 3 | 0 | ◎ | |
| | | | | 542 | Communication station number (CC-Link) | 1 to 64 | 1 | × | The station number is set with the station number setting switch for FR-A500L. Use the Pr.542 setting for FR-A800. |
| | | | | 543 | Baud rate selection (CC-Link) | 0 to 4 | 0 | × | The baud rate is set with the transmission baud rate setting switch for FR-A500L. Use the Pr.543 setting for FR-A800.<br>0: 156 kbps<br>1: 625 kbps<br>2: 2.5 Mbps<br>3: 5 Mbps<br>4: 10 Mbps |



BCN-C21002-167F

### 4. 2. Restrictions for the FR-A800 Series

When the FR-A500L series is replaced with the FR-A800 series, the FR-A800 series does not support some FR-A500L series functions as shown below.

(1) Unsupported functions

| No. | Item | Remarks |
|---|---|---|
| 1 | Power failure stop function | This function is available for the FR-CC2 manufactured in August 2014 or later. |
| 2 | PU level display data selection | |
| 3 | User's initial value setting | |
| 4 | Program operation function | |
| 5 | User group 2 | |
| 6 | Special regenerative brake duty | |
| 7 | Electronic bypass sequence | When an error occurs in the FR-CC2, the commercial power supply operation is not activated.<br>For the FR-CC2 manufactured in August 2014 or later, use the X95 and X96 signals. |
| 8 | Warnings and protective functions | The FR-A842 does not support the regenerative brake pre-alarm (RB) or the brake transistor alarm detection (E.BE). |

(2) Functions unsupported by the FR-A842 but supported by the FR-CC2

| No. | Item | Remarks |
|---|---|---|
| 1 | Warnings and protective functions | With this function, the FR-CC2 can detect the instantaneous power failure (E.IPF) and the undervoltage (E.UVT). |

(3) Other restrictions

| No. | No. | Remarks |
|---|---|---|
| 1 | Startup time | If the power to the main circuit of the FR-CC2 is turned ON with the control circuit power already ON, the FR-CC2 performs a reset. The inverter is reset and the startup delays. |
| 2 | Operation panel (provided for FR-CC2 only) | Install the operation panel of the FR-A842 to set the FR-CC2. |

### 4. 3. Compatibility of the Terminal Response Speed

The response of the input/output terminals of the FR-A800 series is improved compared to the FR-A500L series. Operation timing of the device may differ depending on the usage.
In this case, set Pr.289 (Inverter output terminal filter) and Pr.699 (Input terminal filter) to adjust the terminal response time.
Set 5 to 8 ms in Pr.289 and Pr.699 and adjust according to the system.

# 5. OPTION

## 5. 1. Option

The following table shows which FR-A500L series options are compatible with the FR-A800 series inverters and their corresponding A800 series options.

| Name | | Option model | |
|---|---|---|---|
| | | FR-A500L | FR-A800 |
| Plug-in type | 12-bit digital input | FR-A5AX | FR-A8AX<br>The priority for the frequency setting differs between the FR-A500L and the FR-A800. For the details, refer to the Instruction Manual. |
| | Digital output, additional analog output | FR-A5AY | FR-A8AY |
| | Relay output | FR-A5AR | FR-A8AR |
| | Orientation/encoder/pulse train input | FR-A5AP, T-PLG50, T-PLG51 | FR-A8AP (The pulse train input is a built-in function of the inverter.) |
| | Computer link | FR-A5NR | Built-in function of the inverter (RS-485 terminals, two relay output terminals) |
| | Profibus-DP | FR-A5NP | FR-A8NP |
| | Device Net | FR-A5ND | FR-A8ND |
| | CC-Link | FR-A5NC | FR-A8NC |
| Stand-alone type | Parameter unit | FR-PU04 | Not compatible<br>Use FR-PU07. |
| | Parameter unit connection cable | FR-CB201, 203, 205 | Compatible<br>Prepare FR-ADP for installing the operation panel on the enclosure surface. |
| | EMC Directive compliant noise filter | SF | Built-in function of the inverter (EN 61800-3 2nd Environment compatible) |
| | Power factor improving AC reactor | MT-BAL-H | Compatible<br>If replacing the reactor, use FR-HAL-(H). |
| | Radio noise filter | FR-BIF-H | Compatible |
| | Line noise filter | FR-BLF | Compatible |
| | Brake unit | FR-BU-H, FR-BU2-H | Compatible<br>MT-BU5 is not compatible. |
| | Resistor unit | MT-BR5-H | Compatible |
| | FR-HC type high power factor converter | FR-HC2-H | Compatible |
| Manual Controller/Speed controller | Manual controller | FR-AX | Compatible |
| | DC tach. follower | FR-AL | Compatible |
| | Three speed selector | FR-AT | Compatible |
| | Motorized speed setter | FR-FK | Compatible |
| | Ratio setter | FR-FH | Compatible |
| | Speed detector | FR-FP | Compatible |
| | Master controller | FR-FG | Compatible |
| | Soft starter | FR-FC | Compatible |
| | Deviation detector | FR-FD | Compatible |
| | Preamplifier | FR-FA | Compatible |
| Others | Pilot generator | QVAH-10 | Compatible |
| | Deviation sensor | YVGC-500W-NS | Compatible |
| | Frequency setting potentiometer | WA2W 1 kΩ | Compatible |
| | Analog frequency meter | YM206NRI 1 mA | Compatible |
| | Calibration resistor | RV24YN 10 kΩ | Compatible |

