

Information for Replacement of
FR-B, B3 (FR-A700 Specification) Series with
FR-B, B3 (FR-A800 Specification) Series

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

1. Replacing inverter

The FR-B, B3 (A800 specification) series inverters are the FM type ND rated inverters.

2. Size

When the FR-B, B3 (A700 specification) series inverters are replaced with the FR-B, B3 (A800 specification) series inverters, the required installation space of the A800 specification models is the same as that of the corresponding A700 specification models.

For more information about the product size, refer to the outline dimension drawings on the following pages.

[FR-B (variable-torque) inverters for V/F control]

	Existing inverter (A700 specification)	Replacing inverter (A800 specification)	Installation size
200 V class	FR-B-750	FR-B-750	Same
	FR-B-1500	FR-B-1500	Same
	FR-B-2200	FR-B-2200	Same
	FR-B-3700	FR-B-3700	Same
	FR-B-5.5K	FR-B-5.5K	Same
	FR-B-7.5K	FR-B-7.5K	Same
	FR-B-11K	FR-B-11K	Same
	FR-B-15K	FR-B-15K	Same
	FR-B-22K	FR-B-22K	Same
	FR-B-30K	FR-B-30K	Same
	FR-B-37K	FR-B-37K	Same
	FR-B-45K	FR-B-45K	Same
	FR-B-55K	FR-B-55K	Same
	FR-B-75K	FR-B-75K	Same
400 V class	FR-B-750	FR-B-750	Same
	FR-B-1500	FR-B-1500	Same
	FR-B-2200	FR-B-2200	Same
	FR-B-3700	FR-B-3700	Same
	FR-B-7.5K	FR-B-7.5K	Same
	FR-B-15K	FR-B-15K	Same
	FR-B-22K	FR-B-22K	Same
	FR-B-37K	FR-B-37K	Same
	FR-B-55K	FR-B-55K	Same
	FR-B-75K	FR-B-75K	Same
	FR-B-90K	FR-B-90K	Same
	FR-B-110K	FR-B-110K	Same

- Use screws with the proper lengths for installation as required.
- For the 75 kW inverter or higher, always provide the DC reactor FR-HEL.
Make sure the motor capacity is for variable-torque load as is the case in the A700 specification model.

[FR-B3-N (constant-torque and low-noise) inverters for Advanced magnetic flux vector control]

[FR-B3 (constant-torque and standard) inverters for Advanced magnetic flux vector control]

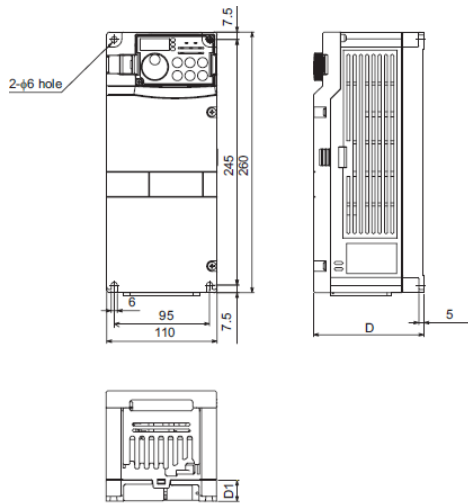
	Existing inverter (A700 specification)	Replacing inverter (A800 specification)	Installation size
200 V class	FR-B3-(N)400	FR-B3-(N)400	Same
	FR-B3-(N)750	FR-B3-(N)750	Same
	FR-B3-(N)1500	FR-B3-(N)1500	Same
	FR-B3-(N)2200	FR-B3-(N)2200	Same
	FR-B3-(N)3700	FR-B3-(N)3700	Same
	FR-B3-(N)5.5K	FR-B3-(N)5.5K	Same
	FR-B3-(N)7.5K	FR-B3-(N)7.5K	Same
	FR-B3-(N)11K	FR-B3-(N)11K	Same
	FR-B3-(N)15K	FR-B3-(N)15K	Same
	FR-B3-(N)18.5K	FR-B3-(N)18.5K	Same
	FR-B3-(N)22K	FR-B3-(N)22K	Same
	FR-B3-(N)30K	FR-B3-(N)30K	Same
	FR-B3-(N)37K	FR-B3-(N)37K	Same
400 V class	FR-B3-(N)H400	FR-B3-(N)H400	Same
	FR-B3-(N)H750	FR-B3-(N)H750	Same
	FR-B3-(N)H1500	FR-B3-(N)H1500	Same
	FR-B3-(N)H2200	FR-B3-(N)H2200	Same
	FR-B3-(N)H3700	FR-B3-(N)H3700	Same
	FR-B3-(N)H5.5K	FR-B3-(N)H5.5K	Same
	FR-B3-(N)H7.5K	FR-B3-(N)H7.5K	Same
	FR-B3-(N)H11K	FR-B3-(N)H11K	Same
	FR-B3-(N)H15K	FR-B3-(N)H15K	Same
	FR-B3-(N)H18.5K	FR-B3-(N)H18.5K	Same
	FR-B3-(N)H22K	FR-B3-(N)H22K	Same
	FR-B3-(N)H30K	FR-B3-(N)H30K	Same
	FR-B3-(N)H37K	FR-B3-(N)H37K	Same

- Use screws with the proper lengths for installation as required.
- After replacing the inverter, perform offline auto tuning with motor rotation and drive the motor under Advanced magnetic flux vector control.

Outline dimension drawings (Unit: mm)
 [FR-B (variable-torque) 200 V class inverters]

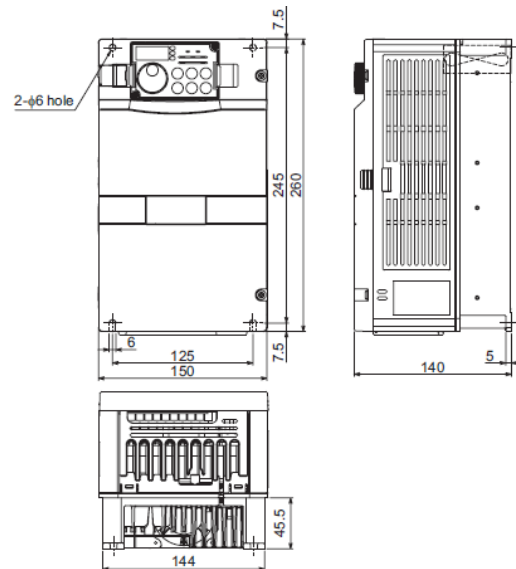
A700 specification

■ FR-B-750



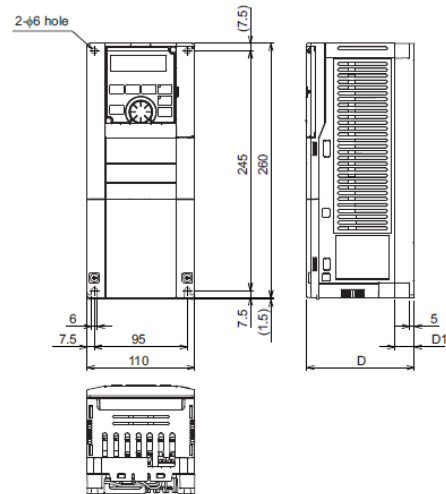
Inverter model	D	D1
FR-B-750	125	36

■ FR-B-1500, 2200, 3700



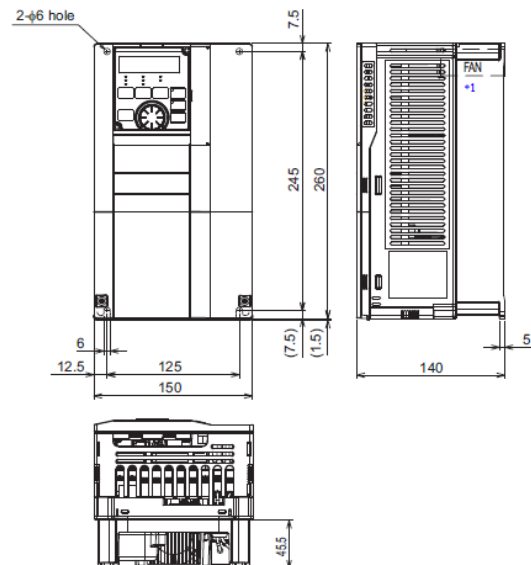
A800 specification

■ FR-B-750



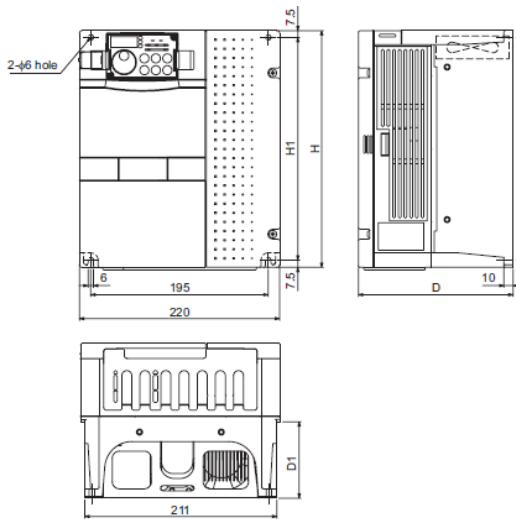
Inverter model	D1	D1
FR-B-750	125	35

■ FR-B-1500, 2200, 3700



A700 specification

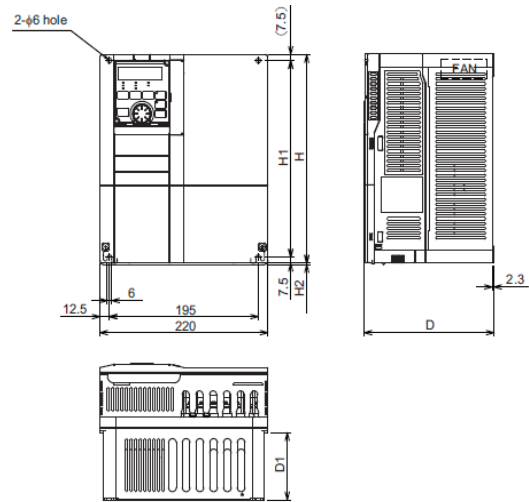
■ FR-B-5.5K, 7.5K, 11K



Inverter model	H	H1	D	D1
FR-B-5.5K, 7.5K	260	245	170	84
FR-B-11K	300	285	190	101.5

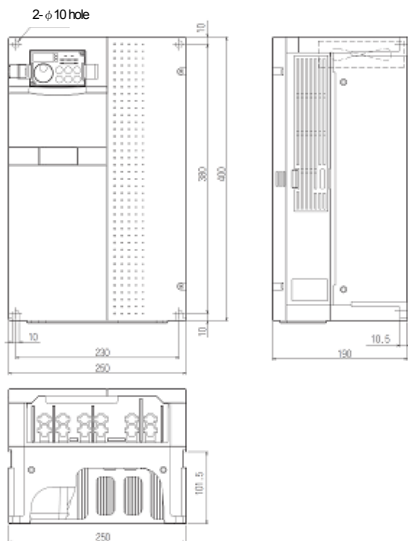
A800 specification

■ FR-B-5.5K, 7.5K, 11K

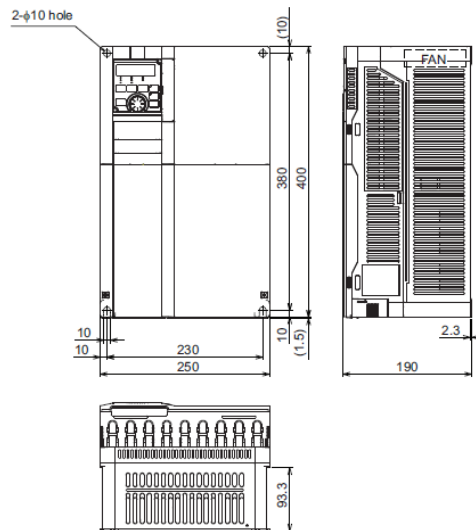


Inverter model	H	H1	H2	D	D1
FR-B-5.5K, 7.5K	260	245	1.5	170	84
FR-B-11K	300	285	3	190	101.5

■ FR-B-15K, 22K

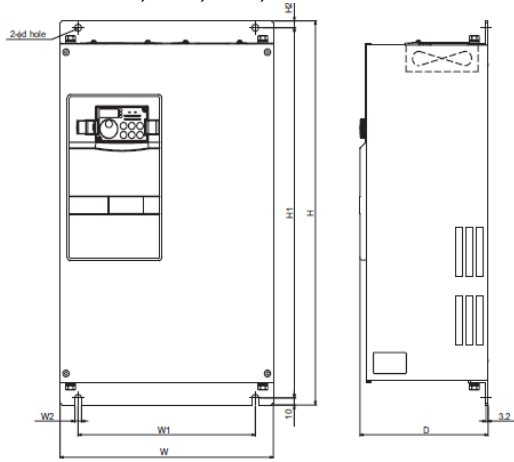


■ FR-B-15K, 22K



A700 specification

■ FR-B-30K, 37K, 45K, 55K

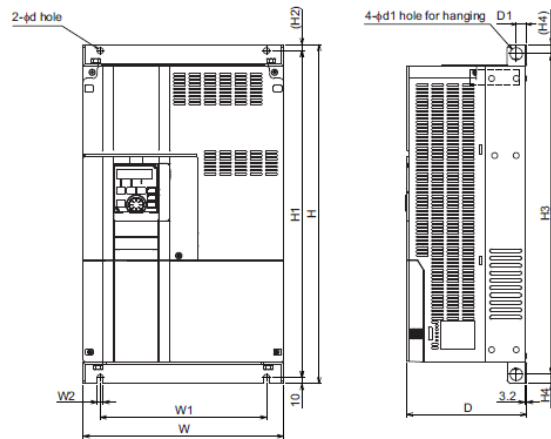


Inverter model	W	W1	W2	H	H1	H2
FR-B-30K	325	270	10	550	530	10
FR-B-37K, 45K	435	380	12	550	525	15
FR-B-55K	465	410	12	700	675	15

Inverter model	d	D
FR-B-30K	10	195
FR-B-37K, 45K	12	250
FR-B-55K	12	250

A800 specification

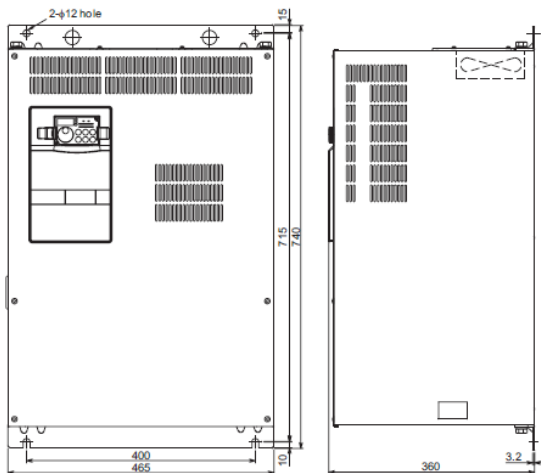
■ FR-B-30K, 37K, 45K, 55K, 75K



Inverter model	W	W1	W2	H	H1	H2
FR-B-30K	325	270	10	550	530	10
FR-B-37K, 45K	435	380	12	550	525	15
FR-B-55K	465	410	12	700	675	15
FR-B-75K	465	400	12	740	715	15

Inverter model	H3	H4	d	d1	D	D1
FR-B-30K	520	15	10	20	195	17
FR-B-37K, 45K	514	18	12	25	250	24
FR-B-55K	664	18	12	25	250	22
FR-B-75K	704	18	12	24	360	22

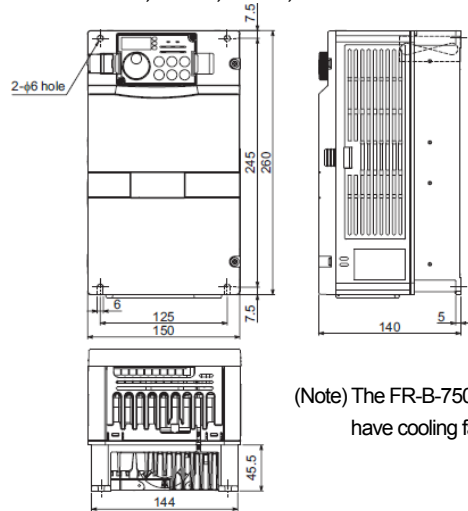
■ FR-B-75K



[FR-B (variable-torque) 400 V class inverters]

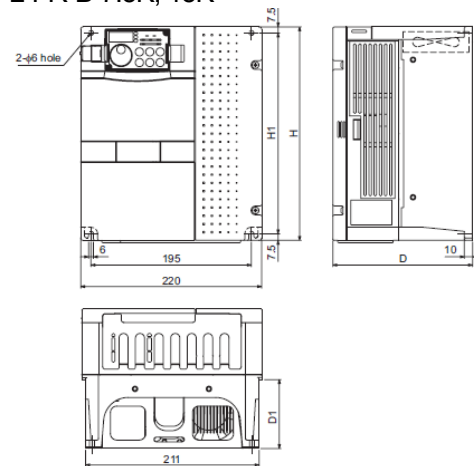
A700 specification

■ FR-B-750, 1500, 2200, 3700



(Note) The FR-B-750, 1500 do not have cooling fans.

