Information for Replacement of FR-A700-A1 Inverters

Replacement model

FR-A800-R2R inverters

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

1. NEW INVERTER

The FR-A800-R2R inverters have two types of specifications FM type and CA type.
When replacing the Japanese model FR-A700-A1 inverters, select the FM type inverters (FR-A8[ ]0-[ ][ ]K-1-R2R).

2. SIZE

When the FR-A700-A1 inverters is replaced with the FR-A800-R2R inverters, the required installation space of the 280K FR-A800-R2R inverters or lower is the same as that of the corresponding FR-A700-A1 inverters.
For more information about the product size, refer to the outline dimension drawings on the following pages.

[Inverter alone]

Existing inverter	New inverter	Installation space comparison
FR-A720-0.4K	FR-A820-0.4K-R2R	Same
FR-A720-0.75K	FR-A820-0.75K-R2R	Same
FR-A720-1.5K	FR-A820-1.5K-R2R	Same
FR-A720-2.2K	FR-A820-2.2K-R2R	Same
FR-A720-3.7K	FR-A820-3.7K-R2R	Same
FR-A720-5.5K	FR-A820-5.5K-R2R	Same
FR-A720-7.5K	FR-A820-7.5K-R2R	Same
FR-A720-11K	FR-A820-11K-R2R	Same
FR-A720-15K	FR-A820-15K-R2R	Same
FR-A720-18.5K	FR-A820-18.5K-R2R	Same
FR-A720-22K	FR-A820-22K-R2R	Same
FR-A720-30K	FR-A820-30K-R2R	Same
FR-A720-37K	FR-A820-37K-R2R	Same
FR-A720-45K	FR-A820-45K-R2R	Same
FR-A720-55K	FR-A820-55K-R2R	Same
FR-A720-75K	FR-A820-75K-R2R	Same
FR-A720-90K	FR-A820-90K-R2R	Same
FR-A740-0.4K	FR-A840-0.4K-R2R	Same
FR-A740-0.75K	FR-A840-0.75K-R2R	Same
FR-A740-1.5K	FR-A840-1.5K-R2R	Same
FR-A740-2.2K	FR-A840-2.2K-R2R	Same
FR-A740-3.7K	FR-A840-3.7K-R2R	Same
FR-A740-5.5K	FR-A840-5.5K-R2R	Same
FR-A740-7.5K	FR-A840-7.5K-R2R	Same
FR-A740-11K	FR-A840-11K-R2R	Same
FR-A740-15K	FR-A840-15K-R2R	Same
FR-A740-18.5K	FR-A840-18.5K-R2R	Same
FR-A740-22K	FR-A840-22K-R2R	Same
FR-A740-30K	FR-A840-30K-R2R	Same
FR-A740-37K	FR-A840-37K-R2R	Same
FR-A740-45K	FR-A840-45K-R2R	Same
FR-A740-55K	FR-A840-55K-R2R	Same
FR-A740-75K	FR-A840-75K-R2R	Same
FR-A740-90K	FR-A840-90K-R2R	Same
FR-A740-110K	FR-A840-110K-R2R	Same
FR-A740-132K	FR-A840-132K-R2R	Same
FR-A740-160K	FR-A840-160K-R2R	Same
FR-A740-185K	FR-A840-185K-R2R	Same
FR-A740-220K	FR-A840-220K-R2R	Same
FR-A740-250K	FR-A840-250K-R2R	Same
FR-A740-280K	FR-A840-280K-R2R	Same

For the installation, prepare screws of the appropriate length as necessary.

When the inverter is installed with its heat sink protruding through a panel, the replacement is possible using the same enclosure with the panel cutout for the FR-A700-A1 inverter.

[When protruding the heat sink through a panel]

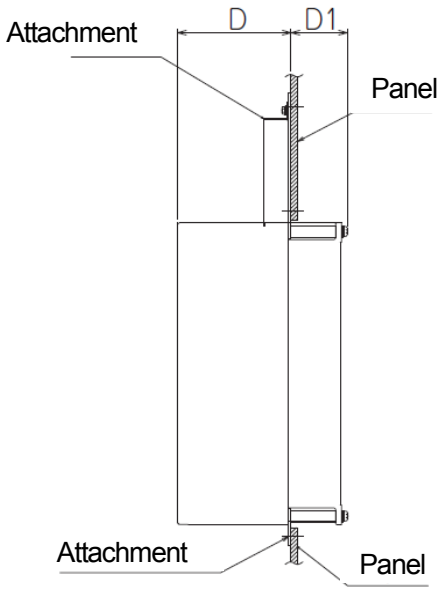
Existing inverter		New inverter		Comparison of Installation space and panel cutout size
Inverter model	Panel through attachment model	Inverter model	Panel through attachment model	
FR-A720-0.4K-A1	—	FR-A820-0.4K-R2R	—	—
FR-A720-0.75K-A1	—	FR-A820-0.75K-R2R	—	—
FR-A720-1.5K-A1	FR-A7CN01	FR-A820-1.5K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A720-2.2K-A1	FR-A7CN01	FR-A820-2.2K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A720-3.7K-A1	FR-A7CN01	FR-A820-3.7K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A720-5.5K-A1	FR-A7CN02	FR-A820-5.5K-R2R	FR-A8CN02	Same
FR-A720-7.5K-A1	FR-A7CN02	FR-A820-7.5K-R2R	FR-A8CN02	Same
FR-A720-11K-A1	FR-A7CN03	FR-A820-11K-R2R	FR-A8CN03	Same
FR-A720-15K-A1	FR-A7CN04	FR-A820-15K-R2R	FR-A8CN04	Same
FR-A720-18.5K-A1	FR-A7CN04	FR-A820-18.5K-R2R	FR-A8CN04	Same
FR-A720-22K-A1	FR-A7CN04	FR-A820-22K-R2R	FR-A8CN04	Same
FR-A720-30K-A1	FR-A7CN05	FR-A820-30K-R2R	FR-A8CN05	Existing panel cutout available*
	FR-A7CN103			Same panel cutout
FR-A720-37K-A1	FR-A7CN07	FR-A820-37K-R2R	FR-A8CN06	Same panel cutout
FR-A720-45K-A1	FR-A7CN07	FR-A820-45K-R2R	FR-A8CN06	Same panel cutout
FR-A720-55K-A1	FR-A7CN11	FR-A820-55K-R2R	FR-A8CN07	Same panel cutout
	FR-A7CN104		FR-A8CN103	Same panel cutout
FR-A720-75K-A1	FR-A7CN10	FR-A820-75K-R2R	FR-A8CN08	Same panel cutout
	FR-A7CN105		FR-A8CN104	Processing required partially
FR-A720-90K-A1	FR-A7CN10	FR-A820-90K-R2R	FR-A8CN08	Same panel cutout
	FR-A7CN105		FR-A8CN104	Processing required partially
FR-A740-0.4K-A1	FR-A7CN01	FR-A840-0.4K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A740-0.75K-A1	FR-A7CN01	FR-A840-0.75K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A740-1.5K-A1	FR-A7CN01	FR-A840-1.5K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A740-2.2K-A1	FR-A7CN01	FR-A840-2.2K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A740-3.7K-A1	FR-A7CN01	FR-A840-3.7K-R2R	FR-A8CN01	Same
	FR-A7CN101		FR-A8CN101	Same
FR-A740-5.5K-A1	FR-A7CN02	FR-A840-5.5K-R2R	FR-A8CN02	Same
FR-A740-7.5K-A1	FR-A7CN02	FR-A840-7.5K-R2R	FR-A8CN02	Same
FR-A740-11K-A1	FR-A7CN03	FR-A840-11K-R2R	FR-A8CN03	Same
	FR-A7CN102		FR-A8CN102	Same
FR-A740-15K-A1	FR-A7CN03	FR-A840-15K-R2R	FR-A8CN03	Same
	FR-A7CN102		FR-A8CN102	Same

Existing inverter		New inverter		Comparison of Installation space and panel cutout size
Inverter model	Panel through attachment model	Inverter model	Panel through attachment model	
FR-A740-18.5K-A1	FR-A7CN04	FR-A840-18.5K-R2R	FR-A8CN04	Same
FR-A740-22K-A1	FR-A7CN04	FR-A840-22K-R2R	FR-A8CN04	Same
FR-A740-30K-A1	FR-A7CN06	FR-A840-30K-R2R	FR-A8CN05	Same panel cutout
FR-A740-37K-A1	FR-A7CN07	FR-A840-37K-R2R	FR-A8CN06	Same panel cutout
FR-A740-45K-A1	FR-A7CN07	FR-A840-45K-R2R	FR-A8CN06	Same panel cutout
FR-A740-55K-A1	FR-A7CN07	FR-A840-55K-R2R	FR-A8CN06	Same panel cutout
FR-A740-75K-A1	FR-A7CN08	FR-A840-75K-R2R	FR-A8CN09	Same panel cutout
	FR-A7CN106		FR-A8CN105	Processing required partially
FR-A740-90K-A1	FR-A7CN09	FR-A840-90K-R2R	FR-A8CN09	Same panel cutout
	FR-A7CN107		FR-A8CN105	Processing required partially
FR-A740-110K-A1	FR-A7CN10	FR-A840-110K-R2R	FR-A8CN08	Same panel cutout
	FR-A7CN105		FR-A8CN104	Processing required partially
FR-A740-132K-A1	FR-A7CN10	FR-A840-132K-R2R	FR-A8CN08	Same panel cutout
	FR-A7CN108		FR-A8CN106	Same
FR-A740-160K-A1	Not used (Installation frames need relocation.)	FR-A840-160K-R2R	Not used (Installation frames need relocation.)	Same
	FR-A7CN109		FR-A8CN107	Same panel cutout
FR-A740-185K-A1	Not used (Installation frames need relocation.)	FR-A840-185K-R2R	Not used (Installation frames need relocation.)	Same
FR-A740-220K-A1	Not used (Installation frames need relocation.)	FR-A840-220K-R2R	Not used (Installation frames need relocation.)	Same
	FR-A7CN110		FR-A8CN108	Same panel cutout
FR-A740-250K-A1	Not used (Installation frames need relocation.)	FR-A840-250K-R2R	Not used (Installation frames need relocation.)	Same
FR-A740-280K-A1	Not used (Installation frames need relocation.)	FR-A840-280K-R2R	Not used (Installation frames need relocation.)	Same
	FR-A7CN111		FR-A8CN109	Same panel cutout

∗The attachment FR-A8CN05 can be used for an enclosure with panel cutout for the attachment FR-A7CN05.

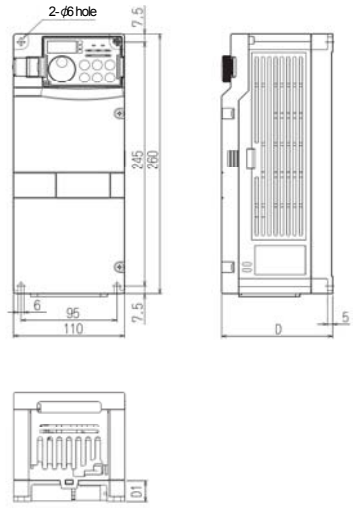
[Depth]
The depth of the case of the FR-A800-R2R inverter in the enclosure (D) and the depth of protruded heat sink (D1) differ depending on the attachment when compared to the FR-A700-A1 inverters (attachments described in shaded rows of the following table affected).