**5. 2. Replacement When the FR-A5NC Is Used**

The FR-A5NC (CC-Link communication option) used with the FR-A500L series cannot be used with the FR-A800 series. For the CC-Link communication with the FR-A800 series, use the FR-A8NC.

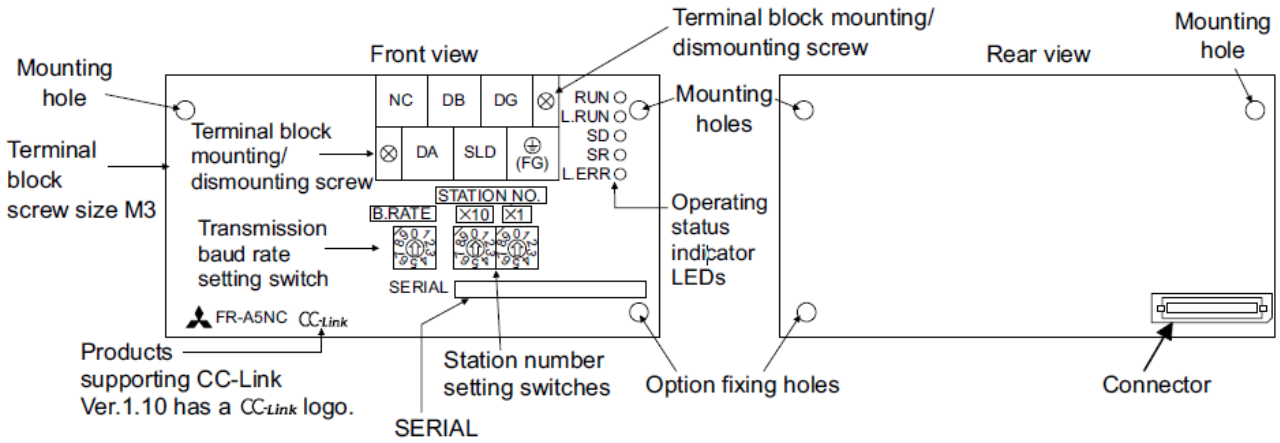
(1) Shape and installation method

The following table shows the differences in the shape and installation method.

| Item | FR-A5NC | FR-A8NC | Remarks |
|---|---|---|---|
| Shape | Inverter plug-in option type, terminal block connection | Inverter plug-in option type, terminal block connection | Although the connection method is the same, the circuit board of the option has a different shape. |
| Connection terminal block | 6-terminal terminal block (M3 × 6 mm screws) | A6CON-L5P Insertion wiring | The shape of the terminal block and wiring method differ. A terminal block is not enclosed. |
| Installation procedure | Installed to the slot 3 * After installing the front cover, install the terminal block. | Connected to the option connector 1. * After performing wiring to the terminal block, install the front cover. | |
| Terminating resistor | Terminating resistor supplied with the programmable controller | Terminating resistor selection switch | |
| Connection cable*1 | CC-Link dedicated cable | CC-Link dedicated cable | |