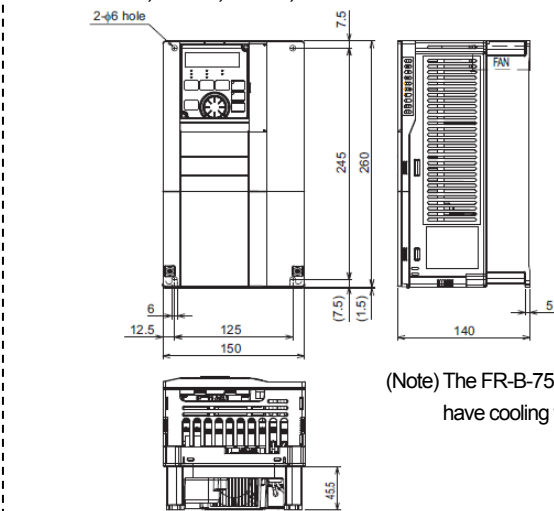
■ FR-B-7.5K, 15K



Inverter model	H	H1	D	D1
FR-B-7.5K	260	245	170	84
FR-B-15K	300	285	190	101.5

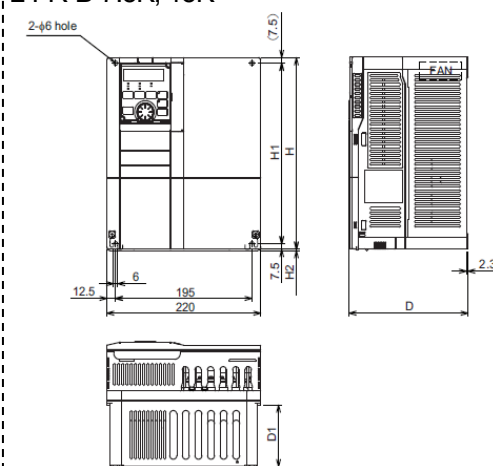
A800 specification

■ FR-B-750, 1500, 2200, 3700



(Note) The FR-B-750, 1500 do not have cooling fans.

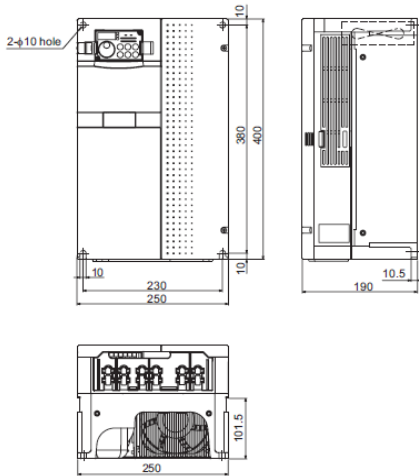
■ FR-B-7.5K, 15K



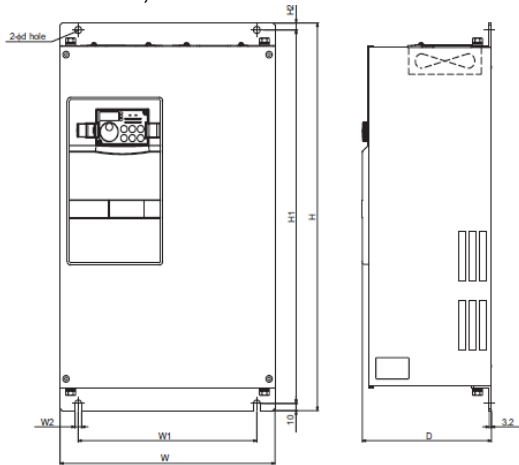
Inverter model	H	H1	H2	D	D1
FR-B-7.5K	260	245	1.5	170	84
FR-B-15K	300	285	3	190	101.5

A700 specification

■ FR-B-22K



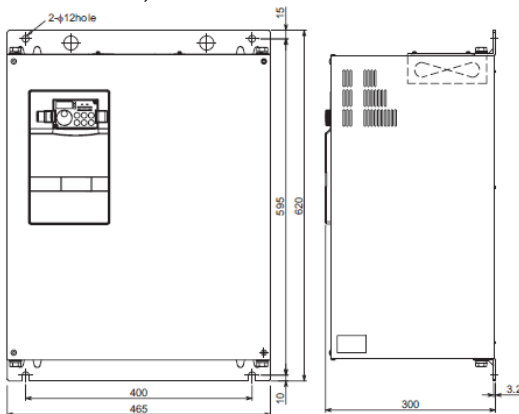
■ FR-B-37K, 55K



Inverter model	W	W1	W2	H	H1	H2
FR-B-37K, 55K	435	380	12	550	525	15

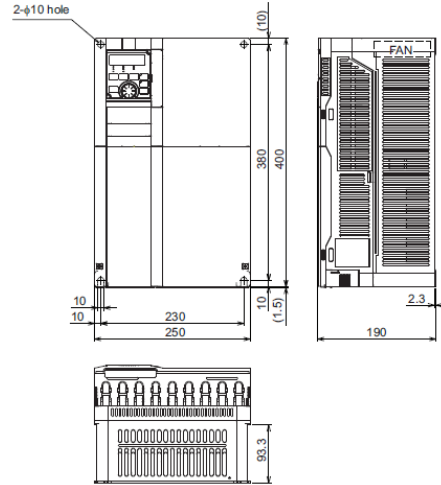
Inverter model	d	D
FR-B-37K, 55K	12	250

■ FR-B-75K, 90K

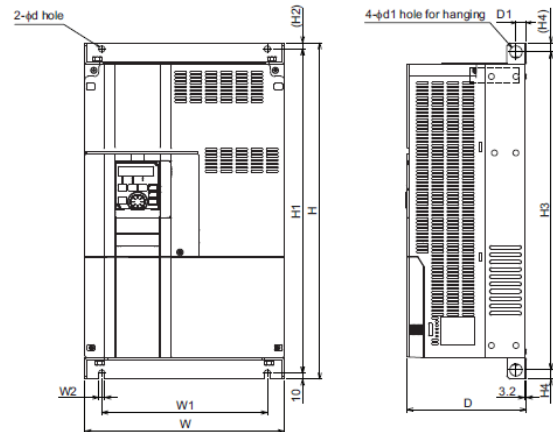


A800 specification

■ FR-B-22K



■ FR-B-37K, 55K, 75K, 90K

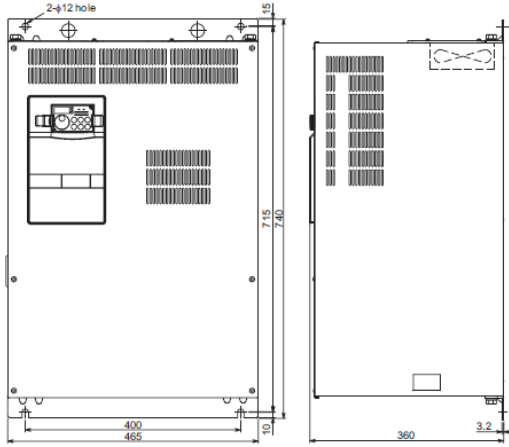


Inverter model	W	W1	W2	H	H1	H2
FR-B-37K, 55K	435	380	12	550	525	15
FR-B-75K, 90K	465	400	12	620	595	15

Inverter model	H3	H4	d	d1	D	D1
FR-B-37K, 55K	514	18	12	25	250	24
FR-B-75K, 90K	584	18	12	24	300	22

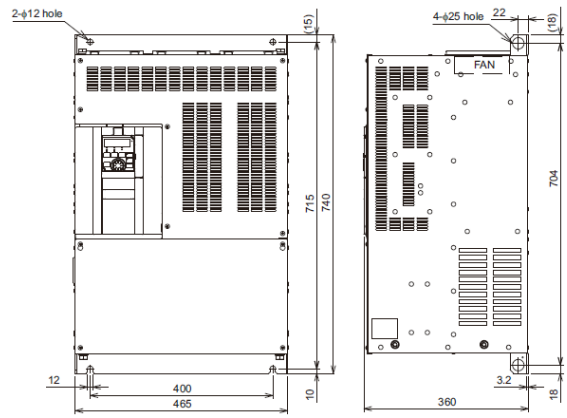
A700 specification

■ FR-B-110K



A800 specification

■ FR-B-110K

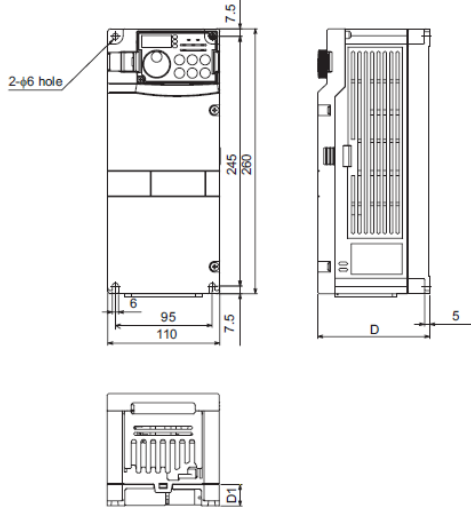


[FR-B3-N (constant-torque and low-noise) 200 V class inverters]

[FR-B3 (constant-torque and standard) 200 V class inverters]

A700 specification

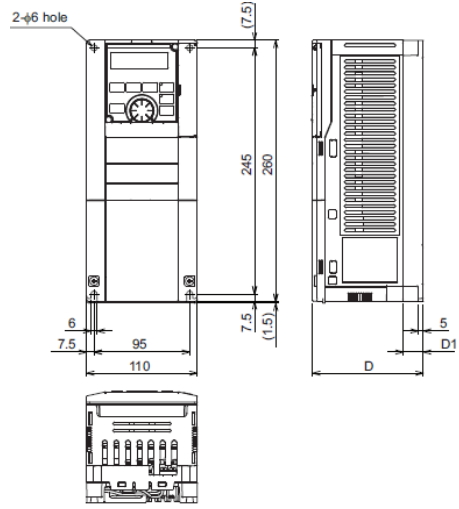
■ FR-B3-(N)400, 750



Inverter model	D	D1
FR-B3-(N)400	110	21
FR-B3-(N)750	125	36

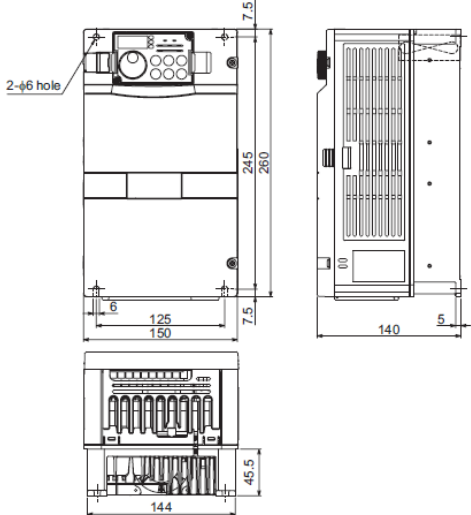
A800 specification

■ FR-B3-(N) 400, 750

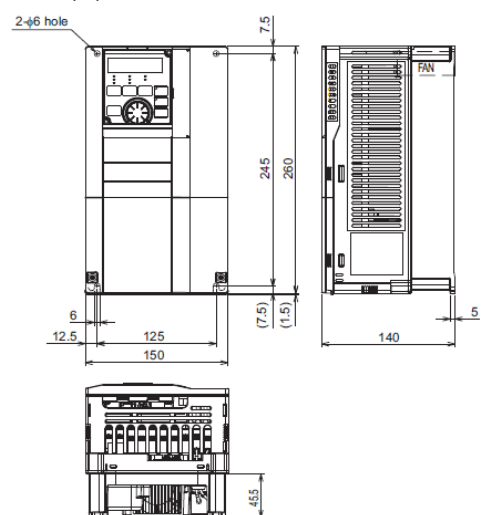


Inverter model	D	D1
FR-B3-(N)400	110	20
FR-B3-(N)750	125	35

■ FR-B3-(N)1500, 2200, 3700

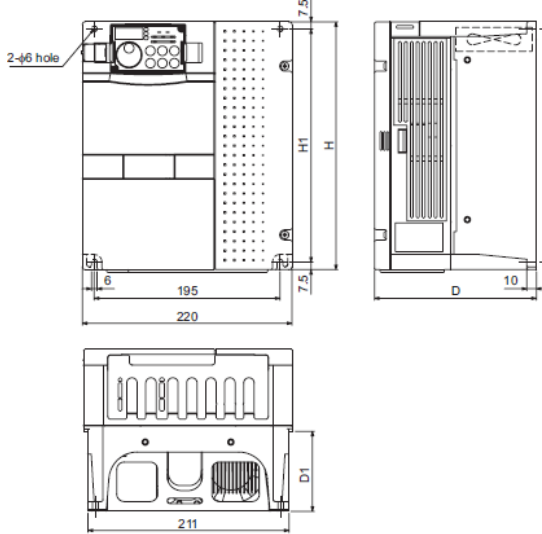


■ FR-B3-(N)1500, 2200, 3700



A700 specification

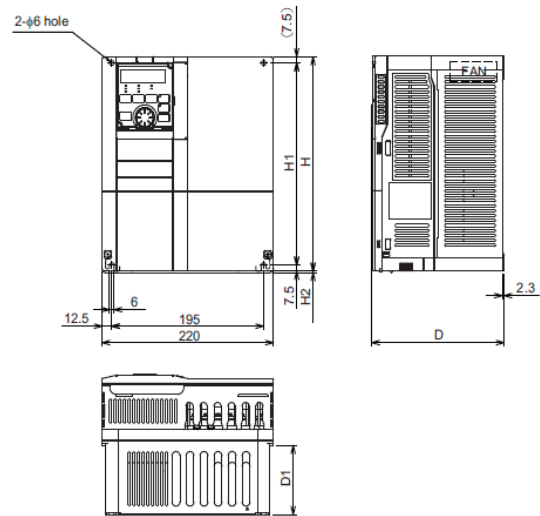
■ FR-B3-(N)5.5K, 7.5K, 11K



Inverter model	H	H1	D	D1
FR-B3-(N)5.5K, 7.5K	260	245	170	84
FR-B3-(N)11K	300	285	190	101.5

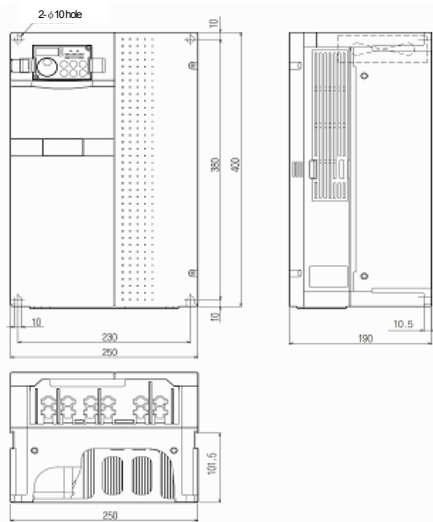
A800 specification

■ FR-B3-(N)5.5K, 7.5K, 11K

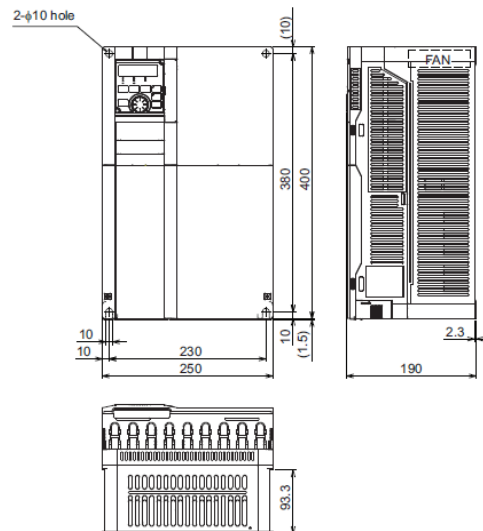


Inverter model	H	H1	H2	D	D1
FR-B3-(N)5.5K, 7.5K	260	245	1.5	170	84
FR-B3-(N)11K	300	285	3	190	101.5