FR-A700-A1			FR-A800-R2R		
Attachment model	D (mm)	D1 (mm)	Attachment model	D (mm)	D1 (mm)
FR-A7CN01	97	48.4	FR-A8CN01	97	48.4
FR-A7CN02	86	89.4	FR-A8CN02	86	89.4
FR-A7CN03	89	106.4	FR-A8CN03	89	106.4
FR-A7CN04	88.5	110.6	FR-A8CN04	96.7	102.4
FR-A7CN05, 06	123.5	71.5	FR-A8CN05	130.8	64.2
FR-A7CN07	96	154	FR-A8CN06	96	154
FR-A7CN11	97	153	FR-A8CN07	130	120
FR-A7CN10	176.5	183.5	FR-A8CN08	176.5	183.5
FR-A7CN08, 09	116.5	183.5	FR-A8CN09	152.3	147.7
FR-A7CN101	97	48.4	FR-A8CN101	97	48.4
FR-A7CN102	89	106.4	FR-A8CN102	88.5	106.9
FR-A7CN103	123.5	71.5	FR-A8CN05	130.8	64.2
FR-A7CN104	97	153	FR-A8CN103	130	120
FR-A7CN105	176.5	183.5	FR-A8CN104	176.5	183.5
FR-A7CN106	116.5	183.5	FR-A8CN105	152.3	147.7
FR-A7CN107	116.5	183.5	FR-A8CN105	152.3	147.7
FR-A7CN108	176.5	183.5	FR-A8CN106	176.5	183.5
FR-A7CN109	195	185	FR-A8CN107	195	185
FR-A7CN110	195	185	FR-A8CN108	195	185
FR-A7CN111	195	185	FR-A8CN109	198.2	181.8



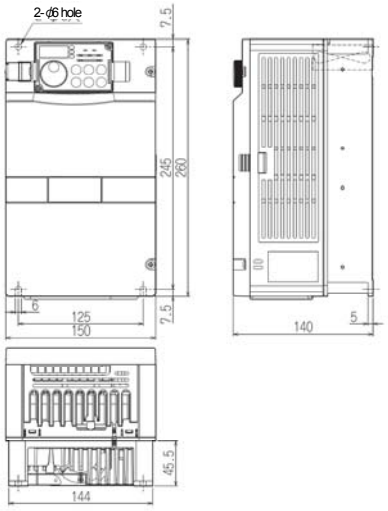
Outline dimension drawings (Unit: mm)

■FR-A720-0.4K, 0.75K-A1

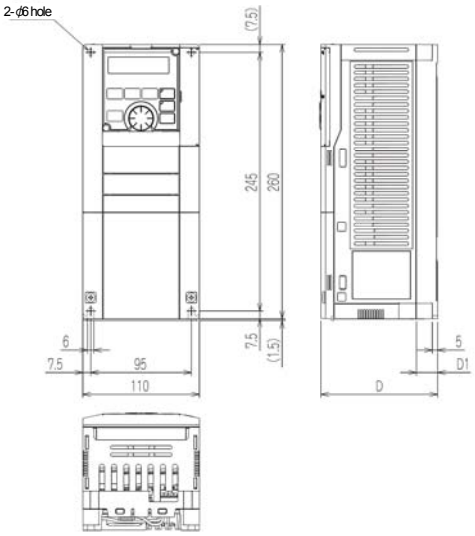


Inverter model	D	D1
FR-A720-0.4K-A1	110	21
FR-A720-0.75K-A1	125	36

■FR-A720-1.5K, 2.2K, 3.7K-A1

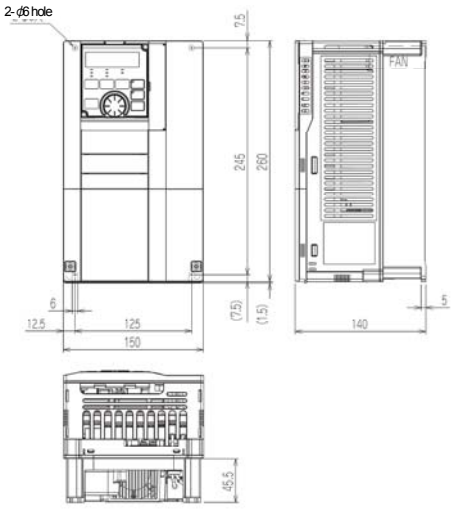


■FR-A820-0.4K, 0.75K-R2R

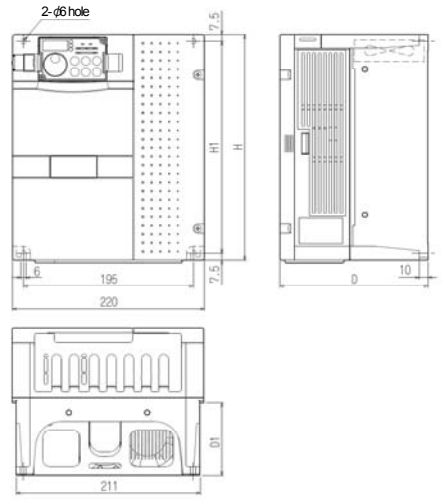


Inverter model	D1	D1
FR-A820-0.4K-R2R	110	20
FR-A820-0.75K-R2R	125	35

■FR-A820-1.5K, 2.2K, 3.7K-R2R

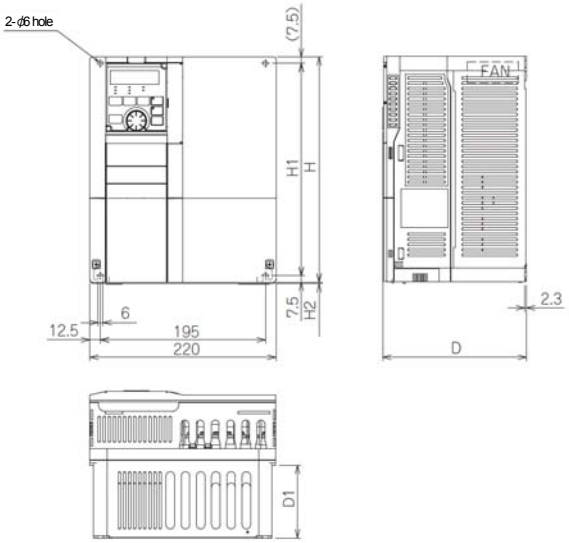


■FR-A720-5.5K, 7.5K, 11K-A1



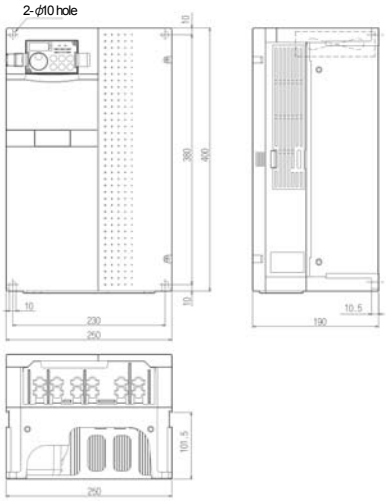
Inverter model	H	H1	D	D1
FR-A720-5.5K, 7.5K-A1	260	245	170	84
FR-A720-11K-A1	300	285	190	101.5

■FR-A820-5.5K, 7.5K, 11K-R2R

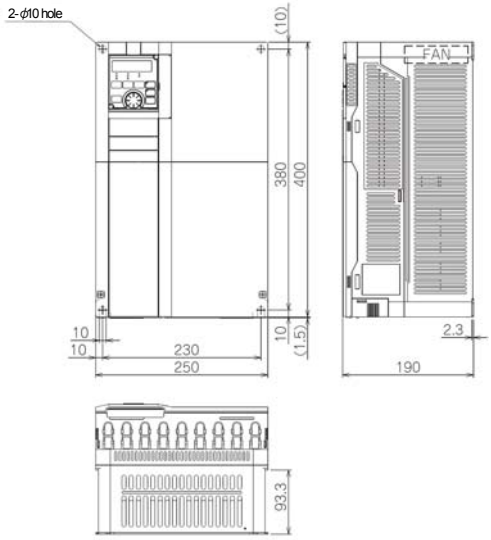


Inverter model	H	H1	H2	D	D1
FR-A820-5.5K, 7.5K-R2R	260	245	1.5	170	84
FR-A820-11K-R2R	300	285	3	190	101.5

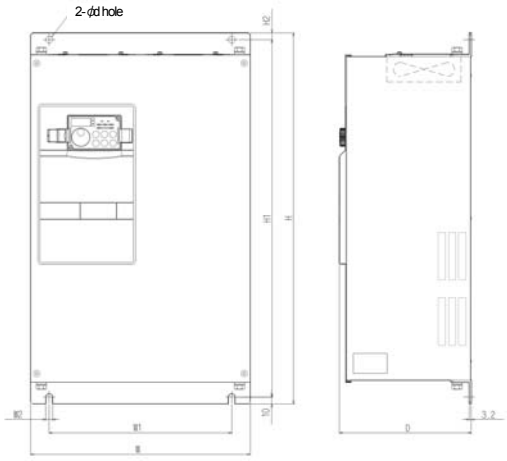
■FR-A720-15K, 18.5K, 22K-A1



■FR-A820-15K, 18.5K, 22K-R2R



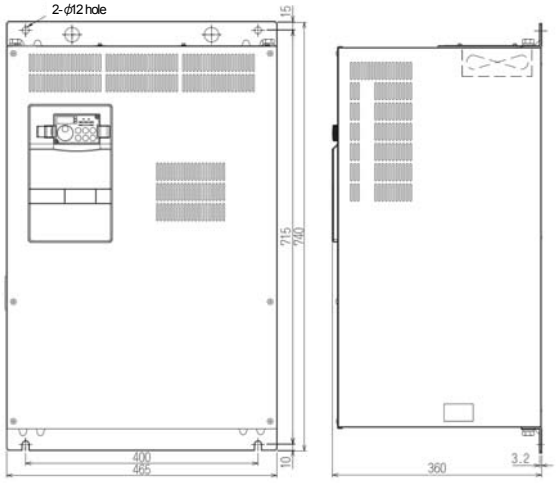
■FR-A720-30K, 37K, 45K, 55K-A1



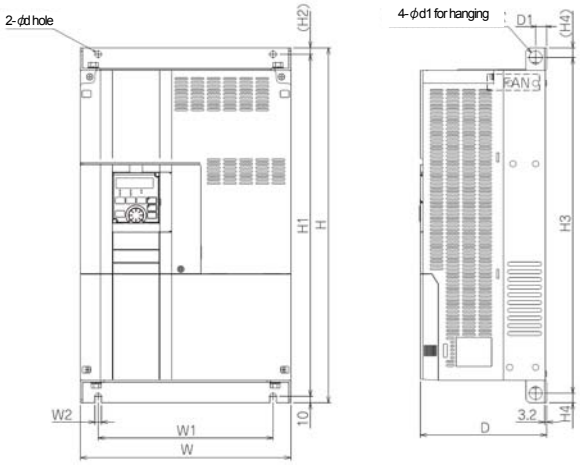
Inverter model	W	W1	W2	H	H1	H2
FR-A720-30K-A1	325	270	10	550	530	10
FR-A720-37K, 45K-A1	435	380	12	550	525	15
FR-A720-55K-A1	465	410	12	700	675	15

Inverter model	d	D
FR-A720-30K-A1	10	195
FR-A720-37K, 45K-A1	12	250
FR-A720-55K-A1	12	250

■FR-A720-75K, 90K-A1



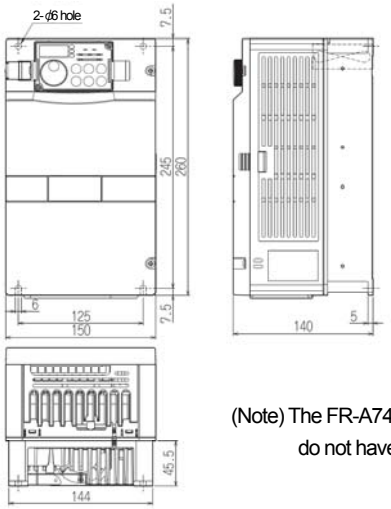
■FR-A820-30K, 37K, 45K, 55K, 75K, 90K-R2R



Inverter model	W	W1	W2	H	H1	H2
FR-A820-30K-R2R	325	270	10	550	530	10
FR-A820-37K, 45K-R2R	435	380	12	550	525	15
FR-A820-55K-R2R	465	410	12	700	675	15
FR-A820-75K, 90K-R2R	465	400	12	740	715	15

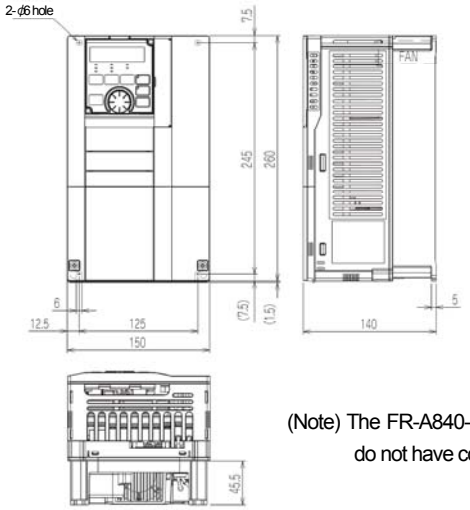
Inverter model	H3	H4	d	d1	D	D1
FR-A820-30K-R2R	520	15	10	20	195	17
FR-A820-37K, 45K-R2R	514	18	12	25	250	24
FR-A820-55K-R2R	664	18	12	25	250	22
FR-A820-75K, 90K-R2R	704	18	12	24	360	22

■FR-A740-0.4K, 0.75K, 1.5K, 2.2K, 3.7K-A1



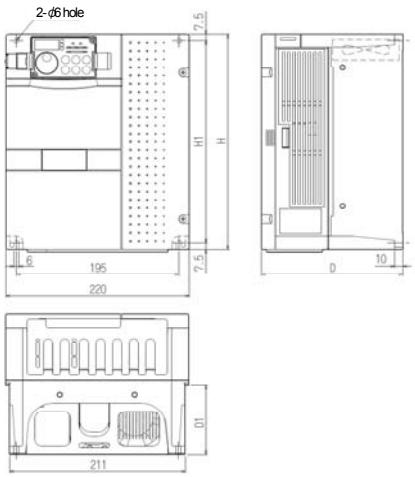
(Note) The FR-A740-0.4K to 1.5K-A1 do not have cooling fans.