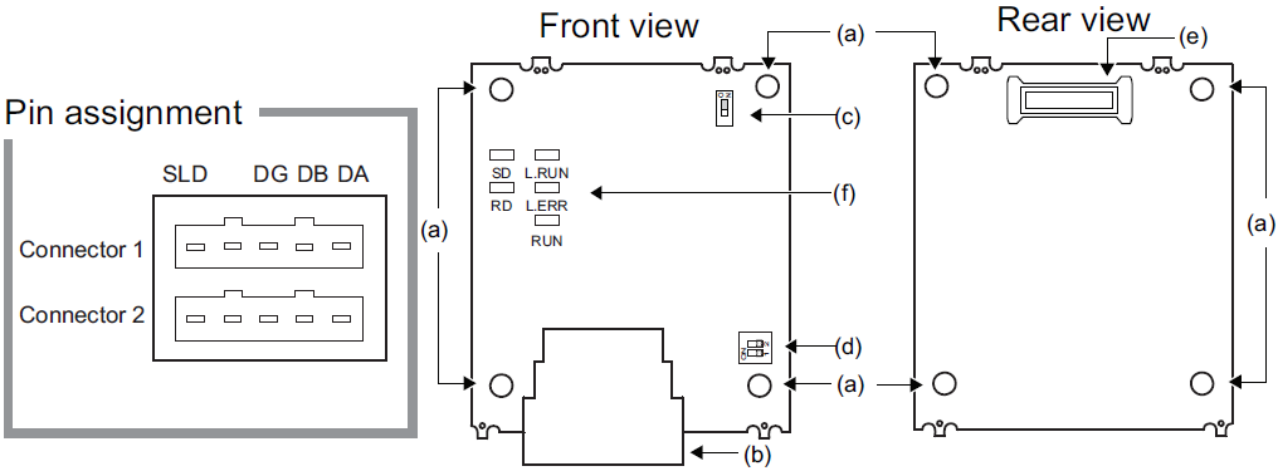
*1 Attention must be paid to the connection cable length.

[Shape of the FR-A5NC]




* For the FR-A8NC, the station number and the transmission baud rate are set in the inverter parameters. Read the values set with the station number switch and the transmission baud rate switch of the FR-A5NC, and take a note of them.

[Shape of the FR-A8NC]



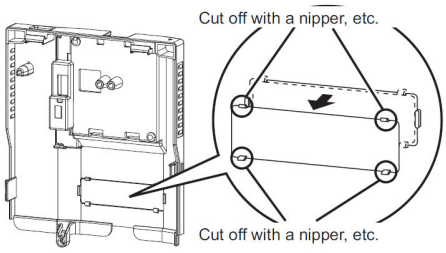

| Symbol | Name | Description |
|---|---|---|
| a | Mounting hole | Fixes the option to the inverter with screws, or installs spacers. |
| b | CC-Link communication one-touch connector | CC-Link communication can be performed with the CC-Link communication connector. |
| c | Switch for manufacturer setting | Switch for manufacturer setting. Do not change the initial setting (OFF). |
| d | Terminating resistor selection switch | Select the resistor value of the terminating resistor. |
| e | Connector | Connected to the option connector of the inverter. |

[Installation procedure of the FR-A8NC]

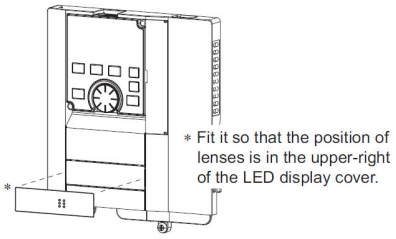
### ◆ Installation of the communication option LED display cover

(1) Remove the inverter front cover. (Refer to Chapter 2 of the Instruction Manual (Detailed) of the inverter for details on how to remove the front cover.)
Mount the cover for displaying the operation status indication LED for the communication option on the inverter front cover.

(2) Cut off hooks on the rear of the inverter front cover with nipper, etc. and open a window for fitting the LED display cover.




(3) Fit the communication option LED display cover to the front of the inverter front cover and push it into until fixed with hooks.




**NOTE**

- The protective structure (JEM1030) changes to the open type (IP00).