■ FR-B3-(N)15K, 18.5K, 22K

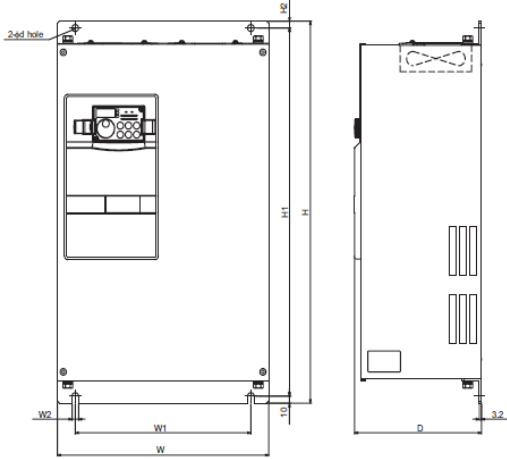


■ FR-B3-(N)15K, 18.5K, 22K



A700 specification

■ FR-B3-(N)30K, 37K

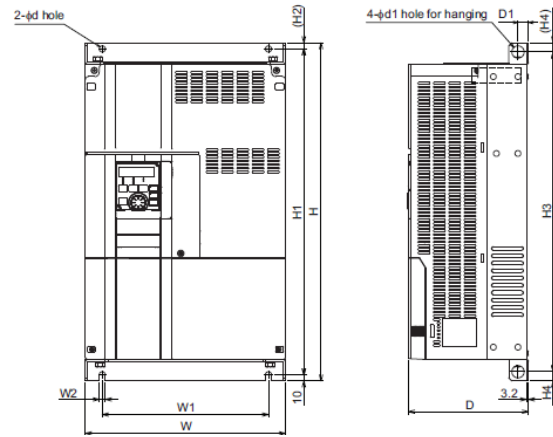


Inverter model	W	W1	W2	H	H1	H2
FR-B3-(N)30K	325	270	10	550	530	10
FR-B3-(N)37K	435	380	12	550	525	15

Inverter model	d	D
FR-B3-(N)30K	10	195
FR-B3-(N)37K	12	250

A800 specification

■ FR-B3-(N)30K, 37K



Inverter model	W	W1	W2	H	H1	H2
FR-B3-(N)30K	325	270	10	550	530	10
FR-B3-(N)37K	435	380	12	550	525	15

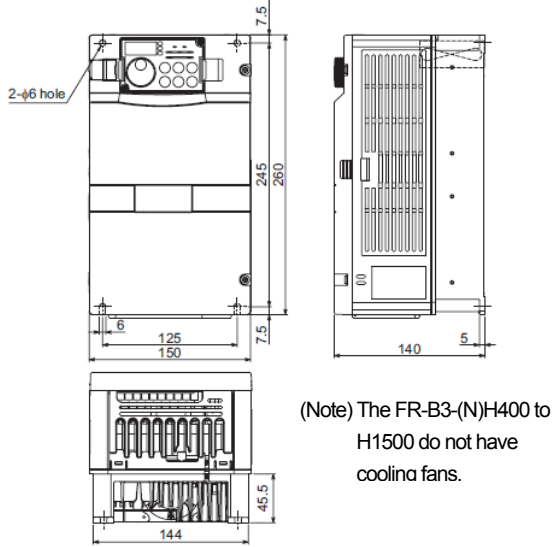
Inverter model	H3	H4	d	d1	D	D1
FR-B3-(N)30K	520	15	10	20	195	17
FR-B3-(N)37K	514	18	12	25	250	24

[FR-B3-NH (constant-torque and low-noise) 400 V class inverters]

[FR-B3-H (constant-torque and standard) 400 V class inverters]

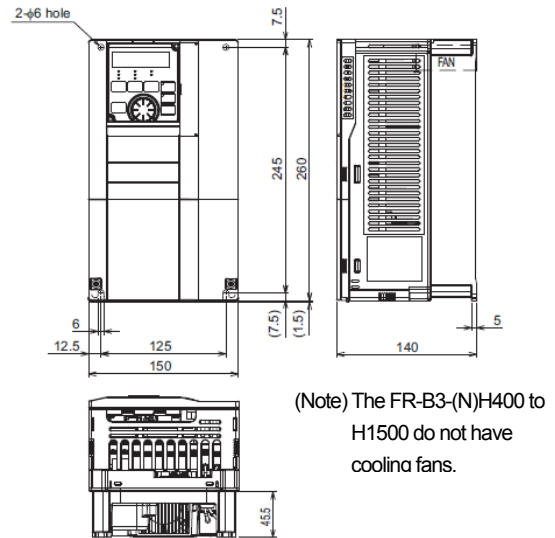
A700 specification

■ FR-B3-(N)H400, H750, H1500, H2200, H3700

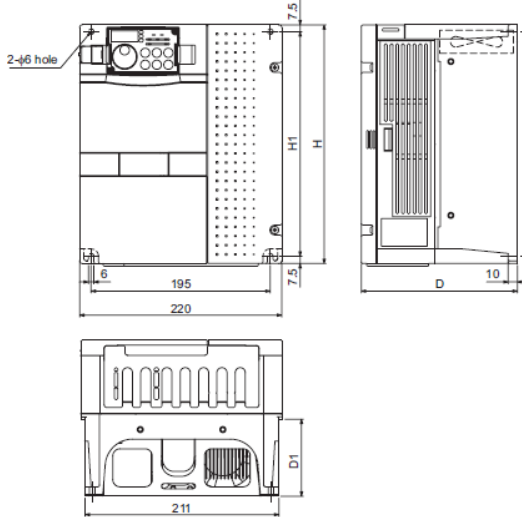


A800 specification

■ FR-B3-(N)H400, H750, H1500, H2200, H3700

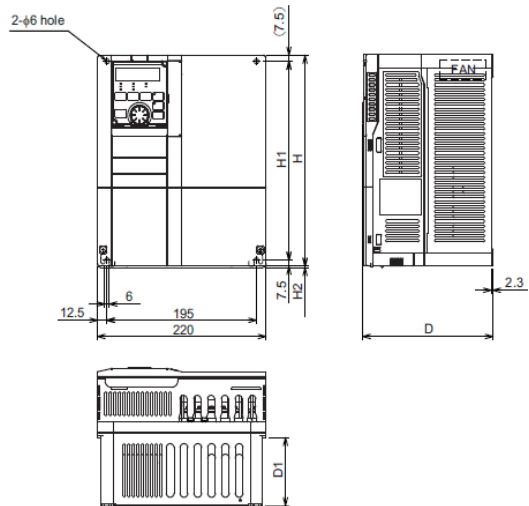


■ FR-B3-(N)H5.5K, H7.5K, H11K, H15K



Inverter model	H	H1	D	D1
FR-B3-(N)H5.5K, 7.5K	260	245	170	84
FR-B3-(N)H11K, 15K	300	285	190	101.5

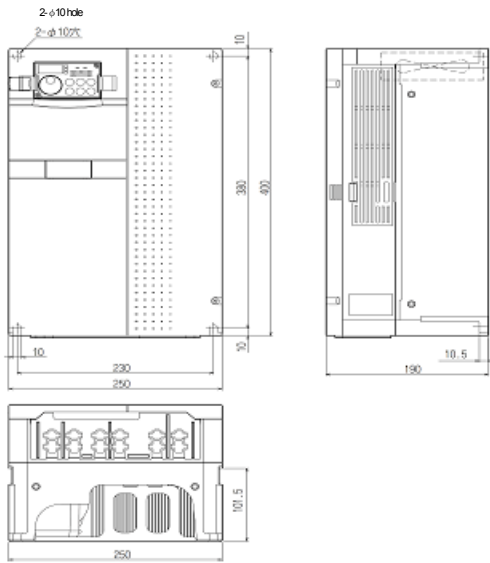
■ FR-B3-(N)H5.5K, H7.5K, H11K, H15K



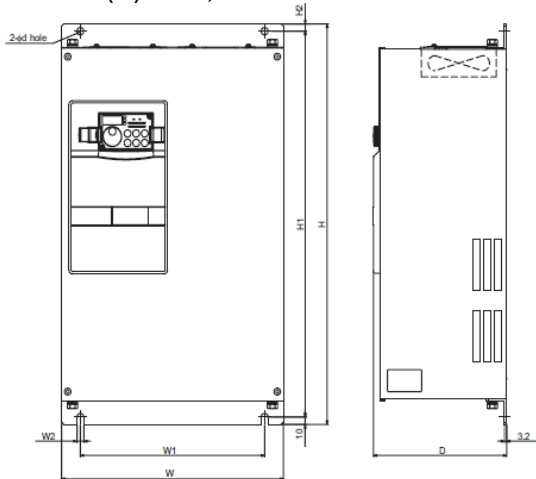
Inverter model	H	H1	H2	D	D1
FR-B3-(N)H5.5K, 7.5K	260	245	1.5	170	84
FR-B3-(N)H11K, 15K	300	285	3	190	101.5

A700 specification

■ FR-B3-(N)H18.5K, H22K



■ FR-B3-(N)H30K, H37K

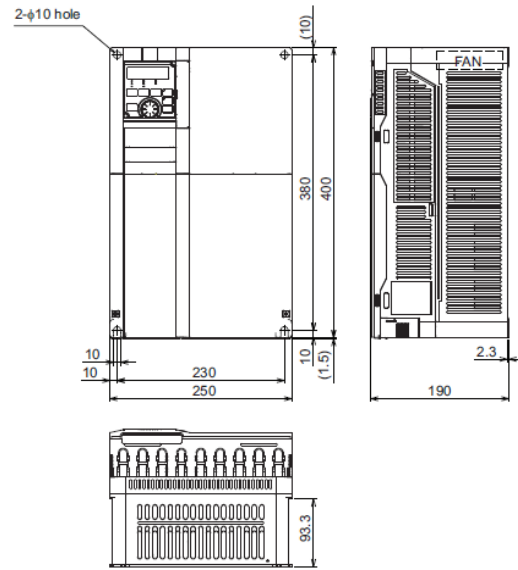


Inverter model	W	W1	W2	H	H1	H2
FR-B3-(N)H30K	325	270	10	550	530	10
FR-B3-(N)H37K	435	380	12	550	525	15

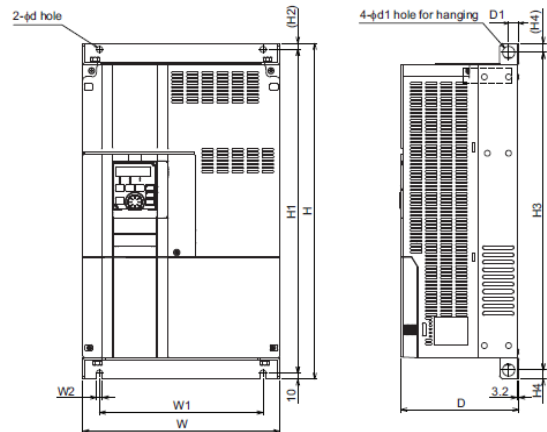
Inverter model	d	D
FR-B3-(N)H30K	10	195
FR-B3-(N)H37K	12	250

A800 specification

■ FR-B3-(N)H18.5K, H22K



■ FR-B3-(N)H30K, H37K



Inverter model	W	W1	W2	H	H1	H2
FR-B3-(N)H30K	325	270	10	550	530	10
FR-B3-(N)H37K	435	380	12	550	525	15

Inverter model	H3	H4	d	d1	D	D1
FR-B3-(N)H30K	520	15	10	20	195	17
FR-B3-(N)H37K	514	18	12	25	250	24

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		FR-B, B3 (A700 specification) terminal name	FR-B, B3 (A800 specification) terminal name
Main circuit		R/L1, S/L2, T/L3	R/L1, S/L2, T/L3
		U, V, W	U, V, W
		R1/L11, S1/L21	R1/L11, S1/L21
		P/+, PR	P/+, PR P3, PR*1
		P/+, N/-	P/+, N/- P3, N/*2
		P/+, P1	P/+, P1
		PR, PX	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
		SD	SD
		PC	PC
Analog	Frequency setting	10E	10E
		10	10
		2	2
		4	4
		1	1
		5	5
Control circuit output signal	Relay	A1, B1, C1	A1, B1, C1
		A2, B2, C2	A2, B2, C2
	Open collector	RUN	RUN
		SU	SU
		OL	OL
		IPF	IPF
		FU	FU
		SE	SE
	Pulse	FM	FM
	Analog	AM	AM
Communication	RS-485	PU connector	PU connector
Signal for a brake unit		CN8 (equipped in 75K or higher)	None

*1) For the FR-B, B3 (A800 specification) 200 V class 15K to 22K and the 400 V class 18.5K to 55K, connect the brake resistor between P3 and PR.

*2) For the FR-B, B3 (A800 specification) 200 V class 15K to 22K and the 400 V class 18.5K to 55K, connect the brake unit between P3 and N/-.

Main circuit terminal layout

The following shows the main circuit terminal layouts of the FR-B, B3 (A700 specification) series and FR-B, B3 (A800 specification) 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.

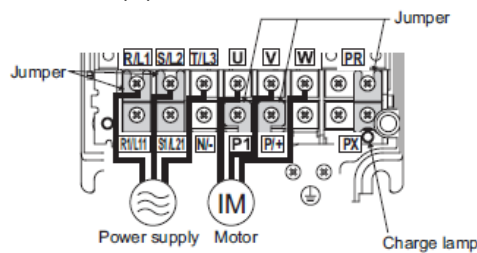
When the cable used for the FR-B, B3 (A700 specification) series is too short for the FR-B, B3 (A800 specification) series, prepare a longer one.

The terminal screw size may differ depending on the capacity. Check the terminal screw size before performing wiring.

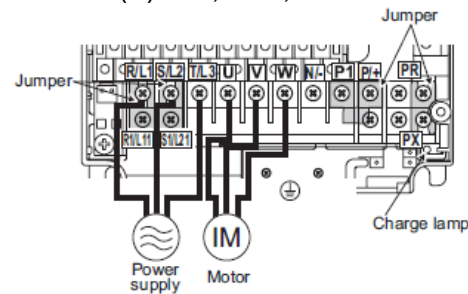
[200 V class]