■FR-A840-0.4K, 0.75K, 1.5K, 2.2K, 3.7K-R2R



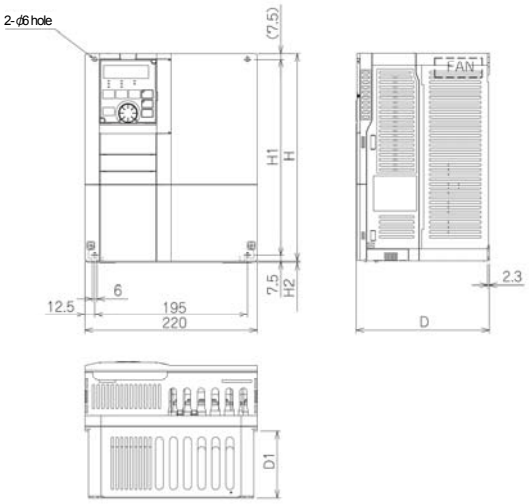
(Note) The FR-A840-0.4K to 1.5K-R2R do not have cooling fans.

■FR-A740-5.5K, 7.5K, 11K, 15K-A1



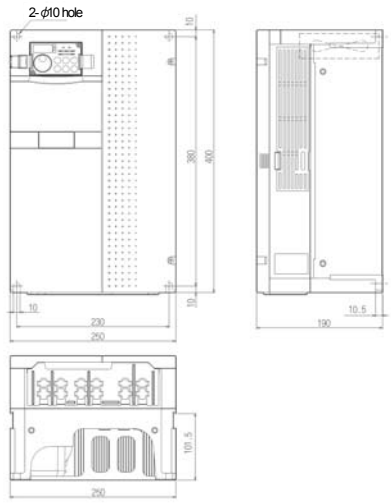
Inverter model	H	H1	D	D1
FR-A740-5.5K, 7.5K-A1	260	245	170	84
FR-A740-11K, 15K-A1	300	285	190	101.5

■FR-A840-5.5K, 7.5K, 11K, 15K-R2R

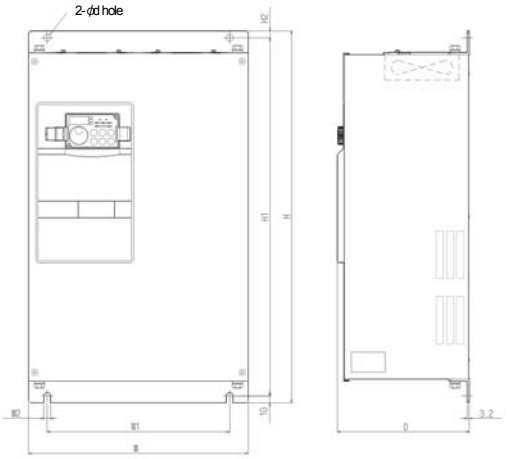


Inverter model	H	H1	H2	D	D1
FR-A840-5.5K, 7.5K-R2R	260	245	1.5	170	84
FR-A840-11K, 15K-R2R	300	285	3	190	101.5

■FR-A740-18.5K, 22K-A1



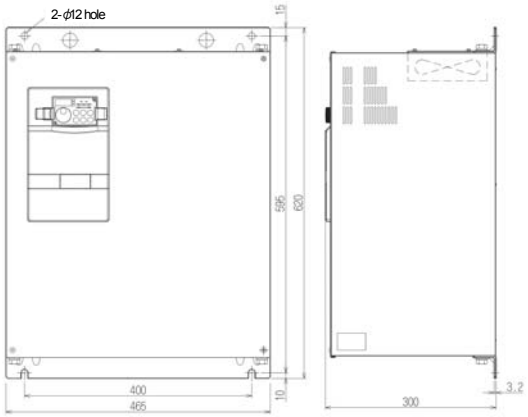
■FR-A740-30K, 37K, 45K, 55K-A1



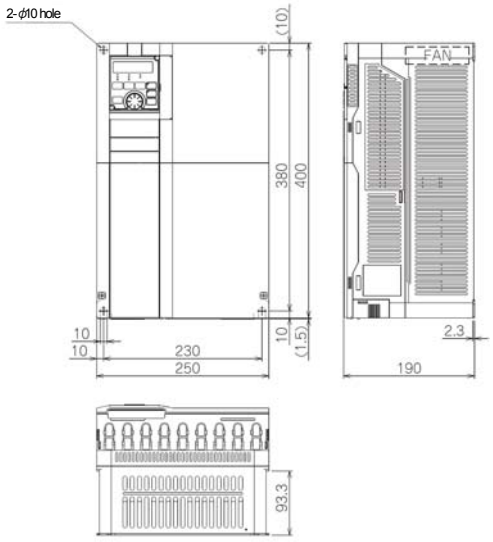
Inverter model	W	W1	W2	H	H1	H2
FR-A740-30K-A1	325	270	10	550	530	10
FR-A740-37K, 45K, 55K-A1	435	380	12	550	525	15

Inverter model	d	D
FR-A740-30K-A1	10	195
FR-A740-37K, 45K, 55K-A1	12	250

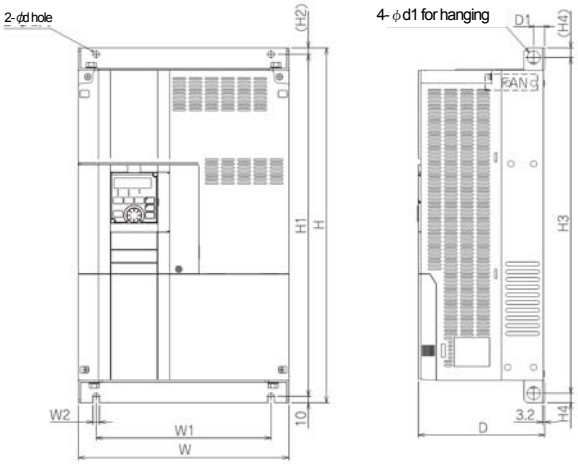
■FR-A740-75K, 90K-A1



■FR-A840-18.5K, 22K-R2R



■FR-A840-30K, 37K, 45K, 55K, 75K. 90K-R2R

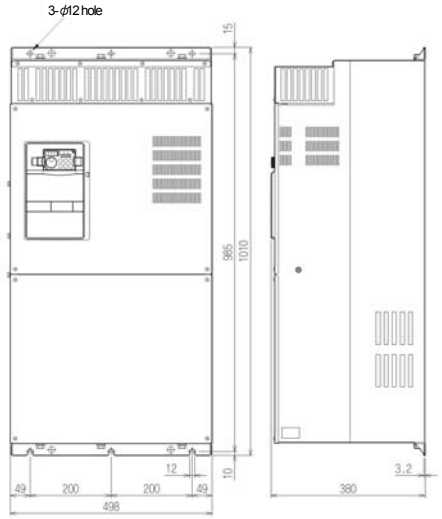


Inverter model	W	W1	W2	H	H1	H2
FR-A840-30K-R2R	325	270	10	550	530	10
FR-A840-37K, 45K, 55K-R2R	435	380	12	550	525	15
FR-A840-75K, 90K-R2R	465	400	12	620	595	15

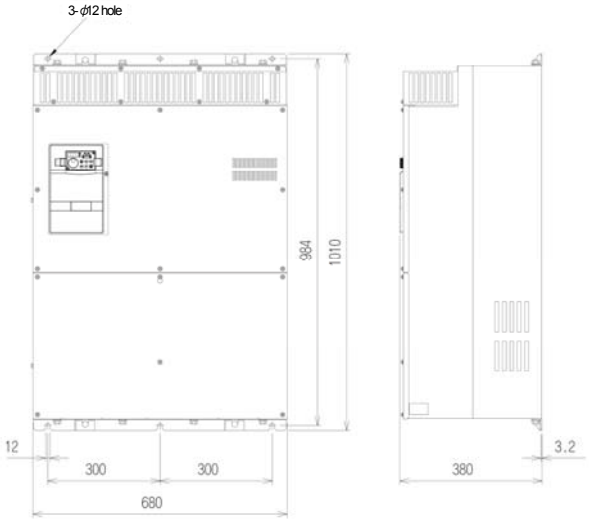
Inverter model	H3	H4	d	d1	D	D1
FR-A840-30K-R2R	520	15	10	20	195	17
FR-A840-37K, 45K, 55K-R2R	514	18	12	25	250	24
FR-A840-75K, 90K-R2R	584	18	12	24	300	22

■FR-A740-110K, 132K-A1

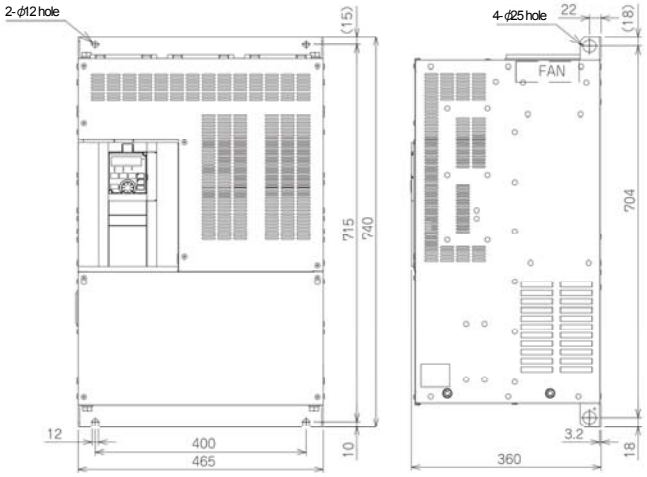
■FR-A740-160K, 185K-A1



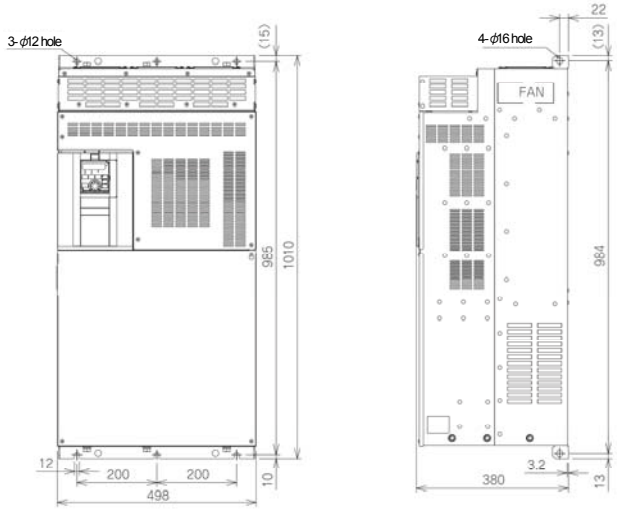
■FR-A740-220K, 250K, 280K-A1



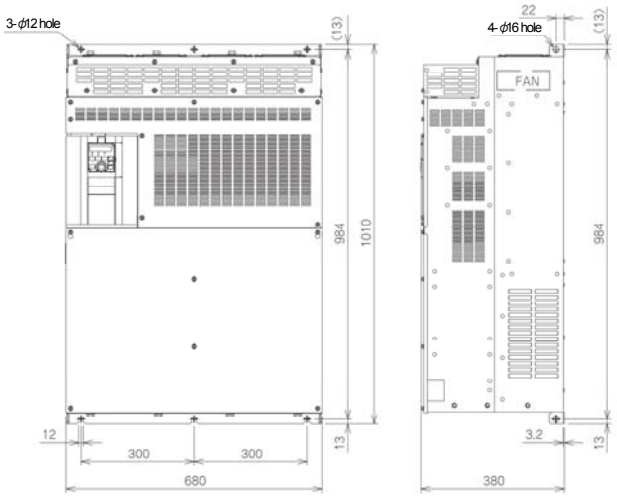
■FR-A840-110K, 132K-R2R



■FR-A840-160K, 185K-R2R



■FR-A840-220K, 250K, 280K-R2R



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-A700-A1 terminal name	FR-A800-R2R compatible 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 the brake unit		CN8 (equipped in 75K or higher)	Not available

*1) For the FR-A820-15K to 22K-R2R and the FR-A840-18.5K to 55K-R2R, connect the brake resistor to terminals P3 and PR.