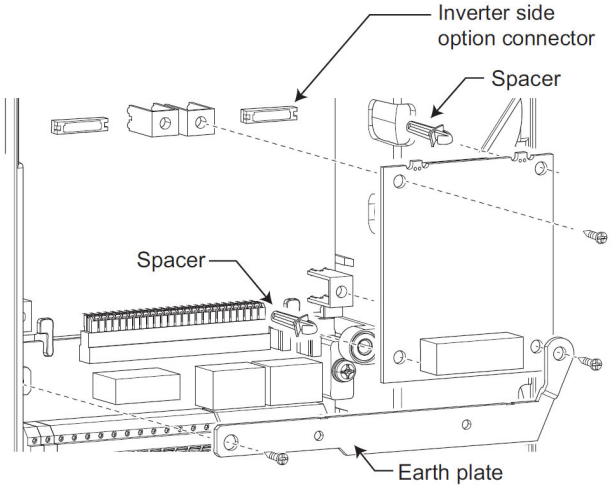
### ◆ Installing the option

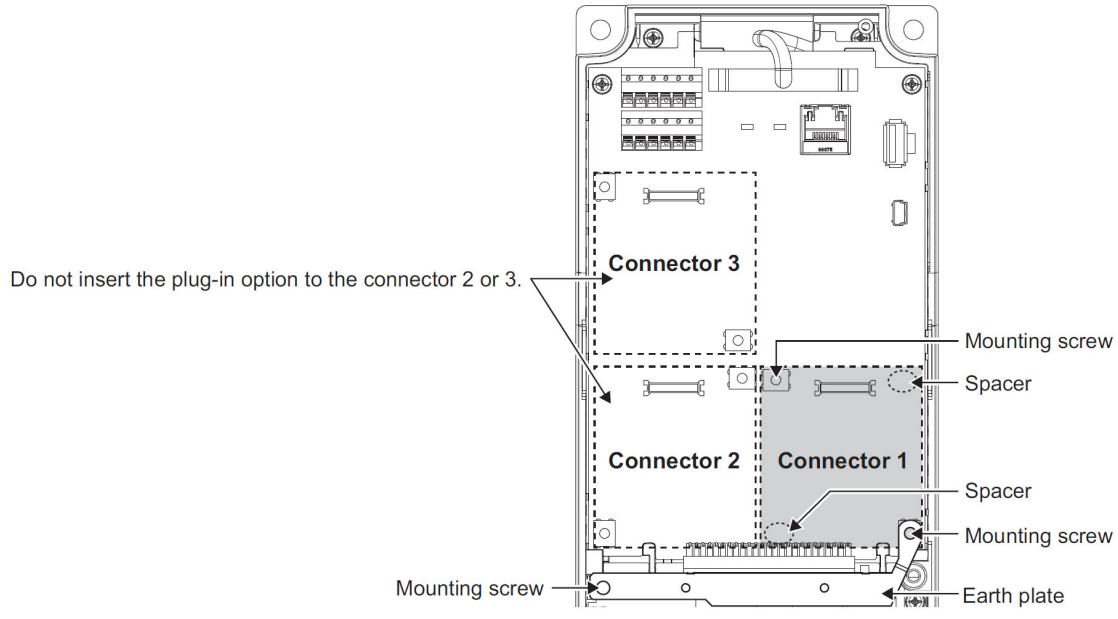
(1) For the two mounting holes (as shown in the next page) that will not be tightened with mounting screws, insert spacers.

(2) Fit the connector of the plug-in option to the guide of the connector on the inverter unit side, and insert the plug-in option as far as it goes. (Insert it to the inverter option connector 1.)

(3) Fit the one location on the left of the earth plate (as shown in the next page) securely to the inverter unit by screwing in the supplied mounting screw. (tightening torque 0.33 N·m to 0.40 N·m)

(4) Fit the one location on the left of the plug-in option securely to the inverter unit and the right of the plug-in option to the inverter unit together with the earth plate by screwing in the supplied mounting screws. (tightening torque 0.33 N·m to 0.40 N·m) If the screw holes do not line up, the connector may not be inserted deep enough. Check the connector.




**Insertion positions for screws and spacers**

## [Connection cable of the FR-A8NC]

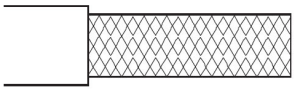
In the CC-Link system, use CC-Link dedicated cables.
If the cable used is other than the CC-Link dedicated cable, the performance of the CC-Link system is not guaranteed.
For the specifications of the CC-Link dedicated cable, refer to the website of the CC-Link Partner Association.

- Website of the CC-Link Partner Association http://www.cc-link.org/
- One-touch communication connector plug (as of July 2013)
  Refer to the following table for the plug required to fabricate a cable on your own.

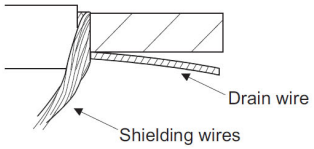
| Model | Manufacturer |
|---|---|
| A6CON-L5P | Mitsubishi Electric Corporation |
| 35505-6000-B0M GF | Sumitomo 3M Limited |

(1) Cable-end treatment
Apply the following treatment to the CC-Link dedicated cable that is inserted to a one-touch communication connector plug.

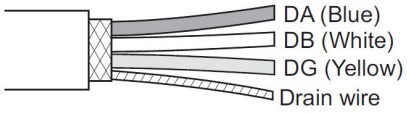
1. Cut the sheath



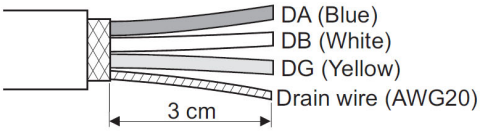
2. Separate shielding wires from the drain wire. Cut the shielding wires.