A700 specification

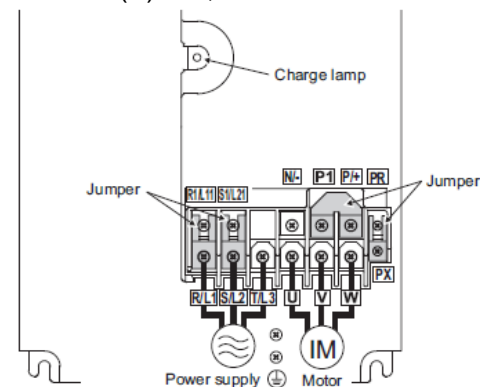
- FR-B-750
FR-B3-(N)400, 750



- FR-B-1500, 2200, 3700
FR-B3-(N)1500, 2200, 3700

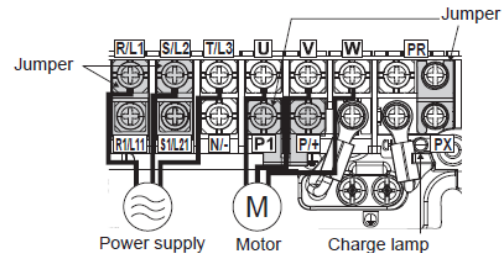


- FR-B-5.5K, 7.5K
FR-B3-(N)5.5K, 7.5K

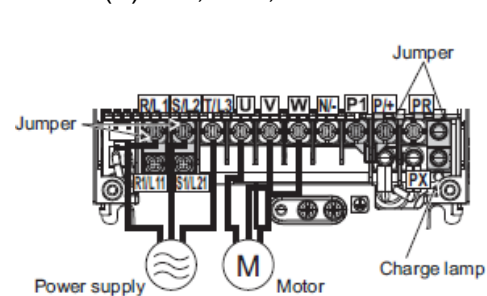


A800 specification

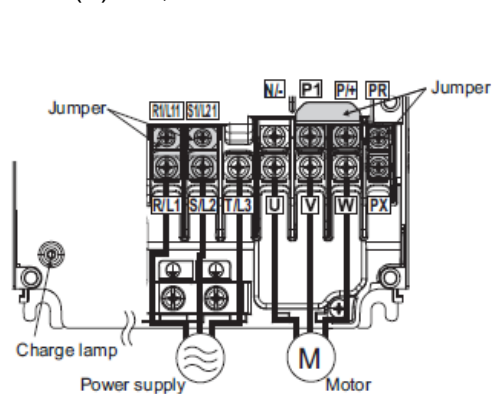
- FR-B-750
FR-B3-(N)400, 750



- FR-B-1500, 2200, 3700
FR-B3-(N)1500, 2200, 3700

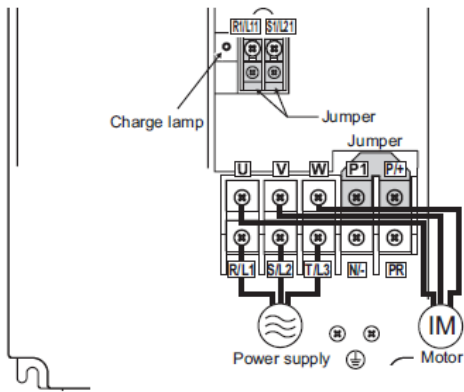


- FR-B-5.5K, 7.5K
FR-B3-(N)5.5K, 7.5K

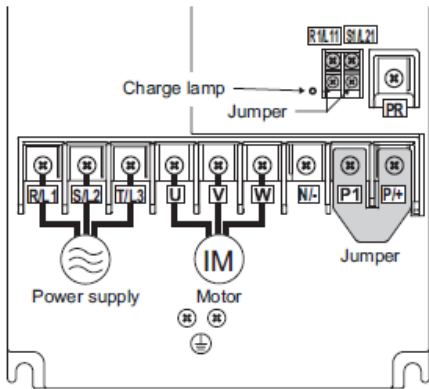


A700 specification

- FR-B-11K
FR-B3-(N)11K

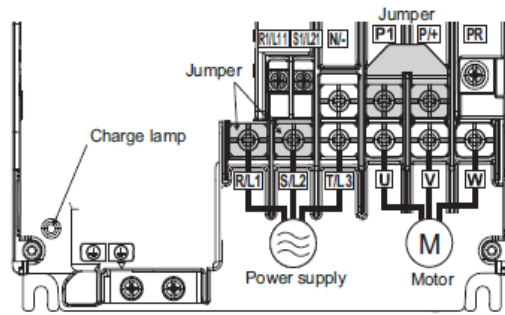


- FR-B-15K, 22K
FR-B3-(N)15K, 18.5K, 22K

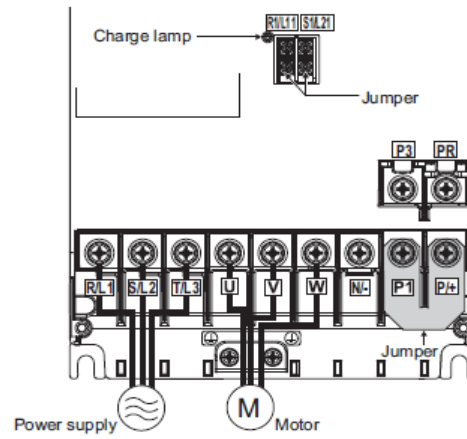


A800 specification

- FR-B-11K
FR-B3-(N)11K

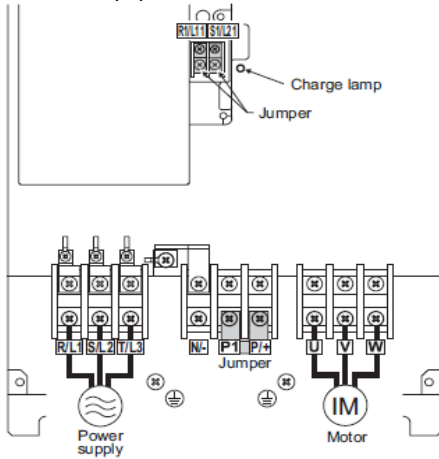


- FR-B-15K, 22K
FR-B3-(N)15K, 18.5K, 22K



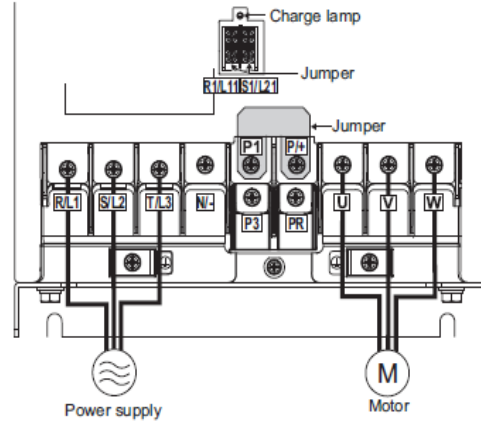
A700 specification

- FR-B-30K, 37K, 45K
- FR-B3-(N)30K, 37K

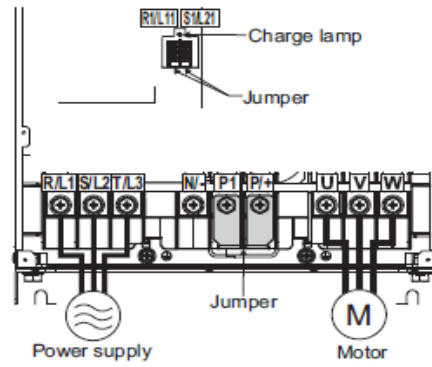


A800 specification

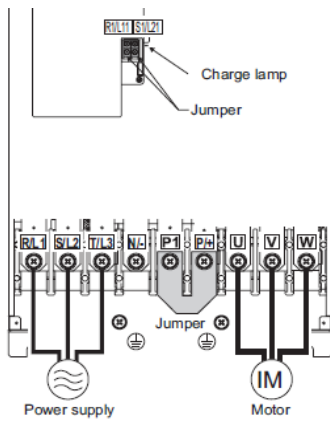
- FR-B-30K
- FR-B3-(N)30K



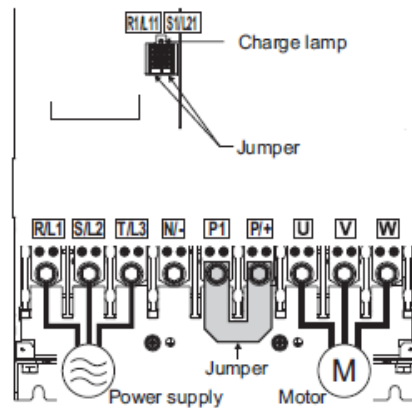
- FR-B-37K, 45K
- FR-B3-(N)37K



- FR-B-55K

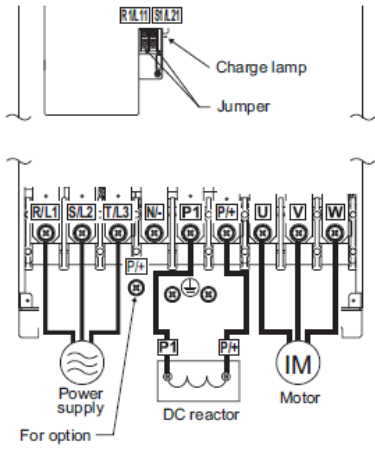


- FR-B-55K



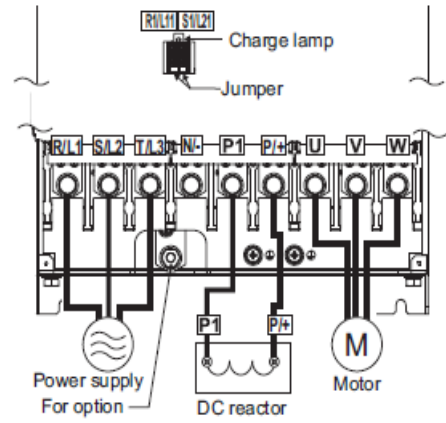
A700 specification

■ FR-B-75K



A800 specification

■ FR-B-75K

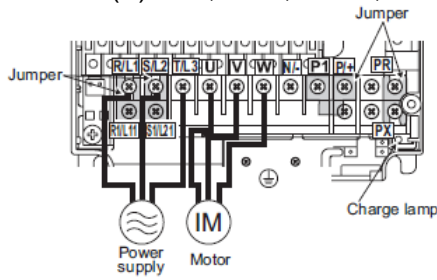


Always provide the DC reactor (FR-HEL) which is equivalent to the one used with the A700 specification model.

[400 V class]

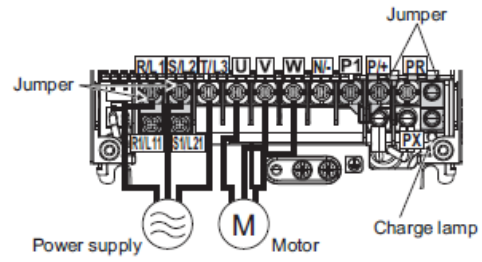
A700 specification

- FR-B-750, 1500, 2200, 3700
FR-B3-(N)H400, H750, H1500, H2200, H3700

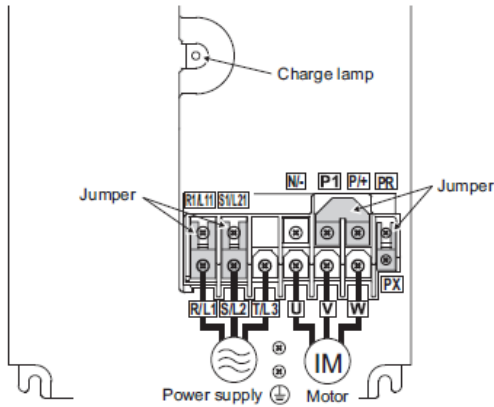


A800 specification

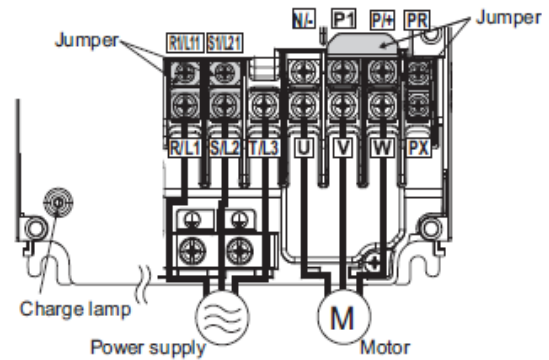
- FR-B-750, 1500, 2200, 3700
FR-B3-(N)H400, H750, H1500, H2200, H3700



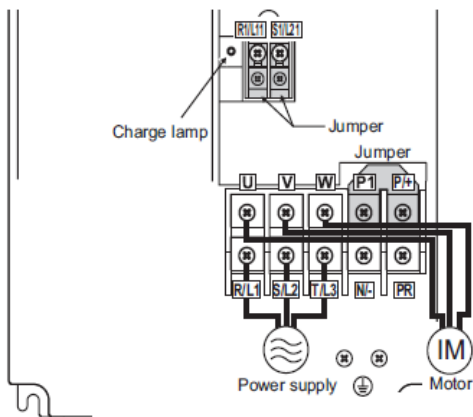
- FR-B-7.5K
FR-B3-(N)H5.5K, H7.5K



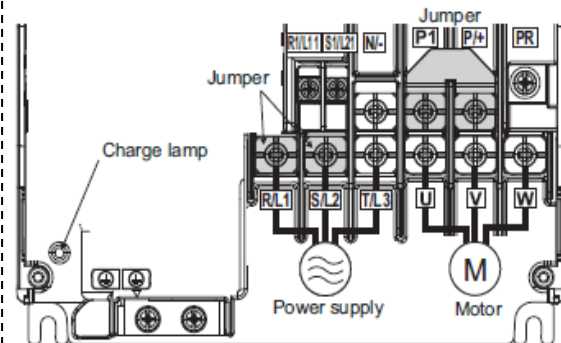
- FR-B-7.5K
FR-B3-(N)H5.5K, H7.5K



- FR-B-15K
FR-B3-(N)H11K, H15K

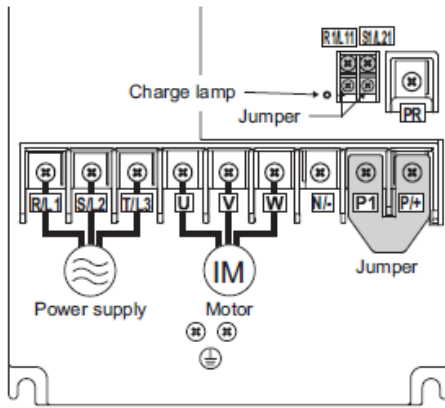


- FR-B-15K
FR-B3-(N)H11K, H15K



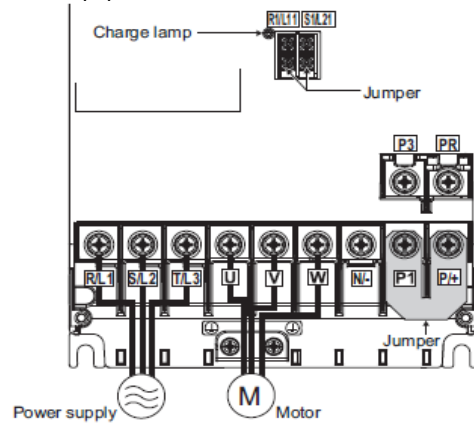
A700 specification

- FR-B-22K
FR-B3-(N)H18.5K, H22K

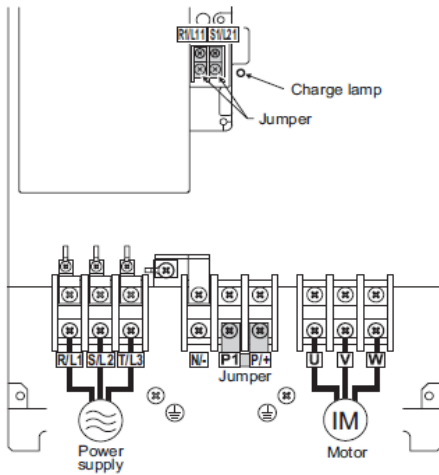


A800 specification

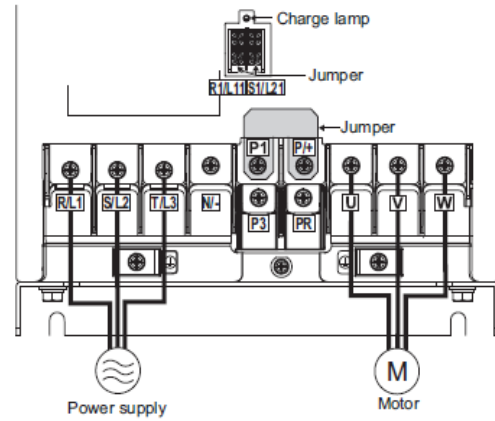
- FR-B-22K
FR-B3-(N)H18.5K, H22K



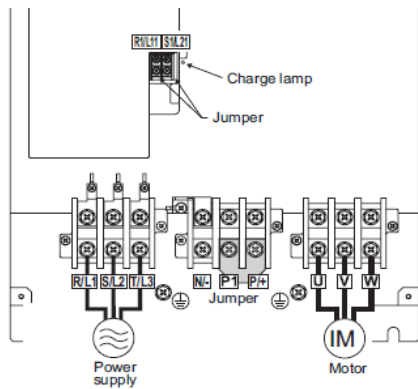
- FR-B-37K
FR-B3-(N)H30K, H37K



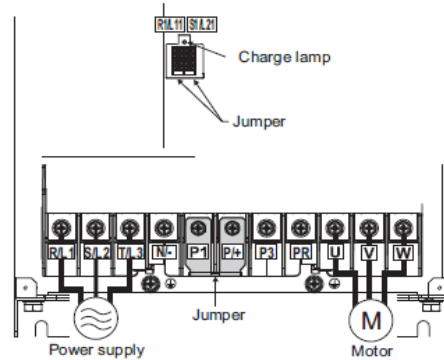
- FR-B3-(N)H30K



- FR-B-55K

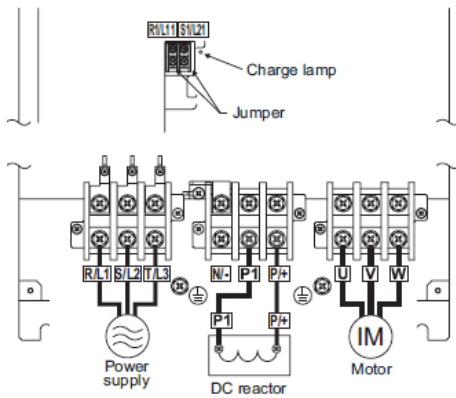


- FR-B-37K, 55K
FR-B3-(N)H37K

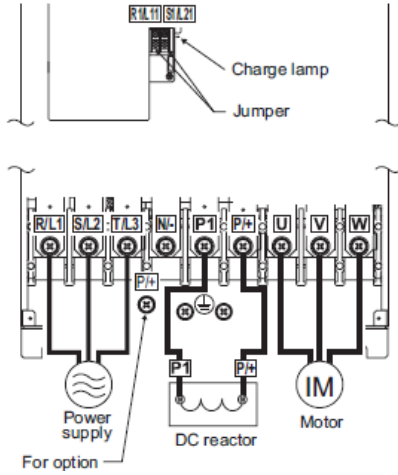


A700 specification

■ FR-B-75K, 90K

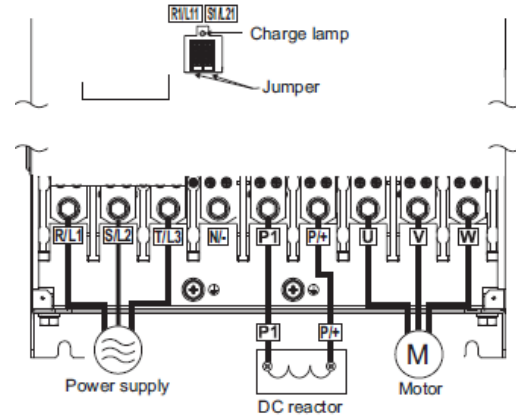


■ FR-B-110K



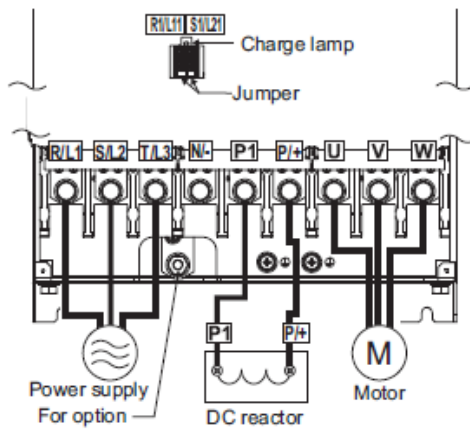
A800 specification

■ FR-B-75K, 90K



Always provide the DC reactor (FR-HEL) which is equal to the one used with the A700 specification model.