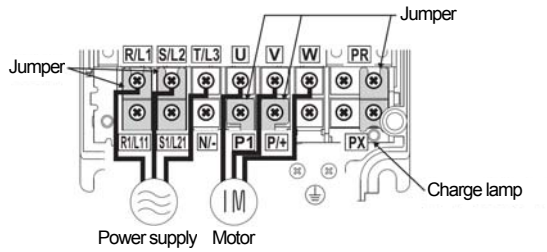
*2) For the FR-A820-15K to 22K-R2R and the FR-A840-18.5K to 55K-R2R, connect the brake unit to terminals P3 and N/-.

Main circuit terminal layout

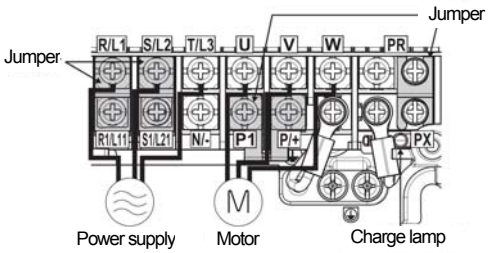
The following shows the main circuit terminal layouts of the FR-A700-A1 inverters and FR-A800-R2R inverters.
The main circuit terminal layout and the position of the earth (ground) terminal may differ depending on the capacity. Check the terminal names and positions before performing wiring.
If cables used for the FR-A700-A1 inverters are not long enough for the FR-A800-R2R inverters, replace them with the longer one.
The terminal screw size may differ depending on the capacity. Check the terminal screw size before performing wiring.

[200 V class]

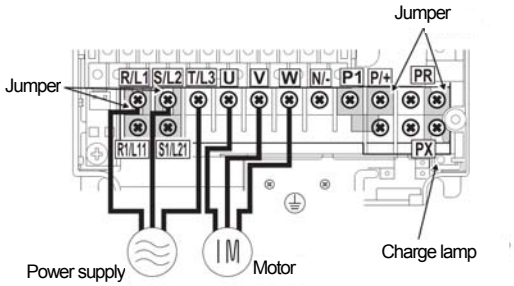
■FR-A720-0.4K, 0.75K-A1



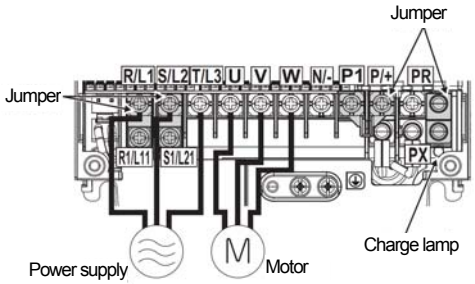
■FR-A820-0.4K, 0.75K-R2R



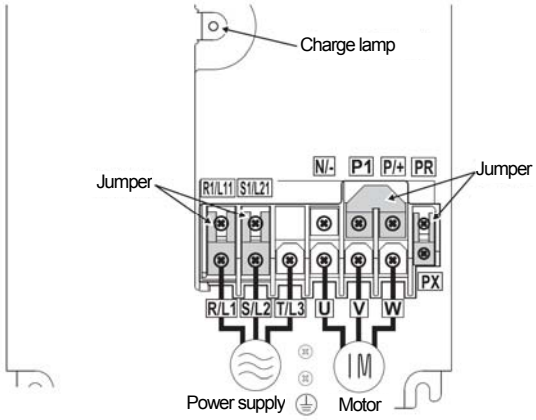
■FR-A720-1.5K, 2.2K, 3.7K-A1



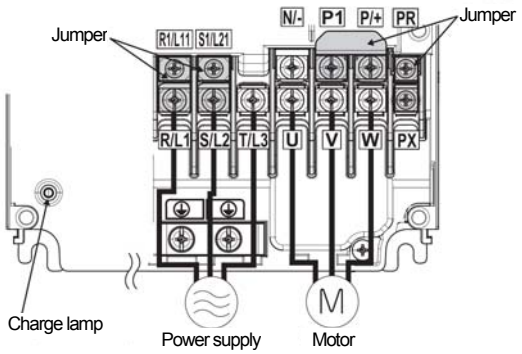
■FR-A820-1.5K, 2.2K, 3.7K-R2R



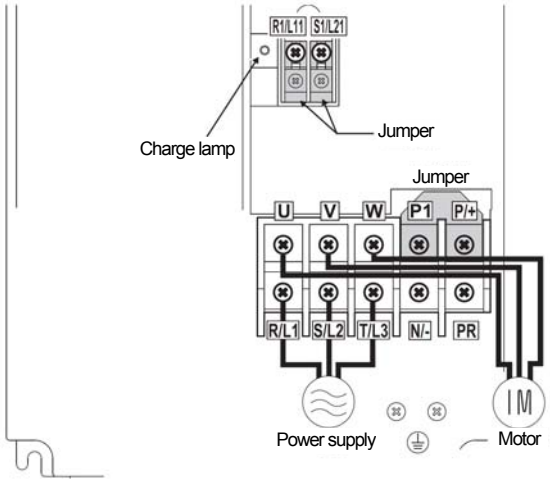
■FR-A720-5.5K, 7.5K-A1



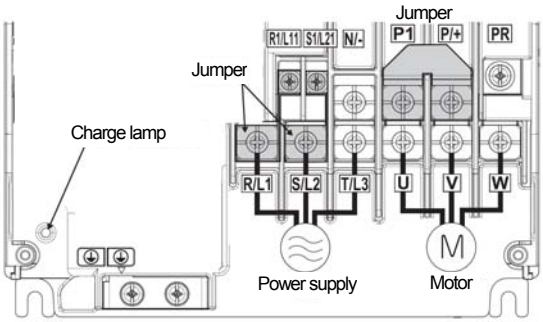
■FR-A820-5.5K, 7.5K-R2R



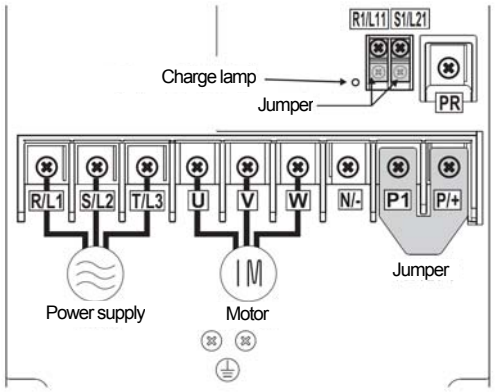
■FR-A720-11K-A1



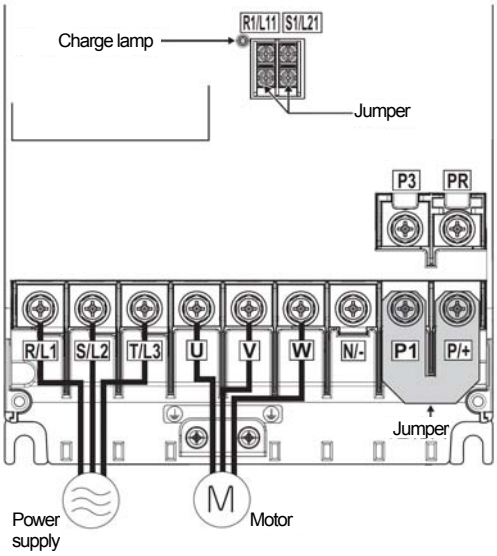
■FR-A820-11K-R2R



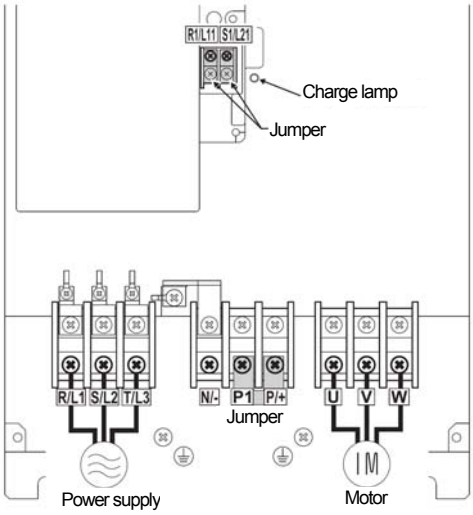
■FR-A720-15K, 18.5K, 22K-A1



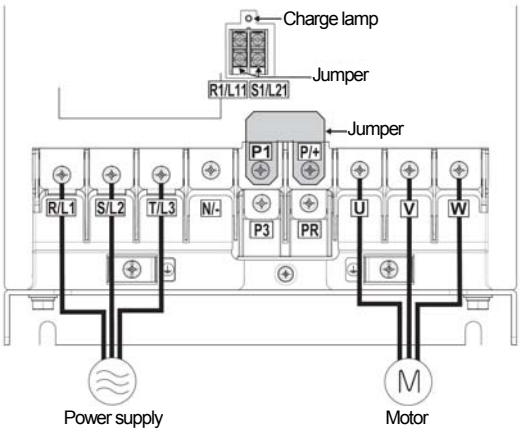
■FR-A820-15K, 18.5K, 22K-R2R



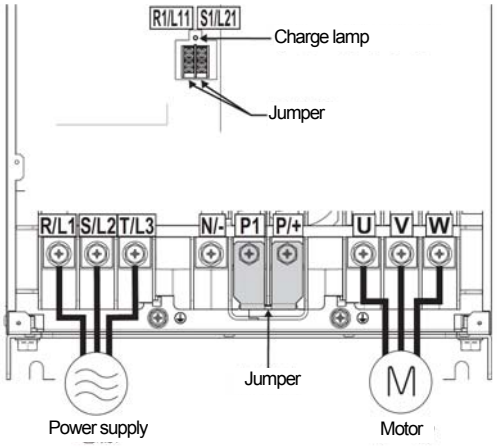
■FR-A720-30K, 37K, 45K-A1



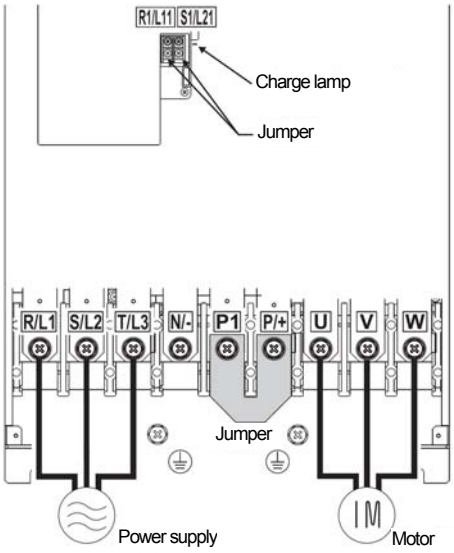
■FR-A820-30K-R2R



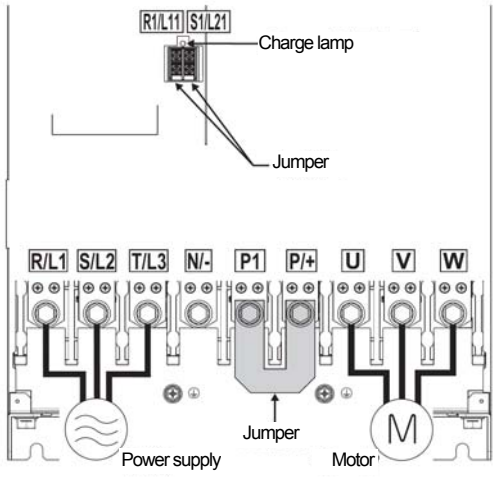
■FR-A820-37K, 45K-R2R



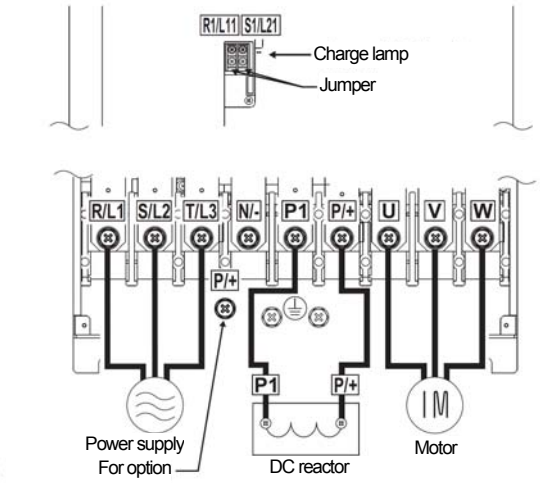
■FR-A720-55K-A1



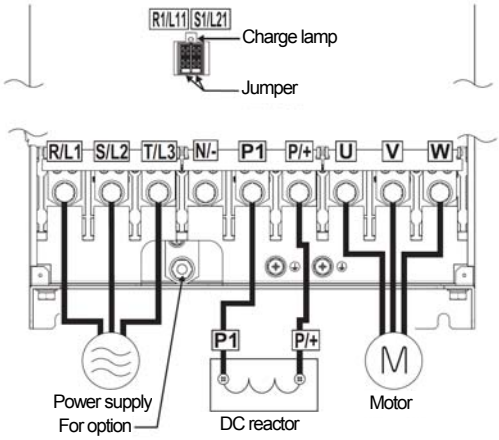
■FR-A820-55K-R2R



■FR-A720-75K, 90K-A1

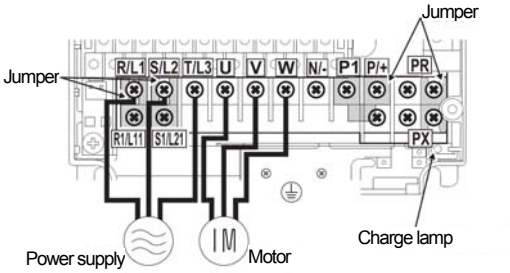


■FR-A820-75K, 90K-R2R

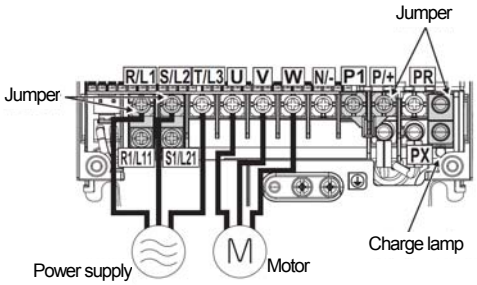


[400 V class]