3. Cut the aluminum tape and braid.



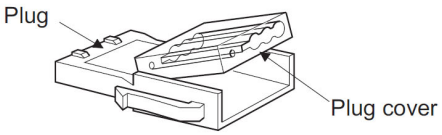

4. Straighten the drain wire and twist it from the root.
(Twist seven times or more per 3 cm.)




**NOTE**

- Where possible, round the cable tip that is cut off with a tool such as nippers. If the cable is not rounded, it may get caught in the middle of a plug, without fully entering into the plug.
- If required, apply an insulation treatment to the shielding wire area where it is not covered by the one-touch communication connector plug.

(2) Plug cover check
Check that a plug cover is snapped into a plug

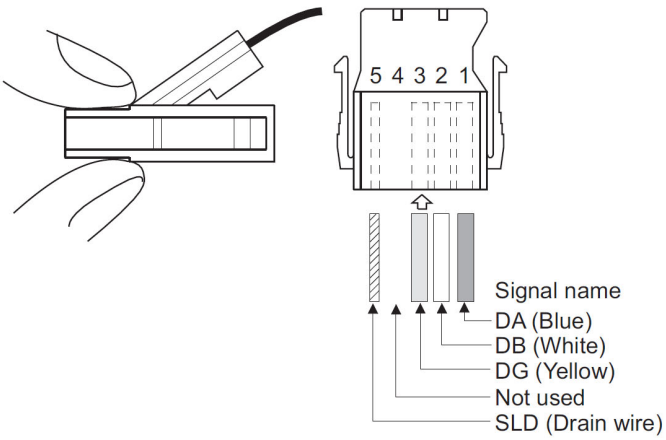



**NOTE**

- Do not push the plug cover onto the plug before inserting a cable. Once crimped, the plug cover cannot be reused.

(3) Cable insertion

Lift up the tail of the plug cover, and fully insert a cable. Insert different signal wires to the one-touch communication connector plug as shown in the right figure.




**NOTE**

- Insert the cable fully. Failure to do so may cause a crimping failure.
- A cable sometimes comes out of the head of the cover. In that case, pull the cable a little so that the cable stays under the plug cover.

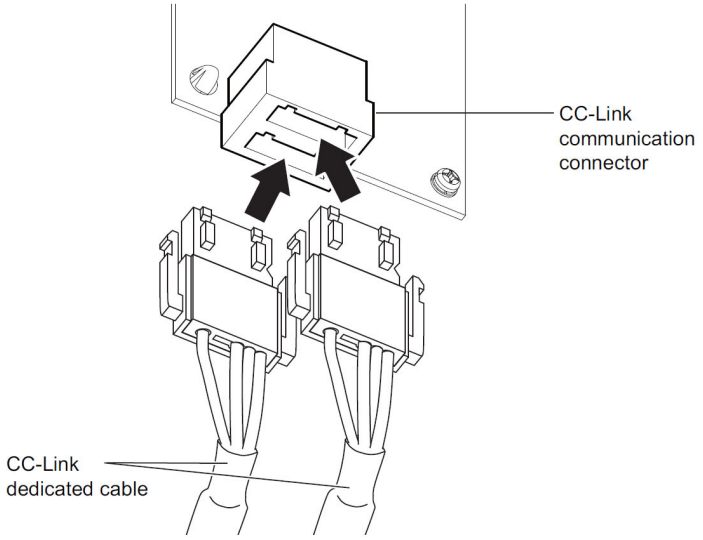
(4) Crimping the plug cover

Push the plug cover onto the plug with a tool such as pliers. After crimping, check that the plug cover is securely snapped into the plug as shown in the right figure.

**NOTE**

- Misaligned latches between the plug cover and the plug may keep the cover lifted. The plug cover is not sufficiently crimped in this condition. Push the plug cover until it snaps into the plug.

Connect the CC-Link dedicated cable to the CC-Link communication connector.




**NOTE**

- When wiring cables to the inverter's RS-485 terminals while a plug-in option is mounted, take caution not to let the cables touch the circuit board of the option or of the inverter. Otherwise, electromagnetic noises may cause malfunctions.

[Setting of the terminating resistor selection switch of the FR-A8NC]

For the inverter (FR-A8NC) of the end station, configure the terminating resistor selection switch setting in advance.

The following table shows the specifications of the terminating resistor selection switch.

| Setting | 1 | 2 | Description |
|---|---|---|---|
|  | OFF | OFF | Without terminating resistor (initial setting) |
|  | ON | OFF | Do not use. |
|  | OFF | ON | 130 Ω (resistance value with the CC-Link Ver. 1.00 dedicated high performance cable) |
|  | ON | ON | 110 Ω |