■ FR-B-110K



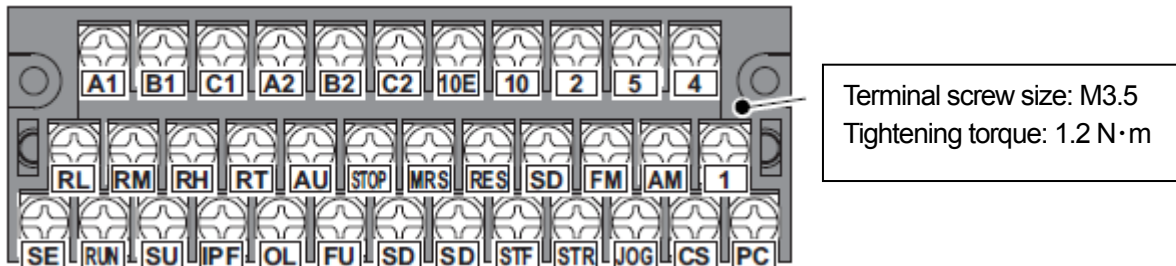
Always provide the DC reactor (FR-HEL) which is equal to the one used with the A700 specification model.

Control circuit terminal layout

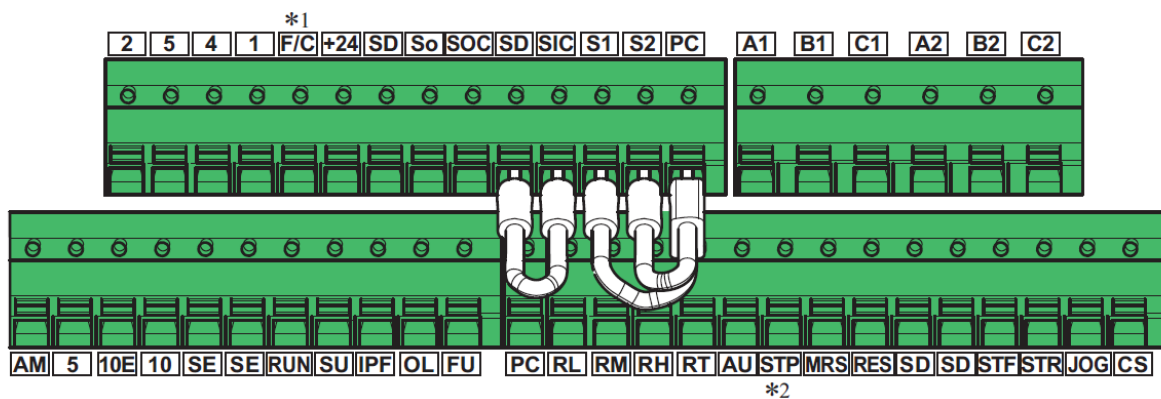
The following shows the control circuit terminal layouts of the FR-B, B3 (A700 specification) series and FR-B, B3 (A800 specification) series.

The control circuit terminal layout differs between the FR-B, B3 (A700 specification) series and FR-B, B3 (A800 specification) series. Check the terminal names and locations before performing wiring.

■ Control circuit terminal layout of the FR-B, B3 (A700 specification) series



■ Control circuit terminal layout of the FR-B, B3 (A800 specification) series



*1) This terminal operates as terminal FM.

*2) Represents terminal STOP.

The control circuit terminal block intercompatibility attachment (FR-A8TAT) can be used for installing control circuit terminal blocks of the FR-B, B3 (A700 specification) 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.

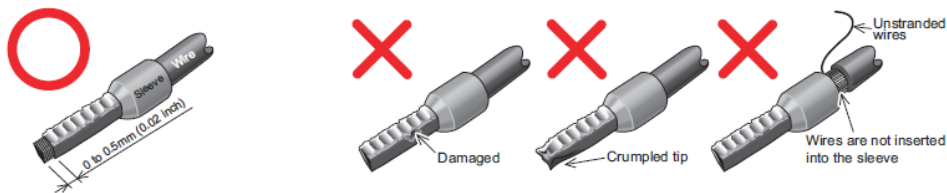
Cable stripping size



(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	—	—	

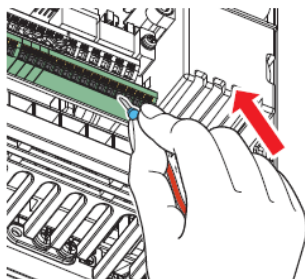
*1 A blade terminal with an insulation sleeve compatible with the MTW wire which has a thick wire insulation.

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

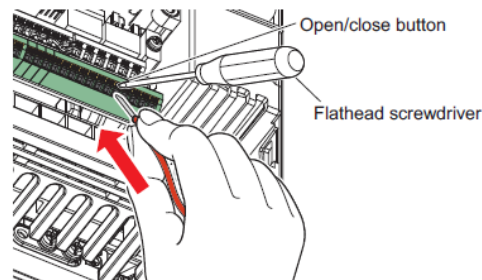
NICHIFU Co., Ltd.

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.



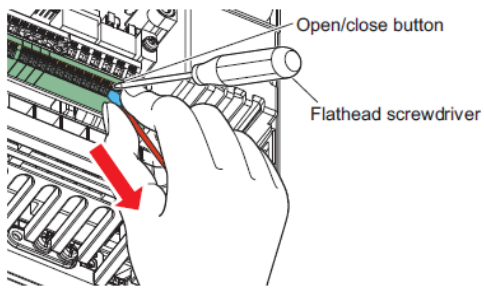
When using a single wire or stranded wires without a blade terminal, push the open/close button all the way down with a flathead screwdriver, and insert the wire.



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 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-B, B3 (A800 specification) series parameters compatible with the FR-B, B3 (A700 specification) series

The following table shows the parameter settings required when replacing an FR-B, B3 (A700 specification) series inverter by an FR-B, B3 (A800 specification) series inverter.

When an FR-B, B3 (A700 specification) series parameter is set to a value other than the initial value, set the corresponding FR-B, B3 (A800 specification) series parameter according to the following table.

When an FR-B, B3 (A700 specification) series parameter is set to an initial value, it is usually not necessary to change the corresponding FR-B, B3 (A800 specification) series parameter setting.

The parameters with Δ are used for adjustment. Set them as required.

The parameter replacement following the table below does not guarantee the inverter characteristics or performance.

FR-B, B3
Setting \odot : Use the same setting of the A700 specification model.
 Δ : Change the setting of the A700 specification model as needed.
 \times : Adjust and set the A800 specification model parameters independently.

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
						0	Torque boost	0% to 30%	2% / 1.5% / 1%	6% / 4% / 3% / 2%		Do not change the setting.	
1	Maximum frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz	120 Hz	1	Maximum frequency	0 to 120 Hz	60 Hz	120 Hz	\odot	FR-B: Set a value from 0 to 60 (Hz) in 30K or higher.	
2	Minimum frequency			0 Hz		2	Minimum frequency	0 to 120 Hz	0 Hz		\odot		
						3	Base frequency	0 to 590 Hz	60 Hz			Do not change the setting.	
4	Multi-speed setting (high speed)	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		4	Multi-speed setting (high speed)	0 to 590 Hz	60 Hz		\odot		
5	Multi-speed setting (middle speed)			30 Hz		5	Multi-speed setting (middle speed)	0 to 590 Hz	30 Hz		\odot		
6	Multi-speed setting (low speed)			10 Hz		6	Multi-speed setting (low speed)	0 to 590 Hz	10 Hz		\odot		
7	Acceleration time	0 to 3600 s / 0 to 360 s		5 s / 15 s		7	Acceleration time	0 to 3600 s	5 s / 15 s		\odot	Changing Pr.21 after setting this parameter will change the set value.	
8	Deceleration time			5 s / 15 s		8	Deceleration time	0 to 3600 s	5 s / 15 s		\odot	Changing Pr.21 after setting this parameter will change the set value.	
9	Electronic thermal O/L relay	0 to 500 A / 0 to 3600 A		Rated current		9	Electronic thermal O/L relay	0 to 500 A / 0 to 3600 A	Rated current		\odot	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 / 1 Hz	3 Hz		FR-B: Do not change the setting.	
11	DC injection brake operation time	0.5 s / 0 s	0 to 10 s, 8888	0.5 s / 0 s	0.5 s	11	DC injection brake operation time	0 to 10 s, 8888	0.5 s / 0 s	0.5 s	\odot	FR-B: Select "0.5 s" or "0 s".	
12	DC injection brake operation voltage	—	0% to 30%	—	4% / 2%	12	DC injection brake operation voltage	0% to 30%	4% / 2% / 1%	4% / 2%		FR-B: Do not change the setting.	
13	Starting frequency	0 to 60 Hz		0.5 Hz		13	Starting frequency	0 to 60 Hz	0.5 Hz		\odot		
						14	Load pattern selection	0 to 5, 12 to 15	0			Do not change the setting.	
15	Jog frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	5 Hz		15	Jog frequency	0 to 590 Hz	5 Hz		\odot		
16	Jog acceleration/deceleration time	0 to 3600 s / 0 to 360 s		0.5 s		16	Jog acceleration/deceleration time	0 to 3600 s	0.5 s		\odot	Changing Pr.21 after setting this parameter will change the set value.	
17	MRS input selection	0, 2, 4		0		17	MRS input selection	0, 2, 4	0		\odot		

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
						18	High speed maximum frequency	0 to 590 Hz		60 Hz (30 kW or higher)	120 Hz		Do not change the setting. FR-B: Maximum 60 Hz in 30K or higher
						19	Base frequency voltage	0 to 1000 V, 8888, 9999		220 V / 440 V	9999		Do not change the setting.
20	Acceleration/deceleration reference frequency	1 to 120 Hz / 1 to 60 Hz	1 to 120 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 400%		150%		22	Stall prevention operation level	0% to 400%		150%		⊙	
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 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		24	Multi-speed setting (speed 4)	0 to 590 Hz, 9999		9999		⊙	
25	Multi-speed setting (speed 5)			9999		25	Multi-speed setting (speed 5)	0 to 590 Hz, 9999		9999		⊙	
26	Multi-speed setting (speed 6)	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		26	Multi-speed setting (speed 6)	0 to 590 Hz, 9999		9999		⊙	
27	Multi-speed setting (speed 7)			9999		27	Multi-speed setting (speed 7)	0 to 590 Hz, 9999		9999		⊙	
28	Multi-speed input compensation selection	0, 1		0		28	Multi-speed input compensation selection	0, 1		0		⊙	
29	Acceleration/deceleration pattern selection	0 to 5		0		29	Acceleration/deceleration pattern selection	0 to 6		0		⊙	
30	Regenerative function selection	0, 1 / 0, 1, 2	0, 1	0		30	Regenerative function selection	0 to 2, 10, 11, 20, 21, 100 to 102, 110, 111, 120, 121		0		⊙	The setting value must be within the setting range. FR-B: "0, 1, 100, 101" in 55K or lower, "0, 1, 2, 100, 101, 102" in 75K or higher FR-B3: "0, 1, 100,101"
31	Frequency jump 1A	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		31	Frequency jump 1A	0 to 590 Hz, 9999		9999		⊙	
32	Frequency jump 1B			9999		32	Frequency jump 1B	0 to 590 Hz, 9999		9999		⊙	
33	Frequency jump 2A			9999		33	Frequency jump 2A	0 to 590 Hz, 9999		9999		⊙	
34	Frequency jump 2B			9999		34	Frequency jump 2B	0 to 590 Hz, 9999		9999		⊙	
35	Frequency jump 3A			9999		35	Frequency jump 3A	0 to 590 Hz, 9999		9999		⊙	
36	Frequency jump 3B			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 120 Hz / 0 to 60 Hz	0 to 120 Hz	6 Hz		42	Output frequency detection	0 to 590 Hz		6 Hz		⊙	
43	Output frequency detection for reverse rotation	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		43	Output frequency detection for reverse rotation	0 to 590 Hz, 9999		9999		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
44	Second acceleration/deceleration time	0 to 3600 / 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 / 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			Do not change the setting.
						47	Second V/F (base frequency)	0 to 590 Hz, 9999		9999			Do not change the setting.
48	Second stall prevention operation current	0% to 220%		150%		48	Second stall prevention operation level	0% to 400%		150%		⊙	
49	Second stall prevention operation frequency	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	0 Hz		49	Second stall prevention operation frequency	0 to 590 Hz, 9999		0		⊙	
50	Second output frequency detection	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	30 Hz		50	Second output frequency detection	0 to 590 Hz		30 Hz		⊙	
						51	Second electronic thermal O/L relay	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A		9999		⊙	
52	DU/PU main display data selection	0, 5, 6, 8 to 14, 17 to 20, 22 to 25, 50 to 57, 100	0, 5 to 14, 17 to 20, 22 to 25, 34, 50 to 57, 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		⊙	
54	FM terminal function selection	1 to 3, 5, 6, 8 to 14, 17, 18, 21, 24, 50, 52, 53	1 to 3, 5 to 14, 17, 18, 21, 24, 34, 50, 52, 53	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		⊙	
55	Frequency monitoring reference	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		55	Frequency monitoring reference	0 to 590 Hz		60 Hz		⊙	
56	Current monitoring reference	0 to 500 A / 0 to 3600 A		Rated output current		56	Current monitoring reference	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A		Rated output current		⊙	
57	Restart coasting time	0, 0.1 to 5 s, 9999 / 0.01 to 30 s, 9999		9999		57	Restart coasting time	0, 0.1 to 30 s, 9999		9999		⊙	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 A800 specification model.
58	Restart cushion time	0 to 60 s		1.0 s		58	Restart cushion time	0 to 60 s		1.0 s		⊙	
59	Remote function selection	0, 1, 2, 3		0		59	Remote function selection	0 to 3, 11 to 13		0		⊙	
						60	Energy saving control selection	0, 4, 9		0			Do not change the setting.
61	Reference current	—	0 to 500 A, 9999	—	9999	61	Reference current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999		9999		⊙	FR-B3: Set Pr.292.
62	Reference value at acceleration	—	0% to 220%, 9999	—	9999	62	Reference value at acceleration	0% to 400%, 9999		9999		⊙	FR-B3: Set Pr.292.
63	Reference value at deceleration	—	0% to 220%, 9999	—	9999	63	Reference value at deceleration	0% to 400%, 9999		9999		⊙	
65	Retry selection	0 to 5		0		65	Retry selection	0 to 5		0		⊙	
66	Stall prevention operation reduction starting frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		66	Stall prevention operation reduction starting frequency	0 to 590 Hz		60 Hz		⊙	
67	Number of retries at fault occurrence	0 to 10, 101 to 110		0		67	Number of retries at fault occurrence	0 to 10, 101 to 110		0		⊙	
68	Retry waiting time	0 to 10 s		1 s		68	Retry waiting time	0.1 to 600 s		1 s		⊙	
69	Retry count display erase	0		0		69	Retry count display erase	0		0		⊙	
70	Special regenerative brake duty	0% to 30% / 0% to 10%		0%		70	Special regenerative brake duty	0% to 100%		0%		⊙	