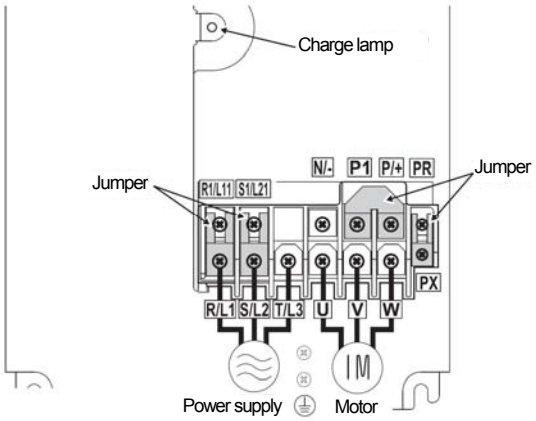
■FR-A740-0.4K, 0.75K, 1.5K, 2.2K, 3.7K-A1



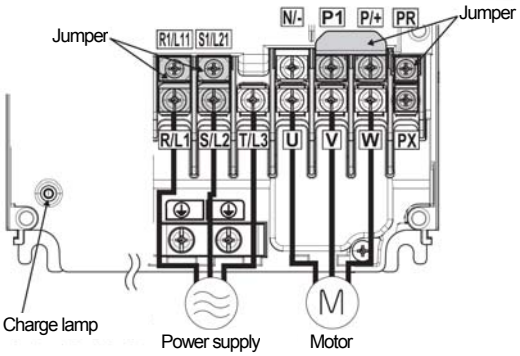
■FR-A840-0.4K, 0.75K, 1.5K, 2.2K, 3.7K-R2R



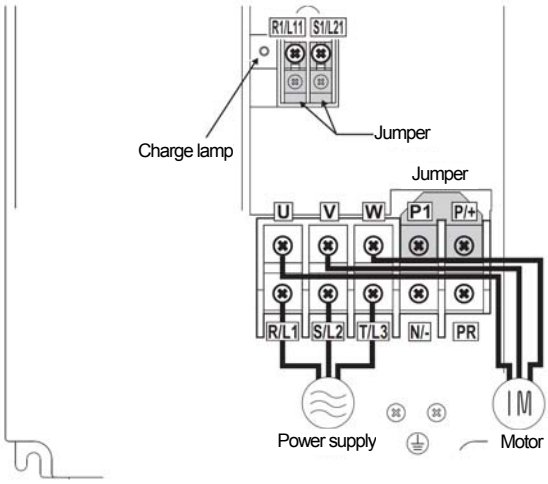
■FR-A740-5.5K, 7.5K-A1



■FR-A840-5.5K, 7.5K-R2R



■FR-A740-11K, 15K-A1



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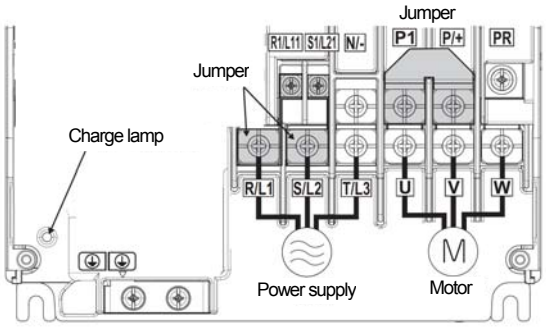
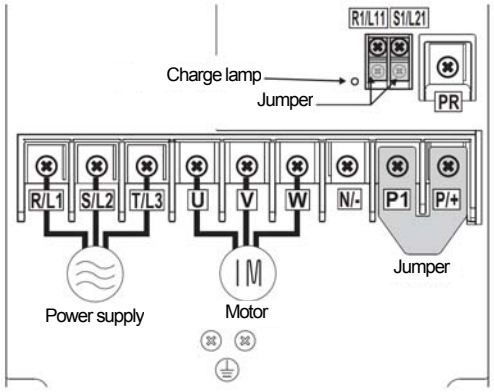
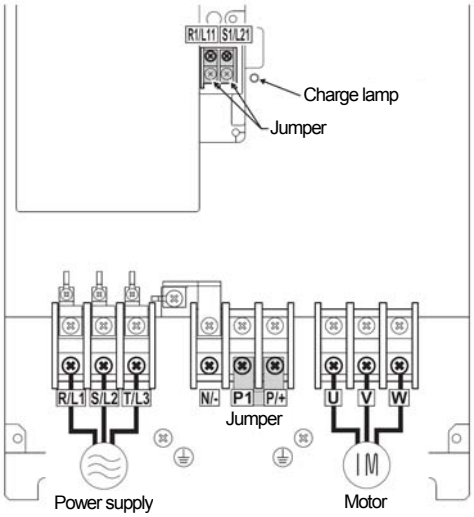