FR-B, B3 (A700 specification) parameter						FR-B, B3 (A800 specification) compatible parameter						Description about parameter setting	
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
71	Applied motor	0, 1	—	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	13	◎	The setting value must be within the setting range. FR-B: "0, 1" FR-B: Do not change the setting.	
72	PWM frequency selection	1 to 15 / 1, 2 / 2	—	1 / 2	—	72	PWM frequency selection	55K or lower: 0 to 15 75K or higher: 0 to 6, 25	1: 200 V class 55K or lower, 400 V 2: 200 V class 75K	2: FR-B3 15: FR-B3N	◎	The setting value must be within the setting range. FR-B: "1 to 15" in 55K or lower, "2" in 200 V class 75K, "1, 2" in 400 V class 75K or higher. FR-B: Do not change the setting.	
73	Analog input selection	0 to 7, 10 to 17		1		73	Analog input selection	0 to 7, 10 to 17		1		◎	
74	Input 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 75K or higher: 0 to 3, 14 to 17, 100 to 103, 114 to 117		14		◎	
76	Fault code output selection	0, 1, 2		0		76	Fault code output selection	0, 1, 2		0		◎	
77	Parameter write 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 4, 6 to 7		0		79	Operation mode selection	0 to 4, 6 to 7		0		◎	
80	Motor capacity	—	Inverter capacity	—	Inverter capacity	80	Motor capacity	55K or lower: 0.4 to 55 kW, 9999 75K or higher: 0 to 3600 kW, 9999	9999	Inverter capacity		Do not change the setting.	
81	Number of motor poles	—	4	—	4	81	Number of motor poles	2, 4, 6, 8, 10, 12, 9999		9999	4	Do not change the setting.	
82	Motor excitation current	—	Read only. Not settable.	—	9999	82	Motor excitation current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999		9999	Tuning data	Do not change the setting.	
83	Rated motor voltage	—	0 to 1000 V	—	200 V / 400 V	83	Rated motor voltage	0 to 1000 V		200 V 400 V		◎	
84	Rated motor frequency	—	10 to 120 Hz	—	60 Hz	84	Rated motor frequency	10 to 400 Hz, 9999		9999		◎	FR-B3: When "9999" is set, the rated motor frequency is determined by Pr.3 setting (initial setting: 60 Hz).
						85	Excitation current break point	0 to 400 Hz, 9999		9999	Tuning data	Do not change the setting.	
						86	Excitation current low-speed scaling factor	0% to 300%, 9999		9999			
89	Speed control gain	—	0% to 200%, 9999	—	9999	89	Speed control gain	0% to 200%, 9999	9999				
90	Motor constant (R1)	—	Read only. Not settable.	—	9999	90	Motor constant (R1)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999		9999		Do not change the setting.	
91	Motor constant (R2)	—		—	9999	91	Motor constant (R2)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999		9999			
92	Motor constant (L1)	—		—	9999	92	Motor constant (L1)	55K or lower: 0 to 50 Ω (0 to 1000 mH), 9999 75K or higher: 0 to 3600 mΩ (0 to 400 mH), 9999		9999			
93	Motor constant (L2)	—		—	9999	93	Motor constant (L2)	55K or lower: 0 to 50 Ω (0 to 1000 mH), 9999 75K or higher: 0 to 3600 mΩ (0 to 400 mH), 9999		9999			
94	Motor constant (X)	—		—	9999	94	Motor constant (X)	0% to 100%, 9999		9999			

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
						95	Online auto tuning selection	0 to 2		0			Do not change the setting.
96	Auto tuning setting/status	—	0, 1, 101	—	0	96	Auto tuning setting/status	0, 1, 11, 101		0		⊙	FR-B: Do not change the setting. FR-B3: Set "101" to perform tuning.
						100	V/F1 (first frequency)	0 to 590 Hz, 9999		*1	9999		Do not change the setting. *1) 55K or lower: 6 Hz, 75K or higher: 50 Hz *2) 200 V class 55K or lower: 30 V, 400 V class 55K or lower: 60 V 200 V class 75K: 200 V, 400 V class 75K or higher: 400 V *3) 55K or lower: 50 Hz, 75K or higher: 9999 *4) 200 V class 55K or lower: 200 V, 400 V class 55K or lower: 400 V 75K or higher: 0 Note) The adjustable 5 points V/F is enabled regardless of Pr.71 setting.
						101	V/F1 (first frequency voltage)	0 to 1000 V		*2	0 V		
						102	V/F2 (second frequency)	0 to 590 Hz, 9999		*3	9999		
						103	V/F2 (second frequency voltage)	0 to 1000 V		*4	0 V		
						104	V/F3 (third frequency)	0 to 590 Hz, 9999		9999			
						105	V/F3 (third frequency voltage)	0 to 1000 V		0 V			
						106	V/F4 (fourth frequency)	0 to 590 Hz, 9999		9999			
						107	V/F4 (fourth frequency voltage)	0 to 1000 V		0 V			
						108	V/F5 (fifth frequency)	0 to 590 Hz, 9999		9999			
						109	V/F5 (fifth frequency voltage)	0 to 1000 V		0 V			
110	Third acceleration/deceleration time	0 to 3600 s / 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 / 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			Do not change the setting.
						113	Third V/F (base frequency)	0 to 590 Hz, 9999		9999			Do not change the setting.
114	Third stall prevention operation current	0% to 220%		150%		114	Third stall prevention operation level	0% to 400%		150%		⊙	
115	Third stall prevention operation frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	0		115	Third stall prevention operation frequency	0 to 590 Hz		0		⊙	
116	Third output frequency detection	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		116	Third output frequency detection	0 to 590 Hz		60 Hz		⊙	
117	PU communication station number	0 to 31		0		117	PU communication station number	0 to 31		0		⊙	
118	PU communication speed	48, 96, 192, 384		192		118	PU communication speed	48, 96, 192, 384, 576, 768, 1152		192		⊙	
119	PU communication stop bit length	0, 1, 10, 11		1		119	PU communication stop bit length / data length	0, 1, 10, 11		1		⊙	
120	PU communication parity check	0, 1, 2		2		120	PU communication parity check	0, 1, 2		2		⊙	
121	Number of PU communication retries	0 to 10, 9999		1		121	PU communication retry count	0 to 10, 9999		1		⊙	
122	PU communication check time interval	0, 0.1 to 999.8 s, 9999		9999		122	PU communication check time interval	0, 0.1 to 999.8 s, 9999		9999		⊙	
123	PU communication waiting time setting	0 to 150 ms, 9999		9999		123	PU communication waiting time setting	0 to 150 ms, 9999		9999		⊙	
124	PU communication CR/LF selection	0, 1, 2		1		124	PU communication CR/LF selection	0, 1, 2		1		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
125	Terminal 2 frequency setting gain frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		125	Terminal 2 frequency setting gain frequency	0 to 590 Hz		60 Hz		⊙	
126	Terminal 4 frequency setting gain frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		126	Terminal 4 frequency setting gain frequency	0 to 590 Hz		60 Hz		⊙	
127	PID control automatic switchover frequency	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		127	PID control automatic switchover frequency	0 to 590 Hz, 9999		9999		⊙	
128	PID action selection	10, 11, 20, 21, 50, 51, 60, 61		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.178 to Pr.189, or when PID control is not used even if "14" (X14 signal) is set in a parameter from Pr.178 to Pr.189 in the A700 specification model, set "0" in Pr.128 in the A800 specification model. Even if the X14 signal is not assigned to any input terminal, the PID control is enabled by setting Pr.128 in the A800 specification model.
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	PID upper limit	0% to 100%, 9999		9999		131	PID upper limit	0% to 100%, 9999		9999		⊙	
132	PID lower limit	0% to 100%, 9999		9999		132	PID lower limit	0% to 100%, 9999		9999		⊙	
133	PID action set point	0% to 100%, 9999		9999		133	PID action set point	0% to 100%, 9999		9999		⊙	
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	Electronic bypass sequence selection	0, 1		0			Do not change the setting.
140	Backlash acceleration stopping frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	1 Hz		140	Backlash acceleration stopping frequency	0 to 590 Hz		1 Hz		⊙	
141	Backlash acceleration stopping time	0 to 360 s		0.5 s		141	Backlash acceleration stopping time	0 to 360 s		0.5 s		⊙	
142	Backlash deceleration stopping frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	1 Hz		142	Backlash deceleration stopping frequency	0 to 590 Hz		1 Hz		⊙	
143	Backlash deceleration stopping time	0 to 360 s		0.5 s		143	Backlash deceleration stopping time	0 to 360 s		0.5 s		⊙	
144	Speed setting switchover	0, 2, 4, 6, 8, 10, 102, 104, 106, 108, 110		4		144	Speed setting switchover	0, 2, 4, 6, 8, 10, 12, 102, 104, 106, 108, 110, 112		4		⊙	
145	PU display language selection	0 to 7		0		145	PU display language selection	0 to 7		—		⊙	
148	Stall prevention level at 0 V input	0% to 220%		150%		148	Stall prevention level at 0 V input	0% to 400%		150%		⊙	
149	Stall prevention level at 10V input	0% to 220%		200%		149	Stall prevention level at 10 V input	0% to 400%		200%		⊙	
150	Output current detection level	0% to 220%		150%		150	Output current detection level	0% to 400%		150%		⊙	
151	Output current detection signal delay time	0 to 10 s		0 s		151	Output current detection signal delay time	0 to 10 s		0 s		⊙	
152	Zero current detection level	0% to 220%		5%		152	Zero current detection level	0% to 400%		5%		⊙	
153	Zero current detection time	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 function validity condition selection	0, 10		0		155	RT signal function validity condition selection	0, 10		0		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
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 output timer	0 to 25 s, 9999		0 s		157	OL signal output timer	0 to 25 s, 9999		0 s		⊙	
158	AM terminal function selection	1 to 3, 5, 6, 8 to 14, 17, 18, 21, 24, 50, 52, 53	1 to 3, 5 to 14, 17, 18, 21, 24, 34, 50, 52, 53	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		⊙	
160	User group read selection	0, 1, 9999		0		160	User group read selection	0, 1, 9999		0		⊙	
161	Frequency setting/key lock operation selection	0, 1, 10, 11		0		161	Frequency setting/key lock operation selection	0, 1, 10, 11		0		⊙	
162	Automatic restart after instantaneous power failure selection	0, 1, 2, 10, 11, 12		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	Stall prevention operation level for restart	0% to 220%		150%		165	Stall prevention operation level for restart	0% to 400%		150%		⊙	
166	Output current detection signal retention time	0 to 10 s, 9999		0.1 s		166	Output current detection signal retention time	0 to 10 s, 9999		0.1 s		⊙	
167	Output current detection operation selection	0, 1		0		167	Output current detection operation selection	0, 1, 10, 11		0		⊙	
170	Watt-hour meter clear	0, 10, 9999		9999		170	Watt-hour meter clear	0, 10, 9999		9999		×	Setting not required
171	Operation hour meter clear	0, 9999		9999		171	Operation hour meter clear	0, 9999		9999		×	Setting not required
172	User group registered display/batch clear	9999, (0 to 16)		0		172	User group registered display/batch clear	9999, (0 to 16)		0		×	
173	User group registration	0 to 999, 9999		9999		173	User group registration	0 to 1999, 9999		9999		×	Set the parameter as required.
174	User group clear	0 to 999, 9999		9999		174	User group clear	0 to 1999, 9999		9999		×	
178	STF terminal function selection	0 to 12, 14, 16, 19, 20, 22, 24, 25, 60, 62, 64 to 67, 9999	0 to 9, 12 to 16, 19, 20, 22, 24, 25, 60, 62, 64 to 67, 9999	60		178	STF terminal function selection	0 to 20, 22 to 28, 37, 42 to 47, 50, 51, 60, 62, 64 to 74, 76 to 80, 87, 92, 93, 9999		60		⊙	FR-B3: Do not assign the X18 signal to any terminals.
179	STR terminal function selection			61		179	STR terminal function selection			61		⊙	
180	RL terminal function selection			0		180	RL terminal function selection			0		⊙	
181	RM terminal function selection			1		181	RM terminal function selection			1		⊙	
182	RH terminal function selection			2		182	RH terminal function selection			2		⊙	
183	RT terminal function selection			3		183	RT terminal function selection			3		⊙	
184	AU terminal function selection			4		184	AU terminal function selection			4		⊙	
185	JOG terminal function selection			5		185	JOG terminal function selection	0 to 20, 22 to 28, 37, 42 to 47, 50, 51, 62, 64 to 74, 76 to 80, 87, 92, 93, 9999		5		⊙	
186	CS terminal function selection			6		186	CS terminal function selection			6		⊙	
187	MRS terminal function selection			24		187	MRS terminal function selection			24		⊙	
188	STOP terminal function selection			25		188	STOP terminal function selection			25		⊙	
189	RES terminal function selection			62		189	RES terminal function selection			62		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
190	RUN terminal function selection	0 to 8, 10 to 16, 25 to 28, 34, 45	0 to 8, 10 to 16, 20, 25 to 28, 34, 35, 45 to 47, 64, 70, 90 to 99, 100	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, 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, 168, 170, 179, 184, 185, 190 to 199, 200 to 208, 300 to 308, 9999	0		⊙		
191	SU terminal function selection	to 47, 64, 70, 90	70, 90 to 99, 100	1		191	SU terminal function selection		1		⊙		
192	IPF terminal function selection	to 99, 100 to 108, 110 to 116, 125 to 128, 134, 145 to 147, 164, 170, 190 to 199, 9999	to 106, 108, 110 to 116, 120, 125 to 128, 134, 135, 145 to 147, 164, 170, 190 to 199, 9999	2		192	IPF terminal function selection		2		⊙		
193	OL terminal function selection			3		193	OL terminal function selection		3		⊙		
194	FU terminal function selection			4		194	FU terminal function selection		4		⊙		
195	ABC1 terminal function selection	0 to 8, 10 to 16, 25 to 28, 34, 45 to 47, 64, 70, 90, 91, 94 to 99, 100 to 108, 110 to 116, 125 to 128, 134, 145 to 147, 164, 170, 190, 191, 194 to 199, 9999	0 to 8, 10 to 16, 20, 25 to 28, 34, 35, 45 to 47, 64, 70, 90, 91, 94 to 99, 100 to 106, 108, 110 to 116, 120, 125 to 128, 134, 135, 145 to 147, 164, 170, 190, 191, 194 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, 68, 70, 79, 84, 85, 90, 91, 94 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, 168, 170, 179, 184, 185, 190, 191, 194 to 199, 200 to 208, 300 to 308, 9999	99		⊙		
196	ABC2 terminal function selection			9999		196	ABC2 terminal function selection		9999		⊙		
232	Multi-speed setting (speed 8)	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		232	Multi-speed setting (speed 8)	0 to 590 Hz, 9999	9999		⊙		
233	Multi-speed setting (speed 9)			9999		233	Multi-speed setting (speed 9)	0 to 590 Hz, 9999	9999		⊙		
234	Multi-speed setting (speed 10)			9999		234	Multi-speed setting (speed 10)	0 to 590 Hz, 9999	9999		⊙		
235	Multi-speed setting (speed 11)			9999		235	Multi-speed setting (speed 11)	0 to 590 Hz, 9999	9999		⊙		
236	Multi-speed setting (speed 12)			9999		236	Multi-speed setting (speed 12)	0 to 590 Hz, 9999	9999		⊙		
237	Multi-speed setting (speed 13)			9999		237	Multi-speed setting (speed 13)	0 to 590 Hz, 9999	9999		⊙		
238	Multi-speed setting (speed 14)			9999		238	Multi-speed setting (speed 14)	0 to 590 Hz, 9999	9999		⊙		
239	Multi-speed setting (speed 15)			9999		239	Multi-speed setting (speed 15)	0 to 590 Hz, 9999	9999		⊙		
						240	Soft-PWM operation selection	0, 1	0	1		Do not change the setting.	
241	Analog input display unit switchover	0, 1		0		241	Analog input display unit switchover	0, 1	0		⊙		
242	Terminal 1 added compensation amount (terminal 2)	0% to 100%		100%		242	Terminal 1 added compensation amount (terminal 2)	0% to 100%	100%		⊙		
243	Terminal 1 added compensation amount (terminal 4)	0% to 100%		75%		243	Terminal 1 added compensation amount (terminal 4)	0% to 100%	75%		⊙		
244	Cooling fan operation selection	0, 1		1		244	Cooling fan operation selection	0, 1, 101 to 105	1		⊙		
						245	Rated slip	0% to 50%, 9999	9999			Do not change the setting.	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
250	Stop selection	0 to 100 s, 1000 to 1100 s, 8888, 9999		9999		250	Stop selection	0 to 100 s, 1000 to 1100 s, 8888, 9999		9999		⊙	
251	Output phase loss 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%		⊙	
255	Life alarm status display	(0 to 15)		0		255	Life alarm status display	(0 to 15)		0		×	Setting not required
256	Inrush current limit circuit life display	(0% to 100%)		100%		256	Inrush current limit circuit life display	(0% to 100%)		100%		×	Setting not required
257	Control circuit capacitor life display	(0% to 100%)		100%		257	Control circuit capacitor life display	(0% to 100%)		100%		×	Setting not required
258	Main circuit capacitor life display	(0% to 100%)		100%		258	Main circuit capacitor life display	(0% to 100%)		100%		×	Setting not required
259	Main circuit capacitor life measuring	0, 1		0		259	Main circuit capacitor life measuring	0, 1		0		×	Setting not required
						260	PWM frequency automatic switchover	0, 1		1			Do not change the setting.
261	Power failure stop selection	0, 1, 2, 11, 12		0		261	Power failure stop selection	0, 1, 2, 11, 12, 21, 22		0		⊙	
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 / 0 to 60 Hz, 9999	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 / 0 to 360 s		5 s		264	Power-failure deceleration time 1	0 to 3600 s		5 s		⊙	Changing Pr.21 after setting this parameter will change the set value.
265	Power-failure deceleration time 2	0 to 3600 / 0 to 360 s, 9999		9999		265	Power-failure deceleration time 2	0 to 3600, 9999		9999		⊙	Changing Pr.21 after setting this parameter will change the set value.
266	Power failure deceleration time switchover frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		266	Power failure deceleration time switchover frequency	0 to 590 Hz		60 Hz		⊙	
267	Terminal 4 input selection	0, 1, 2		0		267	Terminal 4 input selection	0, 1, 2		0		⊙	
268	Monitor decimal digits selection	0, 1, 9999		9999		268	Monitor decimal digits selection	0, 1, 9999		9999		⊙	
270	Stop-on contact/load torque high-speed frequency control selection	0, 2	0, 1, 2, 3	0		270	Stop-on contact/load torque high-speed frequency control selection	0, 1, 2, 3, 11, 13		0		⊙	FR-B: The stop-on-contact function is disabled.
271	High-speed setting maximum current	0% to 220%		50%		271	High-speed setting maximum current	0% to 400%		50%		⊙	
272	Middle-speed setting minimum current	0% to 220%		100%		272	Middle-speed setting minimum current	0% to 400%		100%		⊙	
273	Current averaging range	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		273	Current averaging range	0 to 590 Hz, 9999		9999		⊙	
274	Current averaging filter time constant	1 to 4000		16		274	Current averaging filter time constant	1 to 4000		16		⊙	
275	Stop-on contact excitation 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		⊙	Disabled in the FR-B.
						276	PWM carrier frequency at stop-on contact	55K or lower: 0 to 9, 9999 / 75K or higher: 0 to 4, 9999		9999			Do not change the setting.

FR-B, B3 (A700 specification) parameter						FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting		
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
278	Brake opening frequency	—	0 to 30 Hz	—	3 Hz	278	Brake opening frequency	0 to 30 Hz		3 Hz		⊙	FR-B3: Set Pr.292.
279	Brake opening current	—	0% to 220%	—	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		⊙	
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 (speed deviation excess detection frequency)	—	0 to 30 Hz, 9999	—	9999	285	Overspeed detection frequency (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%		⊙	Disabled in the FR-B.
287	Droop filter time constant	—	0 to 1 s	—	0.3 s	287	Droop filter time constant	0 to 1 s		0.3 s		⊙	
291	Pulse train I/O selection	0, 1, 10, 11, 20, 21, 100		0		291	Pulse train I/O selection	0, 1, 10, 11, 20, 21, 100		0		⊙	
292	Automatic acceleration/deceleration	—	0, 1, 3, 7, 8, 11	—	0	292	Automatic acceleration/deceleration	0, 1, 3, 5 to 8, 11		0		Δ	FR-B: Do not change the setting. FR-B3: Pr.292 cannot be set to "5" and "6". Pr.639, Pr.640, and Pr.641 settings for the A800 specification model must be the initial values to perform the same operation as the one of the A700 specification model when Pr.292 = "7 or 8" (brake sequence mode).
293	Acceleration/deceleration individual operation selection	—	0 to 2	0		293	Acceleration/deceleration separate selection	0 to 2		0		⊙	FR-B3: Set Pr.292.
294	UV avoidance voltage gain	0% to 200%		100%		294	UV avoidance voltage gain	0% to 200%		100%		⊙	
299	Rotation direction detection selection at restarting	0, 1, 9999		0		299	Rotation direction detection selection at restarting	0, 1, 9999		0		⊙	
331	RS-485 communication station number	0 to 31 (0 to 247)		0		331	RS-485 communication station number	0 to 31 (0 to 247)		0		⊙	
332	RS-485 communication speed	3, 6, 12, 24, 48, 96, 192, 384		96		332	RS-485 communication speed	3, 6, 12, 24, 48, 96, 192, 384, 576, 768, 1152		96		⊙	
333	RS-485 communication stop bit length	0, 1, 10, 11		1		333	RS-485 communication stop bit length / data length	0, 1, 10, 11		1		⊙	
334	RS-485 communication parity check selection	0, 1, 2		2		334	RS-485 communication parity check selection	0, 1, 2		2		⊙	
335	RS-485 communication retry count	0 to 10, 9999		1		335	RS-485 communication retry count	0 to 10, 9999		1		⊙	
336	RS-485 communication check time interval	0 to 999.8 s, 9999		0 s		336	RS-485 communication check time interval	0 to 999.8 s, 9999		0 s		⊙	
337	RS-485 communication waiting time setting	0 to 150 ms, 9999		9999		337	RS-485 communication waiting time setting	0 to 150 ms, 9999		9999		⊙	
338	Communication operation command source	0, 1		0		338	Communication operation command source	0, 1		0		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
339	Communication speed command source	0, 1, 2		0		339	Communication speed command source	0, 1, 2		0		⊙	
340	Communication startup mode selection	0, 1, 2, 10, 12		0		340	Communication startup mode selection	0, 1, 2, 10, 12		0		⊙	
341	RS-485 communication CR/LF selection	0, 1, 2		1		341	RS-485 communication CR/LF selection	0, 1, 2		1		⊙	
342	Communication EEPROM write selection	0, 1		0		342	Communication EEPROM write selection	0, 1		0		⊙	
343	Communication error count	—		0		343	Communication error count	—		0		×	Setting not required
350	Stop position command selection	0, 1, 9999		9999		350	Stop position command selection	0, 1, 9999		9999		⊙	
351	Orientation speed	0 to 30 Hz		2 Hz		351	Orientation speed	0 to 30 Hz		2 Hz		⊙	
352	Creep speed	0 to 10 Hz		0.5 Hz		352	Creep speed	0 to 10 Hz		0.5 Hz		⊙	
353	Creep switchover position	0 to 16383		511		353	Creep switchover position	0 to 16383		511		⊙	
354	Position loop switchover position	0 to 8191		96		354	Position loop switchover position	0 to 8191		96		⊙	
355	DC injection brake start position	0 to 255		5		355	DC injection brake start position	0 to 255		5		⊙	
356	Internal stop position command	0 to 16383		0		356	Internal stop position command	0 to 16383		0		⊙	
357	Orientation in-position zone	0 to 255		5		357	Orientation in-position zone	0 to 255		5		⊙	
358	Servo torque selection	0 to 13		1		358	Servo torque selection	0 to 13		1		⊙	
359	Encoder rotation direction	0, 1		1		359	Encoder rotation direction	0, 1, 100, 101		1		⊙	
360	16 bit data selection	0 to 127		0		360	16-bit data selection	0 to 127		0		⊙	
361	Position shift	0 to 16383		0		361	Position shift	0 to 16383		0		⊙	
362	Orientation position loop gain	0.1 to 100		1		362	Orientation position loop gain	0.1 to 100		1		⊙	
363	Completion signal output delay time	0 to 5 s		0.5 s		363	Completion signal output delay time	0 to 5 s		0.5 s		⊙	
364	Encoder stop check time	0 to 5 s		0.5 s		364	Encoder stop check time	0 to 5 s		0.5 s		⊙	
365	Orientation limit	0 to 60 s, 9999		9999		365	Orientation limit	0 to 60 s, 9999		9999		⊙	
366	Recheck time	0 to 5 s, 9999		9999		366	Recheck time	0 to 5 s, 9999		9999		⊙	
367	Speed feedback range	0 to 120 Hz / 0 to 60 Hz, 9999	0 to 120 Hz, 9999	9999		367	Speed feedback range	0 to 590 Hz, 9999		9999		⊙	
368	Feedback gain	0 to 100		1		368	Feedback gain	0 to 100		1		⊙	
369	Number of encoder pulses	0 to 4096		1024		369	Number of encoder pulses	0 to 4096		1024		⊙	
374	Overspeed detection level	0 to 400 Hz		140 Hz		374	Overspeed detection level	0 to 590 Hz		9999		⊙	
376	Encoder signal loss detection enable/disable selection	0, 1		0		376	Encoder signal loss detection enable/disable selection	0, 1		0		⊙	
380	Acceleration S-pattern 1	0 to 50		0		380	Acceleration S-pattern 1	0 to 50		0		⊙	
381	Deceleration S-pattern 1	0 to 50		0		381	Deceleration S-pattern 1	0 to 50		0		⊙	
382	Acceleration S-pattern 2	0 to 50		0		382	Acceleration S-pattern 2	0 to 50		0		⊙	
383	Deceleration S-pattern 2	0 to 50		0		383	Deceleration S-pattern 2	0 to 50		0		⊙	
384	Input pulse division scaling factor	0 to 250		0		384	Input pulse division scaling factor	0 to 250		0		⊙	
385	Frequency for zero input pulse	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	0 Hz		385	Frequency for zero input pulse	0 to 590 Hz		0 Hz		⊙	
386	Frequency for maximum input pulse	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		386	Frequency for maximum input pulse	0 to 590 Hz		60 Hz		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
						450	Second applied motor	0, 1, 3 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, 9999		9999		Do not change the setting.	
						451	Second motor control method selection	10 to 14, 20, 110 to 114, 9999		9999		Do not change the setting.	
495	Remote output selection	0, 1, 10, 11		0		495	Remote output selection	0, 1, 10, 11		0		⊙	
496	Remote output data 1	0 to 4095		0		496	Remote output data 1	0 to 4095		0		⊙	
497	Remote output data 2	0 to 4095		0		497	Remote output data 2	0 to 4095		0		⊙	
503	Maintenance timer	0 (1 to 9998)		0		503	Maintenance timer 1	0 (1 to 9998)		0		×	Setting not required
504	Maintenance timer alarm output set time	0 to 9998, 9999		9999		504	Maintenance timer 1 warning output set time	0 to 9998, 9999		9999		⊙	
505	Speed setting reference	1 to 120 Hz / 1 to 60 Hz		1 to 120 Hz	60 Hz	505	Speed setting reference	1 to 590 Hz		60 Hz		⊙	
516	S-pattern time at a start of acceleration	0.1 to 2.5 s		0.1 s		516	S-pattern time at a start of acceleration	0.1 to 2.5 s		0.1 s		⊙	
517	S-pattern time at a completion of acceleration	0.1 to 2.5 s		0.1 s		517	S-pattern time at a completion of acceleration	0.1 to 2.5 s		0.1 s		⊙	
518	S-pattern time at a start of deceleration	0.1 to 2.5 s		0.1 s		518	S-pattern time at a start of deceleration	0.1 to 2.5 s		0.1 s		⊙	
519	S-pattern time at a completion of deceleration	0.1 to 2.5 s		0.1 s		519	S-pattern time at a completion of deceleration	0.1 to 2.5 s		0.1 s		⊙	
539	Modbus-RTU communication check time interval	0 to 999.8 s, 9999		9999		539	MODBUS RTU communication check time interval	0 to 999.8 s, 9999		9999		⊙	
547	USB communication station number	0 to 31		0		547	USB communication station number	0 to 31		0		⊙	
548	USB communication check time interval	0 to 999.8 s, 9999		9999		548	USB communication check time interval	0 to 999.8 s, 9999		9999		⊙	
549	Protocol selection	0, 1		0		549	Protocol selection	0, 1		0		⊙	
550	NET mode operation command source selection	0, 1, 9999		9999		550	NET mode operation command source selection	0, 1, 9999		9999		⊙	
551	PU mode operation command source selection	1, 2, 3		2		551	PU mode operation command source selection	1, 2, 3		9999		⊙	
555	Current average time	0.1 to 1.0 s		1 s		555	Current average time	0.1 to 1.0 s		1 s		⊙	
556	Data output mask time	0.0 to 20.0 s		0 s		556	Data output mask time	0.0 to 20.0 s		0 s		⊙	
557	Current average value monitor signal output reference current	0 to 500 A / 0 to 3600 A		Inverter rated current		557	Current average value monitor signal output reference current	55K or lower: 0 to 500 A / 75K or higher: 0 to 3600 A		Inverter rated current		⊙	
563	Energization time carrying-over times	((0 to 65535))		0		563	Energization time carrying-over times	((0 to 65535))		0		×	Setting not required
564	Operating time carrying-over times	((0 to 65535))		0		564	Operating time carrying-over times	((0 to 65535))		0		×	Setting not required
571	Holding time at a start	0.0 to 10.0 s, 9999		9999		571	Holding time at a start	0.0 to 10.0 s, 9999		9999		⊙	
						574	Second motor online auto tuning	0, 1		0		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
575	Output interruption detection time	0 to 3600 s, 9999		1 s		575	Output interruption detection time	0 to 3600 s, 9999		1 s		⊙	
576	Output interruption detection level	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	0 Hz		576	Output interruption detection level	0 to 590 Hz		0 Hz		⊙	
577	Output interruption cancel level	900% to 1100%		1000%		577	Output interruption cancel level	900% to 1100%		1000%		⊙	
611	Acceleration time at a restart	0 to 3600 s, 9999		5 s / 15 s		611	Acceleration time at a restart	0 to 3600 s, 9999		9999		⊙	
						617	Reverse rotation excitation current low-speed scaling factor	0% to 300%, 9999		9999			Do not change the setting.
653	Speed smoothing control	0% to 200%	—	0%	—	653	Speed smoothing control	0% to 200%		0%		⊙	
						660	Increased magnetic excitation deceleration operation selection	0, 1		0			Do not change the setting.
665	Regeneration avoidance frequency gain	0% to 200%		100%		665	Regeneration avoidance frequency gain	0% to 200%		100%		⊙	
						673	SF-PR slip amount adjustment operation selection	2, 4, 6, 9999		9999			Do not change the setting.
684	Tuning data unit switchover	—	0, 1	—	0	684	Tuning data unit switchover	0, 1		0		⊙	
						800	Control method selection	0 to 6, 9 to 14, 20, 100 to 106, 109 to 114		20			Do not change the setting.
811	Set resolution switchover	0, 1		0		811	Set resolution switchover	0, 1, 10, 11		0		⊙	
849	Analog input offset adjustment	0% to 200%		100%		849	Analog input offset adjustment	0% to 200%		100%		⊙	
858	Terminal 4 function assignment	0, 4, 9999			0	858	Terminal 4 function assignment	0, 1, 4, 9999		0		⊙	
859	Torque current	—	Read only. Not settable.	—	9999	859	Torque current/Rated PM motor current	55K or lower: 0 to 500 A, 9999 / 75K or higher: 0 to 3600 A, 9999		9999	Tuning data		Do not change the setting.
864	Torque detection	—	0% to 400%	—	150%	864	Torque detection	0% to 400%		150%		⊙	Disabled in the FR-B.
865	Low speed detection	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	1.5 Hz		865	Low speed detection	0 to 590 Hz		1.5 Hz		⊙	
866	Torque monitoring reference	—	0% to 400%	—	150%	866	Torque monitoring reference	0% to 400%		150%		⊙	Disabled in the FR-B.
867	AM output filter	0 to 5 s		0.01 s		867	AM output filter	0 to 5 s		0.01 s		⊙	
868	Terminal 1 function assignment	0, 4, 9999		0		868	Terminal 1 function assignment	0 to 6, 9999		0		⊙	
872	Input phase loss protection selection	0, 1		0		872	Input phase loss protection selection	0, 1		0		⊙	
875	Fault definition	0, 1		0		875	Fault definition	0, 1		0		⊙	
882	Regeneration avoidance operation selection	0, 1, 2		0		882	Regeneration avoidance operation selection	0, 1, 2		0		⊙	
883	Regeneration avoidance operation level	300 to 800 V		380 VDC / 760 VDC		883	Regeneration avoidance operation level	300 to 800 V		380 VDC / 760 VDC		⊙	
884	Regeneration avoidance at deceleration detection sensitivity	0 to 5		0		884	Regeneration avoidance at deceleration detection sensitivity	0 to 5		0		⊙	
885	Regeneration avoidance compensation frequency limit value	0 to 10 Hz, 9999		6 Hz		885	Regeneration avoidance compensation frequency limit value	0 to 590 Hz, 9999		6 Hz		⊙	
886	Regeneration avoidance voltage gain	0% to 200%		100%		886	Regeneration avoidance voltage gain	0% to 200%		100%		⊙	
888	Free parameter 1	0 to 9999		9999		888	Free parameter 1	0 to 9999		9999		⊙	
889	Free parameter 2	0 to 9999		9999		889	Free parameter 2	0 to 9999		9999		⊙	
891	Cumulative power monitor digit shifted times	0 to 4, 9999		9999		891	Cumulative power monitor digit shifted times	0 to 4, 9999		9999		⊙	
892	Load factor	30% to 150%		100%		892	Load factor	30% to 150%		100%		⊙	