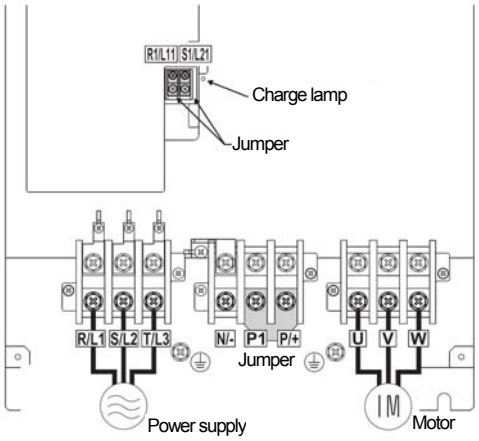
■FR-A740-18.5K, 22K-A1



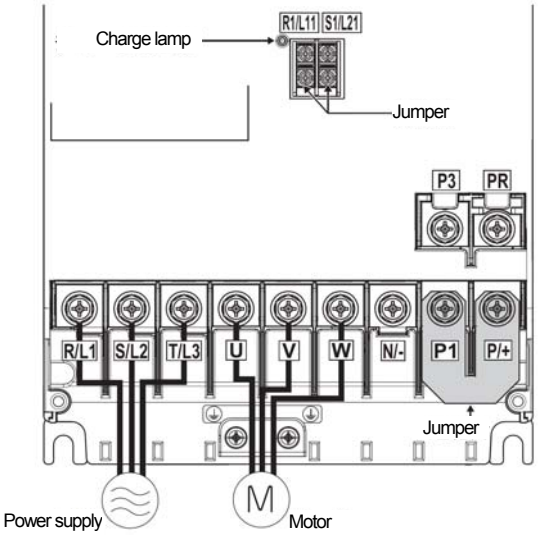
■FR-A740-30K, 37K, 45K-A1



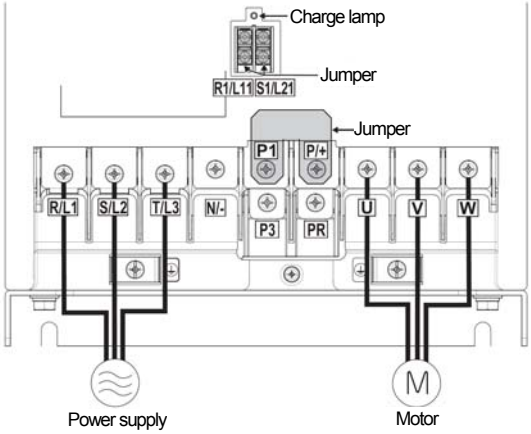
■FR-A740-55K-A1



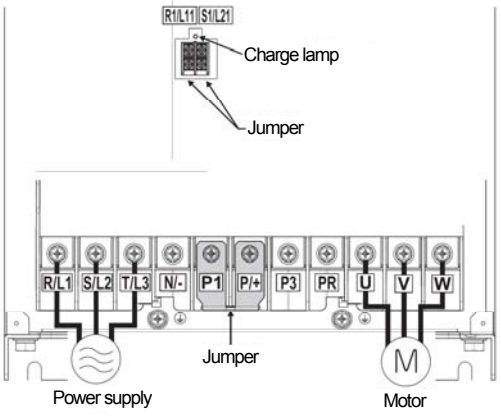
■FR-A840-18.5K, 22K-R2R



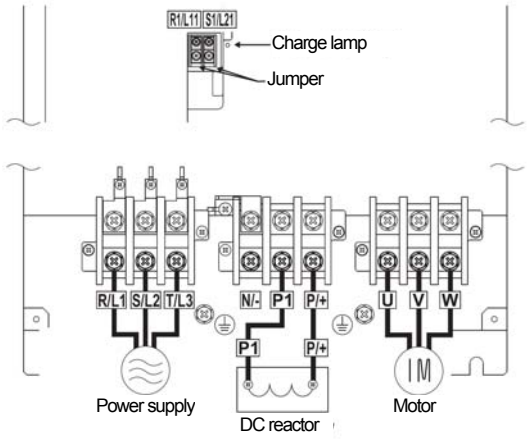
■FR-A840-30K-R2R



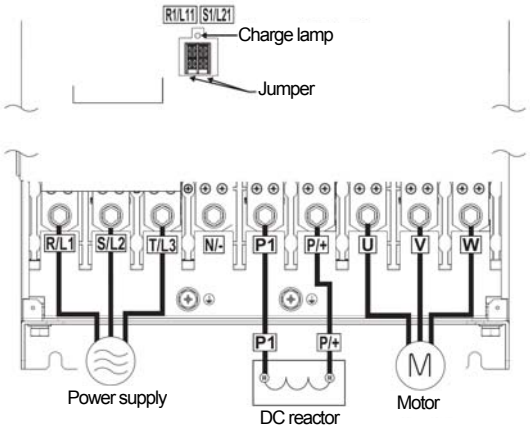
■FR-A840-37K, 45K, 55K-R2R



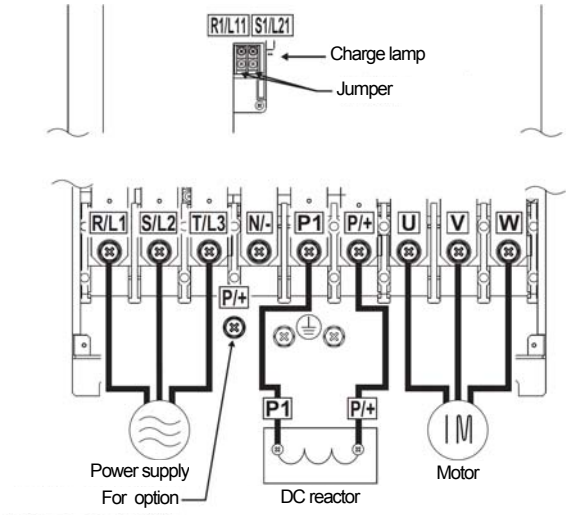
■FR-A740-75K, 90K-A1



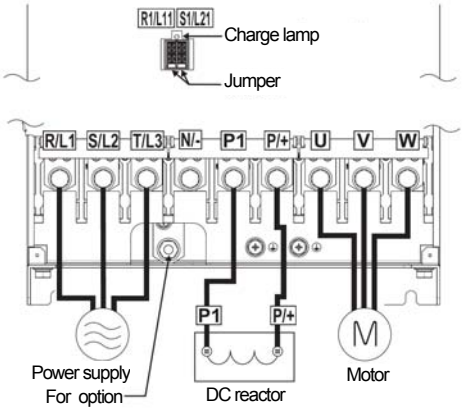
■FR-A840-75K, 90K-R2R



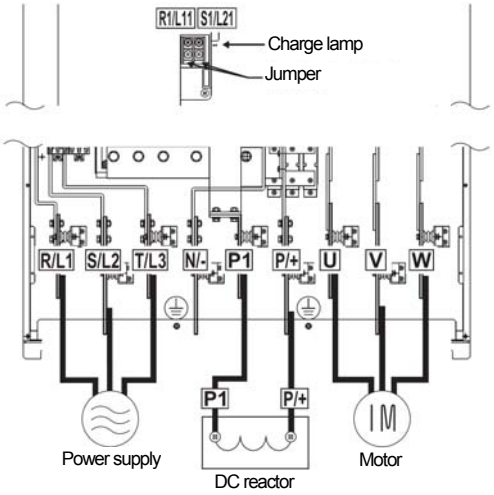
■FR-A740-110K, 132K, 160K, 185K-A1



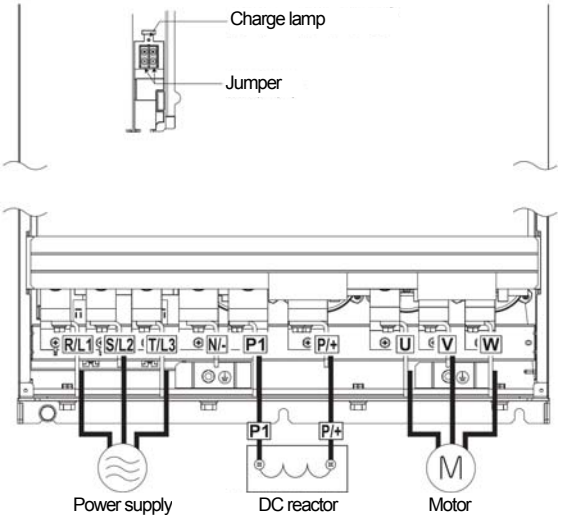
■FR-A840-110K, 132K, 160K, 185K-R2R



■FR-A740-220K, 250K, 280K-A1



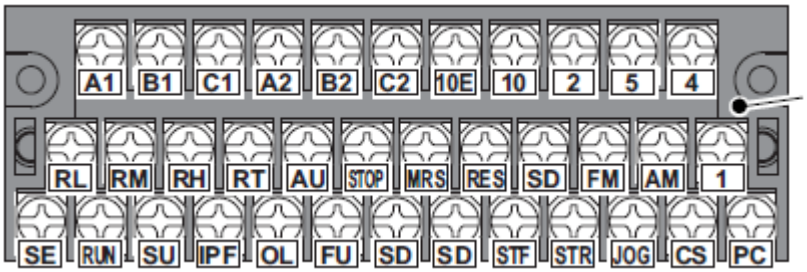
■FR-A840-220K, 250K, 280K-R2R



Control circuit terminal layout

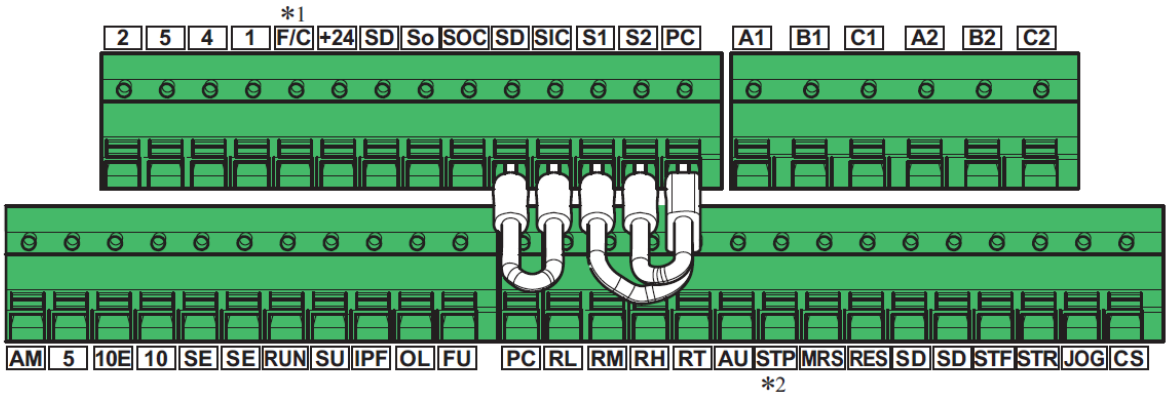
The following shows the control circuit terminal layouts of the FR-A700-A1 inverters and the FR-A800-R2R inverters.
The control circuit terminal layout of the FR-A700-A1 inverters differs from that of the FR-A800-R2R inverters. Check the terminal names and positions before performing wiring.

■ FR-A700-A1 inverters



Terminal screw size : M3.5
Tightening torque : 1.2 N·m

■ FR-A800-R2R inverters



∗1 Terminal FM for the FM type inverters, or terminal CA for the CA type inverters.
∗2 Terminal STOP.

The control circuit terminal block intercompatibility attachment FR-A8TAT allows the control circuit terminal block of the FR-A700-A1 inverters to be installed on the FR-A800-R2R inverters, but restrictions are applied. Refer to the Instruction Manual of the FR-A8TAT for details.

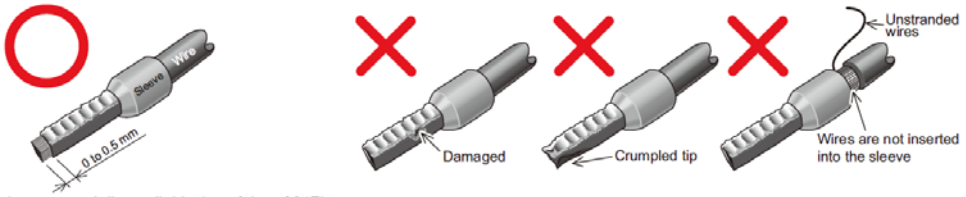
◆ Wiring method

• 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.

(2) Crimp the terminals by inserting the wires into a 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.



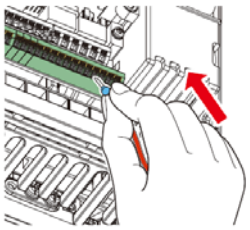
• Blade terminals commercially available (as of Jan. 2017)

Cable gauge (mm^2)	Ferrule terminal model			Manufacturer	Crimping tool name
	With insulation sleeve	Without insulation sleeve	For UL wire*1		
0.3	AI 0,34-10TQ	—	—	Phoenix Contact Co., Ltd.	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	—	—		

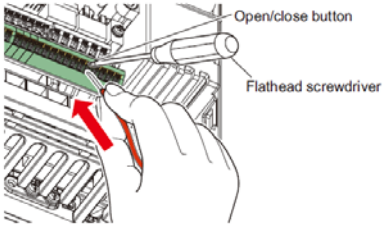
*1 A ferrule terminal with an insulation sleeve compatible with the MTW wire which has a thick wire insulation.
*2 Applicable for terminal A1, B1, C1, A2, B2 and C2 only.

Cable gauge (mm^2)	Blade terminal product number	Insulation cap product number	Manufacturer	Crimping tool product number
0.3 to 0.75	BT 0.75-11	VC 0.75	NICHIFU Co., Ltd.	NH 69

(3) Insert the wires into a socket.

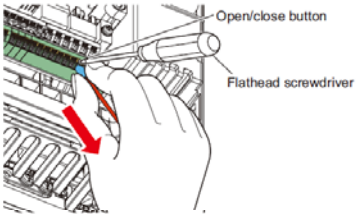


When using a single wire or stranded wires without a blade terminal, push the open/close button all the way down with a flathead screwdriver, and insert the wire.



• Wire removal

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



NOTE

- When using stranded wires without a blade terminal, twist enough to avoid short circuit with a nearby terminals or wires.
- During wiring, 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 2016).

Name	Model	Manufacturer
Driver	SZF 0- 0,4 x 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

Note that most parameter numbers of the two inverters are the same but some setting values differ. Refer to the following table to set the parameters.

The FR-A800-1-R2R inverters have advanced Roll to Roll functions compared to the FR-A700-A1 inverters. Read the Instruction Manual of inverters carefully and configure the setting properly.

List of FR-A800-R2R inverter parameters compatible with the FR-A700-A1 inverter parameters

The following table shows the parameter settings required when replacing FR-A700-A1 inverters with FR-A800-1-R2R inverters (ND rating).
To use the FR-A800-R2R in the ND rating, set Pr.570 to "2 (initial value)".
For parameters of the FR-A700-A1 inverters whose setting has been changed from the initial value, set the corresponding FR-A800-1-R2R inverters (ND rating) according to the following table.
For parameters of the FR-A700-A1 inverters whose setting has not been changed from the initial value, it is basically not necessary to change the setting of the corresponding parameters of the FR-A800-1-R2R inverters (ND rating).
The parameters marked with △in the "Setting" area are used for adjustment. Set them as necessary.
The parameter settings of the FR-A800-R2R inverters as shown in the table below does not guarantee the inverter characteristics or performance.
As differences between the FR-A700-A1 inverters and the FR-A800-R2R inverters, the command methods for the dancer control and torque control are changed (improved) as follows.

	FR-A700-A1	→	FR-A800-R2R
Dancer control	Motor speed (Hz, r/min)	→	Line speed (m/min); The increment is determined by Pr.358.
Torque control	Motor torque command (%)	→	Tension command (N); The increment is determined by Pr.1401.

Setting
◎: Use the same setting of the FR-A700-A1 inverter.
△: Change the setting of the FR-A700-A1 inverter as needed.
×: Adjust and set the FR-A800-R2R parameter independently.
-: Setting is not required in the FR-A800-1-R2R.

The number of the parameter in [ ] is different from the FR-A700-A1 inverters.
Use the parameter in [ ] instead of the parameter in the row above when the X114 signal is ON.