FR-B, B3 (A700 specification) parameter					FR-B, B3 (A800 specification) compatible parameter					Description about parameter setting			
Pr.	Name	Setting range		Initial value		Pr.	Name	Setting range		Initial value		Setting	Remarks
		FR-B	FR-B3	FR-B	FR-B3			FR-B	FR-B3	FR-B	FR-B3		
893	Energy saving monitor reference (motor capacity)	0.1 to 55 kW, 9999 / 0 to 3600 kW		Rated inverter capacity		893	Energy saving monitor reference (motor capacity)	55K or lower: 0.1 to 55 kW, 9999 / 75K or higher: 0 to 3600 kW, 9999		Rated inverter capacity		⊙	
894	Control selection during commercial power-supply operation	0, 1, 2, 3		0		894	Control selection during commercial power-supply operation	0, 1, 2, 3		0		⊙	
895	Power saving rate reference value	0, 1, 9999		9999		895	Power saving rate reference value	0, 1, 9999		9999		⊙	
896	Power unit cost	0 to 500, 9999		9999		896	Power unit cost	0 to 500, 9999		9999		⊙	
897	Power saving monitor average time	0, 1 to 1000 h, 9999		9999		897	Power saving monitor average time	0, 1 to 1000 h, 9999		9999		⊙	
898	Power saving cumulative monitor clear	0, 1, 10, 9999		9999		898	Power saving cumulative monitor clear	0, 1, 10, 9999		9999		×	Setting not required.
899	Operation time rate (estimated value)	0% to 100%, 9999		9999		899	Operation time rate (estimated value)	0% to 100%, 9999		9999		⊙	
C0 (900)	FM terminal calibration	—		—		C0 (900)	FM/CA terminal calibration	—		—		×	Calibrate the parameter as required.
C1 (901)	AM terminal calibration	—		—		C1 (901)	AM terminal calibration	—		—		×	Calibrate the parameter as required.
C2 (902)	Terminal 2 frequency setting bias frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	0 Hz		C2 (902)	Terminal 2 frequency setting bias frequency	0 to 590 Hz		0 Hz		Δ	Set the parameter as required. For the details, refer to section "Frequency setting voltage (current) bias and gain" in the Instruction Manual (Detailed).
C3 (902)	Terminal 2 frequency setting bias	0% to 300%		0%		C3 (902)	Terminal 2 frequency setting bias	0% to 300%		0%		Δ	
125 (903)	Terminal 2 frequency setting gain frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		125 (903)	Terminal 2 frequency setting gain frequency	0 to 590 Hz		60 Hz		Δ	
C4 (903)	Terminal 2 frequency setting gain	0% to 300%		100%		C4 (903)	Terminal 2 frequency setting gain	0% to 300%		100%		Δ	
C5 (904)	Terminal 4 frequency setting bias frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	0 Hz		C5 (904)	Terminal 4 frequency setting bias frequency	0 to 590 Hz		0 Hz		Δ	
C6 (904)	Terminal 4 frequency setting bias	0% to 300%		20%		C6 (904)	Terminal 4 frequency setting bias	0% to 300%		20%		Δ	
126 (905)	Terminal 4 frequency setting gain frequency	0 to 120 Hz / 0 to 60 Hz	0 to 120 Hz	60 Hz		126 (905)	Terminal 4 frequency setting gain frequency	0 to 590 Hz		60 Hz		Δ	
C7 (905)	Terminal 4 frequency setting gain	0% to 300%		100%		C7 (905)	Terminal 4 frequency setting gain	0% to 300%		100%		Δ	
989	Parameter copy alarm release	10 / 100		10 / 100		989	Parameter copy alarm release	55K or lower: 10 / 75K or higher: 100		55K or lower: 10 / 75K or higher: 100		Δ	
990	PU buzzer control	0, 1		1		990	PU buzzer control	0, 1		1		⊙	
991	PU contrast adjustment	0 to 63		58		991	PU contrast adjustment	0 to 63		58		⊙	
						998	PM parameter initialization	0, 3003, 3103, 8009, 8109, 9009, 9109		0			Do not change the setting.
						999	Automatic parameter setting	1, 2, 10, 11, 12, 13, 20, 21, 9999		9999			Do not change the setting.

4.2. Compatibility of the Terminal Response Speed

The I/O terminals of the FR-B, B3 (A800 specification) respond more quickly than those of the FR-B, B3 (A700 specification). 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

The following table shows the comparison of options between the FR-B, B3 (A700 specification) series inverters and the FR-B, B3 (A800 specification) series inverters.

Name		Option model	
		FR-B, B3 (A700 specification)	FR-B, B3 (A800 specification)
Plug-in type	12-bit digital input	FR-A7AX	FR-A8AX
	Digital output / Additional digital output	FR-A7AY	FR-A8AY
	Relay output	FR-A7AR	FR-A8AR
	Orientation / Encoder	FR-A7AP	FR-A8AP
	LONWORKS	FR-A7NL	To be supported soon
	Profibus-DP	FR-A7NP	FR-A8NP
	Device Net	FR-A7ND	FR-A8ND
	CC-Link	FR-A7NC	FR-A8NC
Stand-alone type	Parameter unit	FR-PU07	Some function restricted (parameter copy, operable parameters, etc.)
	Parameter unit connection cable	FR-CB201, 203, 205	Compatible
	Intercompatibility attachment	FR-AAT, FR-A5AT	Compatible
	Panel through attachment	FR-A7CN	FR-A8CN Enclosure cut dimensions are compatible except for some capacities. The depths inside and outside the enclosure differ. For details, refer to the Instruction Manual of the FR-A8CN1[] or the FR-A8CN[].
	Power factor improving DC reactor	FR-HEL-(H)	Compatible
	Power factor improving AC reactor	FR-HAL-(H)	Compatible*
	Radio noise filter	FR-BIF-(H)	Compatible
	Line noise filter	FR-BSF01, FR-BLF	Compatible
	BU type brake unit	BU1500 to 15K, H7.5K to 30K	Compatible
	Brake unit	FR-BU-(H), FR-BU2	Compatible The MT-BU5 is not compatible.
	Resistor unit	FR-BR-(H), MT-BR5-(H)	Compatible
	FR-RC type power regeneration converter	FR-RC-(H), MT-RC-(H)	Compatible
	High-duty brake resistor	FR-ABR	Compatible
FR-HC type high power factor converter	MT-HC-(H), 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
	Frequency meter	YM206NRI 1 mA	Compatible
	Calibration resistor	RV24YN 10 kΩ	Compatible

* When using the FR-RC-(H), use the FR-BAL-(H). When using the MT-RC-(H), use the MT-BAL-(H).

6. Main differences between the FR-B, B3 (A700 specification) and FR-B, B3 (A800 specification)

Item		FR-B, B3 (A700 specification)	FR-B, B3 (A800 specification)
Model	200 V class	FR-B-750 to 75K (14 models)	FR-B-750 to 75K (14 models)
		FR-B3-(N)-400 to 37K (13 models)	FR-B3-(N)-400 to 37K (13 models)
	400 V class	FR-B-750 to 110K (12 models)	FR-B-750 to 110K (12 models)
		FR-B3-(N)-H400 to H37K (13 models)	FR-B3-(N)-H400 to H37K (13 models)
Overload capability		150% 60 s, 200% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C	ND rating only: 150% 60 s, 200% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C
Built-in brake transistor		200 V / 400 V class: 0.4K to 22K 0.4K to 7.5K for built-in brake resistor	200 V class: 0.4K to 22K 400 V class: 0.4K to 55K 0.4K to 7.5K for built-in brake resistor
Power supply separated from control power supply		AC power supply (across terminals R1 and S1) only	Selectable between AC power supply (across terminals R1 and S1) or 24 VDC power supply (across terminals +24 and SD)
Output frequency		FR-B: 0 to 60 Hz / 0 to 120 Hz FR-B3: 0 to 120 Hz	FR-B: 0 to 60 Hz / 0 to 120 Hz FR-B3: 0 to 120 Hz
Control method		High carrier frequency PWM V/F control (for FR-B-□□□) Advanced magnetic flux vector control (for FR-B3-(N)□□□)	High carrier frequency PWM V/F control (for FR-B-□□□) Advanced magnetic flux vector control (for FR-B3-(N)□□□)
Frequency resolution	Analog input	0.015 Hz/0 to 60 Hz (Terminal 2, 4: 12 bits / 0 to 10 V) 0.03 Hz / 0 to 60 Hz (Terminal 2, 4: 11 bits / 0 to 5 V, 0 to 20 mA, terminal 1: 12 bits / -10 to +10 V) 0.06 Hz / 0 to 60 Hz (Terminal 1: 11 bits / -5 to +5 V)	0.015 Hz / 0 to 60 Hz (Terminal 2, 4: 12 bits / 0 to 10 V) 0.03 Hz / 0 to 60 Hz (Terminal 2, 4: 11 bits / 0 to 5 V, 0 to 20 mA, terminal 1: 12 bits / -10 to +10 V) 0.06 Hz / 0 to 60 Hz (Terminal 1: 11 bits / -5 to +5 V)
Input signal	Terminal function	—	<Additional functions> Traverse function (X37), Second brake sequence open completion (BRI2), Trace trigger input (TRG), Trace sampling start/end (TRC), Sequence start (SQ), Fault clear (X51), Second PID P control switchover (X73), Pre-charge end command (X77), Second pre-charge end command (X78), Second PID forward/reverse action switchover (X79), Second PID control valid (X80)
	PTC thermistor input	PTC signal	Terminal 2, 10
Operational functions		—	<ol style="list-style-type: none"> 1. Thermal protection Surrounding air temperature reflection is added to transistor thermal. 2. Intelligent mode (for FR-B3) Second brake sequence function is added. 3. PID control Second PID function, PID pre-charge function, dancer control, and easy dancer control are added. 4. PLC function is added. 5. 24 V power supply input function is added for control circuits.

Item		FR-B, B3 (A700 specification)	FR-B, B3 (A800 specification)
Output signal	Terminal function	—	<Additional functions> Second brake opening request (BOF2), PID deviation limit (Y48), During pre-charge operation (Y49), During second pre-charge operation (Y50), Pre-charge time over (Y51), Second pre-charge time over (Y52), Pre-charge level over (Y53), Second pre-charge level over (Y54), 24 V external power supply operation (EV), Control circuit capacitor life (Y86), Main circuit capacitor life (Y87), Cooling fan life (Y88), Inrush current limit circuit life (Y89), Second PID lower limit (FDN2), Second PID upper limit (FUP2), Second PID forward/reverse rotation output (RL2), During second PID control activated (PID2), During second PID output shutoff (SLEEP2), Second PID deviation limit (Y205)
	Output terminal for indicator	FM type (pulse output)	FM type (pulse output) only (Unavailable for CA type)
	Specifications of terminal AM	Output voltage: 0 to +10 VDC	Output voltage: 0 to ±10 VDC
	Output signal (for indicator)	—	<Additional functions> Motor thermal load factor, Inverter thermal load factor, PID measured value 2, Remote output value 1 to 4, PID manipulated amount, Second PID set point, Second PID measured value, Second PID deviation, Second PID measured value 2, Second PID manipulated amount, Dancer main speed setting
Protective function		—	<Additional functions> (Warning) Maintenance timer 2 to 3, USB host error, 24 V external power supply operation (Fault) PID pre-charge fault, PID signal fault
Operation panel FR-DU	Standard equipment	The operation panel FR-DU07 is equipped as standard. 7-segment LED in 4-digit display	The operation panel FR-DU08 is equipped as standard. 12-segment LED in 5-digit display
	Option	Parameter unit FR-PU07	Parameter unit FR-PU07 LCD operation panel FR-LU08 (Some functions are unavailable.)
Control terminal block	Shape of terminal block	Screw type	Spring clamp (insertion screw type)
	Wiring end	Round crimp terminal (screw size: M3.5)	Blade terminal
	Removal	Available	Available
	Compatibility	None (The option can be used to install the terminal block to the A700 specification model.)	
USB terminal	USB device	B connector	Mini B connector
	USB host	—	A connector (A USB memory device can be connected.)
Setup software		FR Configurator (FR-SW3)	FR Configurator2
Plug-in option	No. of options	3	3
	Compatibility	None	

7. Precautions when replacing the FR-B, B3 (A700/A800 specification)

Item		FR-B, B3 (A700 specification)	FR-B, B3 (A800 specification)
Outline dimension / Installation dimension		Installation size is compatible.	
Main circuit terminal block / Terminal screw size		The terminal block is compatible (some terminal positions differ). / Terminal screw size is compatible.	
Control circuit terminals		Screw type (Terminal screw size: M3.5)	Spring clamp (insertion screw type)
Availability of option brake resistor		0.4K to 22K	200 V class: 0.4K to 22K 400 V class: 0.4K to 55K
PTC thermistor input		Connect across terminals PTC (AU) and SD	Connect across terminals 10 and 2
Parameter unit	FR-DU08	Not available	Available
	FR-DU07	Available	Available (with restrictions)
	FR-PU07	Available	Available (with restrictions)
Parameter unit connection cable	FR-CB2	Available To connect the FR-DU08 and the connection cable, the operation panel connection connector (FR-ADP) is required.	
Dedicated plug-in option		Not compatible because options are dedicated and plug-in type.	
		FR-A7AX, FR-A7AY, FR-A7AR, FR-A7NP, FR-A7ND, FR-A7NC, FR-A7NL, FR-A7AP	FR-A8AX, FR-A8AY, FR-A8AR, FR-A8NP, FR-A8ND, FR-A8NC, FR-A8AP
Terminal block type of plug-in option		Insertion type terminal block	Insertion type terminal block
Dedicated option (such as attachment)	Installation interchange attachment	Compatible	
	Panel through attachment	Not compatible	
External common option (noise filter, reactor, etc.)		Compatible	
External FR controller		Compatible	
Parameters for the explosion-proof specifications		Not disclosed	Disclosed Do not change the settings. For details, refer to the Instruction Manual.