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
0	Torque boost	0 to 30%	0.4 to 0.75K: 6% 1.5K to 3.7K: 4% 5.5K, 7.5K: 3% 11K to 55K: 2% 75K or higher: 1%	0	Torque boost	0 to 30%	0.4 to 0.75K: 6% 1.5K to 3.7K: 4% 5.5K, 7.5K: 3% 11K to 55K: 2% 75K or higher: 1%	△	Basically use the same setting of the FR-A700-A1 inverter. If necessary, change the value according to the device.
1	Maximum frequency	0 to 120 Hz	55K or lower: 120 Hz 75K or higher: 60 Hz	1	Maximum frequency	0 to 120 Hz	55K or lower: 120 Hz 75K or higher: 60 Hz	◎	
2	Minimum frequency	0 to 120 Hz	0 Hz	2	Minimum frequency	0 to 120 Hz	0 Hz	◎	
3	Base frequency	0 to 400 Hz	60 Hz	3	Base frequency	0 to 590 Hz	60 Hz	◎	
4	Multi-speed setting (high speed)	0 to 400 Hz	60 Hz	4	Multi-speed setting (high speed)	0 to 590 Hz	60 Hz	◎	When the Tension control selection (X114) signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				1265	Line multi-speed setting (high-speed)	0 to 6553.4	0	△	
5	Multi-speed setting (middle speed)	0 to 400 Hz	30 Hz	5	Multi-speed setting (middle speed)	0 to 590 Hz	30 Hz	◎	
				1266	Line multi-speed setting (middle-speed)	0 to 6553.4	0	△	
6	Multi-speed setting (low speed)	0 to 400 Hz	10 Hz	6	Multi-speed setting (low speed)	0 to 590 Hz	10 Hz	◎	
				1267	Line multi-speed setting (low-speed)	0 to 6553.4	0	△	
7	Acceleration time	0 to 3600 s/ 0 to 360 s	7.5K or lower: 5 s 11K or higher: 15 s	7	Acceleration time	0 to 3600 s	7.5K or lower: 5 s 11K or higher: 15 s	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
8	Deceleration time	0 to 3600 s/ 0 to 360 s	7.5K or lower: 10 s 11K or higher: 15 s	8	Deceleration time	0 to 3600 s	7.5K or lower: 5 s 11K or higher: 15 s	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
9	Electronic thermal O/L relay	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A	Inverter rated current	9	Electronic thermal O/L relay	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A	Inverter rated current	◎	Set the rated motor current.
10	DC injection brake operation frequency	0 to 120 Hz, 9999	3 Hz	10	DC injection brake operation frequency	0 to 120 Hz, 9999	3 Hz	◎	
11	DC injection brake operation time	0 to 10 s, 8888	0.5 s	11	DC injection brake operation time	0 to 10 s, 8888	0.5 s	◎	
12	DC injection brake operation voltage	0 to 30%	7.5K or lower: 4% 11K to 55K: 2% 75K or higher: 1%	12	DC injection brake operation voltage	0 to 30%	7.5K or lower: 4% 11K to 55K: 2% 75K or higher: 1%	△	Basically use the same setting of the FR-A700-A1 inverter. If necessary, change the value according to the device.
13	Starting frequency	0 to 60 Hz	0.5 Hz	13	Starting frequency	0 to 60 Hz	0.5 Hz	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				622	Line speed command for starting	0 to 6553.4	0	△	
14	Load pattern selection	0 to 5	0	14	Load pattern selection	0 to 5, 12 to 15	0	◎	
15	Jog frequency	0 to 400 Hz	5 Hz	15	Jog frequency	0 to 590 Hz	5 Hz	◎	
16	Jog acceleration/ deceleration time	0 to 3600 s/0 to 360 s	0.5 s	16	Jog acceleration/deceleration time	0 to 3600 s	0.5 s	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
17	MRS input selection	0, 2, 4	0	17	MRS input selection	0, 2, 4	0	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
18	High speed maximum frequency	120 to 400 Hz	55K or lower: 120 Hz 75K or higher: 60 Hz	18	High speed maximum frequency	0 to 590 Hz	55K or lower: 120 Hz 75K or higher: 60 Hz	◎	
19	Base frequency voltage	0 to 1000 V, 8888, 9999	9999	19	Base frequency voltage	0 to 1000 V, 8888, 9999	9999	◎	
20	Acceleration/deceleration reference frequency	1 to 400 Hz	60 Hz	20	Acceleration/deceleration reference frequency	1 to 590 Hz	60 Hz	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				393	Line speed command acceleration/deceleration reference	1 to 6553.4	1000	△	
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 400 Hz, 9999	9999	24	Multi-speed setting (speed 4)	0 to 590 Hz, 9999	9999	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				1268	Line multi-speed setting (speed 4)	0 to 6553.4	0	△	
25	Multi-speed setting (speed 5)	0 to 400 Hz, 9999	9999	25	Multi-speed setting (speed 5)	0 to 590 Hz, 9999	9999	◎	
				1269	Line multi-speed setting (speed 5)	0 to 6553.4	0	△	
26	Multi-speed setting (speed 6)	0 to 400 Hz, 9999	9999	26	Multi-speed setting (speed 6)	0 to 590 Hz, 9999	9999	◎	
				1270	Line multi-speed setting (speed 6)	0 to 6553.4	0	△	
27	Multi-speed setting (speed 7)	0 to 400 Hz, 9999	9999	27	Multi-speed setting (speed 7)	0 to 590 Hz, 9999	9999	◎	
				1271	Line multi-speed setting (speed 7)	0 to 6553.4	0	△	
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, 2, 10, 11, 20, 21	0	30	Regenerative function selection	0 to 2, 10, 11, 20, 21, 100 to 102, 110, 111, 120, 121	0	◎	
31	Frequency jump 1A	0 to 400 Hz, 9999	9999	31	Frequency jump 1A	0 to 590 Hz, 9999	9999	◎	
32	Frequency jump 1B	0 to 400 Hz, 9999	9999	32	Frequency jump 1B	0 to 590 Hz, 9999	9999	◎	
33	Frequency jump 2A	0 to 400 Hz, 9999	9999	33	Frequency jump 2A	0 to 590 Hz, 9999	9999	◎	
34	Frequency jump 2B	0 to 400 Hz, 9999	9999	34	Frequency jump 2B	0 to 590 Hz, 9999	9999	◎	
35	Frequency jump 3A	0 to 400 Hz, 9999	9999	35	Frequency jump 3A	0 to 590 Hz, 9999	9999	◎	
36	Frequency jump 3B	0 to 400 Hz, 9999	9999	36	Frequency jump 3B	0 to 590 Hz, 9999	9999	◎	
37	Speed display	0, 1 to 9998	0	37	Rotation speed display	0, 1 to 9998	0	◎	To change parameters about speed setting when Pr.37≠"0" (machine speed display), change Pr.37 to "0" (frequency display) in advance. After setting the parameters, return Pr.37 setting.
41	Frequency reach operation range	0 to 100%	10%	41	Up-to-frequency sensitivity	0 to 100%	10%	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				621	Allowable deviation from target line speed	0 to 6553.4	0	△	
42	Output frequency detection	0 to 400 Hz	6 Hz	42	Output frequency detection	0 to 590 Hz	6 Hz	◎	
43	Output frequency detection for reverse rotation	0 to 400 Hz, 9999	9999	43	Output frequency detection for reverse rotation	0 to 590 Hz, 9999	9999	◎	
44	Up-to-frequency sensitivity	0 to 3600 s/0 to 360 s	5 s	44	Second acceleration/deceleration time	0 to 3600 s	5 s	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
				100	Second acceleration time for line speed command	0 to 3600 s	15 s	△	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method.
45	Second deceleration time	0 to 3600 s / 0 to 360 s, 9999	9999	45	Second deceleration time	0 to 3600 s, 9999	9999	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
				101	Second deceleration time for line speed command	0 to 3600 s	15 s	△	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method.
46	Second torque boost	0 to 30%, 9999	9999	46	Second torque boost	0 to 30%, 9999	9999	◎	
47	Second V/F (base frequency)	0 to 400 Hz, 9999	9999	47	Second V/F (base frequency)	0 to 590 Hz, 9999	9999	◎	
48	Second stall prevention operation current	0 to 220%	150%	48	Second stall prevention operation current	0 to 400%	150%	◎	
49	Second stall prevention operation frequency	0 to 400 Hz, 9999	0 Hz	49	Second stall prevention operation frequency	0 to 590 Hz, 9999	0	◎	
50	Second output frequency detection	0 to 400 Hz	30 Hz	50	Second output frequency detection	0 to 590 Hz	30 Hz	◎	
51	Second electronic thermal O/L relay	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A	9999	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 to 14, 17, 18, 20, 21, 23 to 27, 32 to 35, 39 to 46, 52 to 57, 62 to 65, 100	0	52	Operation panel main monitor selection	0, 5 to 14, 17 to 20, 22 to 36, 38, 40 to 46, 50 to 57, 61, 62, 64, 67, 81 to 91, 97, 98, 100	0	△	In the A800-R2R, multiple monitoring, available in the FR-A700-A1 inverter by setting the 4-digit number, is unavailable. Use Pr.774 to 776 instead. Between the A700-A1 and A800-R2R inverters, there is a difference in the name and setting value of some monitor items. (For details, refer to Section 4.5.)
54	FM terminal function selection	1 to 3, 5 to 14, 17, 18, 21, 24, 32 to 34, 39 to 44, 46	1	54	FM/CA terminal function selection	1 to 3, 5 to 14, 17 to 19, 21, 22, 24, 26 to 28, 30, 32, 34, 36, 46, 50, 61, 62, 70, 81, 82, 87 to 90, 97, 98	1	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
55	Frequency monitoring reference	0 to 400 Hz	60 Hz	55	Frequency monitoring reference	0 to 590 Hz	60 Hz	◎	
				276	Line speed monitoring reference	0 to 6553.4	1000	△	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method.
56	Current monitoring reference	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A	Inverter rated current	56	Current monitoring reference	55K or lower: 0 to 500 A 75K or higher: 0 to 3600 A	Inverter rated current	◎	
57	Restart coasting time	55K or lower: 0, 0.1 to 5 s, 9999 75K or higher: 0.01 to 30 s, 9999	9999	57	Restart coasting time	0, 0.1 to 30 s, 9999	9999	◎	The A800-R2R can be restarted only by setting Pr.57 when the CS signal is not assigned to any input terminal.
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	0	60	Energy saving control selection	0, 4, 9	0	◎	
61	Reference current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	61	Reference current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	◎	
62	Reference value at acceleration	0 to 220%, 9999	9999	62	Reference value at acceleration	0 to 400%, 9999	9999	◎	
63	Reference value at deceleration	0 to 220%, 9999	9999	63	Reference value at deceleration	0 to 400%, 9999	9999	◎	
64	Starting frequency for elevator mode	0 to 10 Hz, 9999	9999	64	Starting frequency for elevator mode	0 to 10 Hz, 9999	9999	◎	
65	Retry selection	0 to 5	0	65	Retry selection	0 to 5	0	◎	
66	Stall prevention operation reduction starting frequency	0 to 400 Hz	60 Hz	66	Stall prevention operation reduction starting frequency	0 to 590 Hz	60 Hz	◎	
67	Number of retries at 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	55K or lower: 0 to 30% 75K or higher: 0 to 10%	0%	70	Special regenerative brake duty	0 to 100%	0%	◎	
71	Applied motor	0, 1, 3 to 8, 13 to 18, 20, 23, 24, 30, 33, 34, 40, 43, 44, 50, 53, 54	0	71	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	0	△	Value for A700-A1 → Replacement value for A800-R2R Use the setting in parentheses instead when Pr.96 in the A700 A1 inverter is set to "3 or 103". 7 → 5 (3) 17 → 15 (13) 8 → 6 (3) 18 → 16 (13)
72	PWM frequency selection	55K or lower: 0 to 15 75K or higher: 0 to 6, 25	2	72	PWM frequency selection	55K or lower: 0 to 15 75K or higher: 0 to 6, 25	2	◎	
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	55K or lower: 0.4 to 55 kW, 9999 75K or higher: 0 to 3600 kW, 9999	9999	80	Motor capacity	55K or lower: 0.4 to 55 kW, 9999 75K or higher: 0 to 3600 kW, 9999	9999	◎	
81	Number of motor poles	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 9999	9999	81	Number of motor poles	2, 4, 6, 8, 10, 12, 9999	9999	△	When any of "2 to 10" is set for the FR-A700-A1, set the same value for the FR-A800-R2R. When any of "12 to 20", set the number after subtracting 10. When "112 or 122", set "12", and "9999" can be set as is. Set "9999" when Pr.80 is "9999".
82	Motor excitation current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	82	Motor excitation current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	◎	
83	Rated motor voltage	0 to 1000 V	Other than the below class: 200 V 400 V class: 400 V	83	Rated motor voltage	0 to 1000 V	Other than the below class: 200 V 400 V class: 400 V	◎	
84	Rated motor frequency	10 to 120 Hz	60 Hz	84	Rated motor frequency	10 to 400 Hz, 9999	9999	◎	
89	Speed control gain	0 to 200%, 9999	9999	89	Speed control gain	0 to 200%, 9999	9999	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
90	Motor constant (R1)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	90	Motor constant (R1)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	◎	
91	Motor constant (R2)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	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)	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	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	△	75K or higher: When Pr.71="5, 6, 15, or 16", set the number rounded off to the first decimal place.
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	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	△	75K or higher: When Pr.71="5, 6, 15, or 16", set the number rounded off to the first decimal place.
94	Motor constant (X)	55K or lower: 0 to 500 Ω (0 to 100%), 9999 75K or higher: 0 to 100 Ω (0 to 100%), 9999	9999	94	Motor constant (X)	0 to 100%, 9999	9999	◎	
95	Online auto tuning selection	0 to 2	0	95	Online auto tuning selection	0 to 2	0	◎	
96	Auto tuning setting/status	0, 1, 101	0	96	Auto tuning setting/status	0, 1, 11,101	0	△	If auto tuning has been performed, perform tuning again as required.
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	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
				102	Third acceleration time for line speed command	0 to 3600 s	15 s	△	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method.
111	Third deceleration time	0 to 3600 s / 0 to 360 s, 9999	9999	111	Third deceleration time	0 to 3600 s, 9999	9999	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
				103	Third deceleration time for line speed command	0 to 3600 s	15 s	△	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method.
112	Third torque boost	0 to 30%, 9999	9999	112	Third torque boost	0 to 30%, 9999	9999	◎	
113	Third V/F (base frequency)	0 to 400 Hz, 9999	9999	113	Third V/F (base frequency)	0 to 590 Hz, 9999	9999	◎	
114	Third stall prevention operation current	0 to 220%	150%	114	Third stall prevention operation level	0 to 400%	150%	◎	
115	Third stall prevention operation frequency	0 to 400 Hz	0	115	Third stall prevention operation frequency	0 to 590 Hz	0	◎	
116	Third output frequency detection	0 to 400 Hz	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	Number of PU communication retries	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	◎	
125	Terminal 2 frequency setting gain frequency	0 to 400 Hz	60 Hz	125	Terminal 2 frequency setting gain frequency	0 to 590 Hz	60 Hz	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The parameters in yellow cell shown on the left are the example parameters used for FR-A800-R2R inverters when the command method is changed from the motor speed command to the line speed command. For the settings of other command methods, refer to the FR-A800 Roll to Roll Function Manual.
				350	Line speed command voltage/current bias	0 to 100%	0	△	
				351	Line speed command bias	0 to 6553.4	0	△	
				352	Line speed command voltage/current gain	0 to 100%	50%	△	
				353	Line speed command gain	0 to 6553.4 , 9999	1000	△	
126	Terminal 4 frequency setting gain frequency	0 to 400 Hz	60 Hz	126	Terminal 4 frequency setting gain frequency	0 to 400 Hz	60 Hz	◎	
				350	Line speed command voltage/current bias	0 to 100%	0%	△	
				351	Line speed command bias	0 to 6553.4	0	△	
				352	Line speed command voltage/current gain	0 to 100%	50%	△	
				353	Line speed command gain	0 to 6553.4 , 9999	1000	△	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
127	PID control automatic switchover frequency	0 to 400 Hz, 9999	9999	127	PID control automatic switchover frequency	0 to 590 Hz, 9999	9999	◎	
128	PID operation selection	10, 11, 40, 41, 50, 51, 60, 61	40	128	PID action selection	0, 40, 41	0	△	When Pr.128 = "40 or 41", use Pr.363 instead of Pr.731 used for the FR-A700-A1 inverter to determine input method of the dancer signal, use Pr.361 instead of Pr.732 to determine input method of the main speed command, and use the X114 signal instead of the X83 signal for dancer feedback speed control. When Pr128 is set to "0", the dancer control is disabled.
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	400 to 600%, 9999	9999	131	PID upper limit	400 to 600%, 9999	9999	◎	
132	PID lower limit	400 to 600%, 9999	9999	132	PID lower limit	400 to 600%, 9999	9999	◎	
133	Target dancer position	400 to 600%, 9999	500%	133	PID action set point	400 to 600%, 9999	500%	◎	
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	PID proportional band for under-set point value	0.1 to 1000%, 9999	9999	464	PID proportional band for values below set point	0.1 to 1000%, 9999	9999	◎	
136	PID integral time for under-set point value	0.1 to 3600 s, 9999	9999	465	PID integral time for values below set point	0.1 to 3600 s, 9999	9999	◎	
137	PID differential time for under-set point value	0.01 to 10 s, 9999	9999	466	PID differential time for values below set point	0.01 to 10 s, 9999	9999	◎	
138	Integral control presence/absence	0 to 3	0	485	Integral control activation	0 to 3	0	◎	
140	Backlash acceleration stopping frequency	0 to 400 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 400 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	1	◎	
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	◎	
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 to 14, 17, 18, 21, 24, 32 to 34, 39 to 44, 46	1	158	AM terminal function selection	1 to 3, 5 to 14, 17 to 19, 21, 22, 24, 26 to 28, 30, 32 to 34, 36, 46, 50, 52 to 54, 61, 62, 67, 70, 81 to 84, 87 to 91, 97, 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	◎	
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 hold 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	Display/batch clear of the number of user group registrations	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	×	Set the parameter as required.

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
178	STF terminal function selection	0 to 14, 16 to 18, 20, 22 to 28, 30, 32 to 35, 42 to 44, 51 to 60, 62, 64 to 67, 70, 71, 83 to 93, 9999	60	178	STF terminal function selection	0 to 13, 16 to 18, 20, 23 to 28, 42 to 44, 46 to 48, 50, 51, 60, 62, 64 to 67, 70 to 72, 74, 81, 92 to 96, 100 to 109, 111 to 117, 120 to 126, 9999	60	△	X30 → X100, X32 → X101, X33 → X102, X34 → X103, X35 →No replacement signal (Refer to Section 4.4.) X51 → X105, X52 → X106, X53 → X107, X54 → X108, X55 → X109, X56 → Use Pr.1230. The X126 signal can be used for switching between winding and unwinding during operation. (Refer to Section 4.4.), X83 → X114, X84 → X115, X85 → X116, X86 → X117, X87, X88 →No replacement signal (Setting is not required because the command method is changed from motor speed to line speed. To change the line speed, change the command value of the line speed.) X89 → X120, X90 → X121, X93 → X124
179	STR terminal function selection	0 to 14, 16 to 18, 20, 23 to 28, 30 , 32 to 35, 42 to 44, 51 to 59, 61, 62, 64 to 67, 70, 71, 83 to 93, 9999	61	179	STR terminal function selection	0 to 13, 16 to 18, 20, 23 to 28, 42 to 44, 46 to 48, 50, 51, 61, 62, 64 to 67, 70 to 72, 74, 81, 92 to 96, 100 to 109, 111 to 117, 120 to 126, 9999	61	△	
180	RL terminal function selection	0 to 14, 16 to 18, 20, 23 to 28, 30, 32 to 35, 42 to 44, 51 to 59, 62, 64 to 67, 70, 71, 83 to 93, 9999	0	180	RL terminal function selection	0 to 13, 16 to 18, 20, 23 to 28, 42 to 44, 46 to 48, 50, 51, 62, 64 to 67, 70 to 72, 74, 81, 92 to 96, 100 to 109, 111 to 117, 120, 126, 9999	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	0 to 14, 16 to 18, 20, 23 to 28, 30, 32 to 35, 42 to 44, 51 to 59, 62 to 67, 70, 71, 74, 83 to 93, 9999	4	184	AU terminal function selection		4	△	
185	JOG terminal function selection	0 to 20, 22 to 28, 30, 32 to 35, 42 to 44, 62, 64 to 71, 74, 76, 83, 9999	5	185	JOG terminal function selection		5	△	
186	CS terminal function selection		6	186	CS terminal function selection		6	△	
187	MRS terminal function selection		24	187	MRS terminal function selection		24/10	△	
188	STOP terminal function selection		25	188	STOP terminal function selection		25	△	
189	RES terminal function selection		62	189	RES terminal function selection		62	△	
190	RUN terminal function selection	0 to 8, 10 to 16, 25, 26, 30 to 35, 39, 41 to 47, 50 to 54, 64, 70, 85, 90, 91, 93 to 99, 100 to 108, 110 to 116, 125, 126, 130 to 135, 139, 141 to 147, 150 to 154, 164, 170, 185, 190, 191, 193 to 199, 9999	0	190	RUN terminal function selection	0 to 8, 10 to 16, 25, 26, 30 to 35, 39 to 48, 55, 64, 67, 68, 79, 85, 90 to 99, 100 to 108, 110 to 116, 125, 126, 130 to 135, 139 to 148, 155, 164, 167, 168, 179, 185, 190 to 199, 206 to 208, 231 to 239, 306 to 308, 331 to 339, 9999	0	△	Y50 → Y231, Y51 → Y232, Y52 → Y233, Y53 → Y234, Y54 → Y235
191	SU terminal function selection		1	191	SU terminal function selection		1	△	
192	IPF terminal function selection		2	192	IPF terminal function selection		2/9999	△	
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, 26, 30 to 35, 39, 41 to 47, 50 to 54, 64, 70, 85, 90, 91, 94 to 99, 100 to 108, 110 to 116, 125, 126, 130 to 135, 139, 141 to 147, 150 to 154, 164, 170, 185, 190, 191, 194 to 199, 9999	99	195	ABC1 terminal function selection	0 to 8, 10 to 16, 25, 26, 30 to 35, 39 to 48, 55, 64, 67, 68, 79, 85, 90, 91, 94 to 99, 100 to 108, 110 to 116, 125, 126, 130 to 135, 139 to 148, 155, 164, 167, 168, 179, 185, 190, 191, 194 to 199, 206 to 208, 231 to 239, 306 to 308, 331 to 339, 9999	99	△	
196	ABC2 terminal function selection		9999	196	ABC2 terminal function selection		9999	△	
232	Multi-speed setting (speed 8)	0 to 400 Hz, 9999	9999	232	Multi-speed setting (speed 8)	0 to 590 Hz, 9999	9999	◎	When the X114 signal is ON, use the parameter of the different number in yellow cell due to the changed command method. The increment is determined by Pr.358.
				1272	Line multi-speed setting (speed 8)	0 to 6553.4	0	△	
233	Multi-speed setting (speed 9)	0 to 400 Hz, 9999	9999	233	Multi-speed setting (speed 9)	0 to 590 Hz, 9999	9999	◎	
				1273	Line multi-speed setting (speed 9)	0 to 6553.4	0	△	
234	Multi-speed setting (speed 10)	0 to 400 Hz, 9999	9999	234	Multi-speed setting (speed 10)	0 to 590 Hz, 9999	9999	◎	
				1274	Line multi-speed setting (speed 10)	0 to 6553.4	0	△	
235	Multi-speed setting (speed 11)	0 to 400 Hz, 9999	9999	235	Multi-speed setting (speed 11)	0 to 590 Hz, 9999	9999	◎	
				1275	Line multi-speed setting (speed 11)	0 to 6553.4	0	△	
236	Multi-speed setting (speed 12)	0 to 400 Hz, 9999	9999	236	Multi-speed setting (speed 12)	0 to 590 Hz, 9999	9999	◎	
				1276	Line multi-speed setting (speed 12)	0 to 6553.4	0	△	
237	Multi-speed setting (speed 13)	0 to 400 Hz, 9999	9999	237	Multi-speed setting (speed 13)	0 to 590 Hz, 9999	9999	◎	
				1277	Line multi-speed setting (speed 13)	0 to 6553.4	0	△	
238	Multi-speed setting (speed 14)	0 to 400 Hz, 9999	9999	238	Multi-speed setting (speed 14)	0 to 590 Hz, 9999	9999	◎	
				1278	Line multi-speed setting (speed 14)	0 to 6553.4	0	△	
239	Multi-speed setting (speed 15)	0 to 400 Hz, 9999	9999	239	Multi-speed setting (speed 15)	0 to 590 Hz, 9999	9999	◎	
				1279	Line multi-speed setting (speed 15)	0 to 6553.4	0	△	
240	Soft-PWM operation selection	0, 1	1	240	Soft-PWM operation selection	0, 1	1	◎	
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%	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
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	245	Rated slip	0 to 50%, 9999	9999	◎	
246	Slip compensation time constant	0.01 to 10 s	0.5 s	246	Slip compensation constant	0.01 to 10 s	0.5 s	◎	
247	Constant-power range slip compensation selection	0, 9999	9999	247	Constant-power range slip compensation selection	0, 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 1000%	50%	252	Override bias	0 to 1000%	50%	◎	
253	Override gain	0 to 1000%	150%	253	Override gain	0 to 1000%	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.
261	Power failure stop selection	0, 1, 2, 11, 12	0	261	Power failure stop selection	0, 1, 2, 11, 1 2, 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, 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	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
265	Power-failure deceleration time 2	0 to 3600, 9999 /0 to 360 s, 9999	9999	265	Power-failure deceleration time 2	0 to 3600, 9999	9999	◎	Note that changing Pr.21 after setting this parameter will change the setting of this parameter.
266	Power failure deceleration time switchover frequency	0 to 400 Hz	60 Hz	266	Power failure deceleration time switchover frequency	0 to 590 Hz	60 Hz	◎	
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	Dancer position A	400.1 to 600%	600%	486	Deviation A	400.1 to 600%	600%	◎	
271	Dancer position B	400% to 599.9%	400%	487	Deviation B	400 to 599.9%	400%	◎	
272	Dancer position C1	400.1 to 599.9%, 9999	9999	488	Deviation C1	400.1 to 599.9%, 9999	9999	◎	
273	Dancer position C2	400.1 to 599.9%, 9999	9999	489	Deviation C2	400.1 to 599.9%, 9999	9999	◎	
274	PID position gain A	0.1 to 1000%, 9999	9999	490	PID gain A	0.1 to 1000%, 9999	9999	◎	
275	PID position gain B	0.1 to 1000%, 9999	9999	491	PID gain B	0.1 to 1000%, 9999	9999	◎	
276	PID position gain C1	0.1 to 1000%, 9999	9999	492	PID gain C1	0.1 to 1000%, 9999	9999	◎	
277	PID position gain C2	0.1 to 1000%, 9999	9999	493	PID gain C2	0.1 to 1000%, 9999	9999	◎	
278	PID position gain D	0.1 to 1000%, 9999	9999	494	PID gain D	0.1 to 1000%, 9999	9999	◎	
279	Winding/unwinding length detection	0 to 9999	1000	1264	Winding length detection (lower 4 digits)	0 to 9999	1000	◎	
280	Winding/unwinding length unit	0, 1, 2, 3	0	1262	Winding length increment	0, 1, 2, 3	3	△	Value for A700-A1 → Replacement value for A800-R2R 1 m: 0 → 3 10 m: 1 → 2 100 m: 2 → 1 1 km: 3 → 0
281	Stored winding/unwinding length	0 to 9999	0	1263	Stored winding length (lower 4 digits)	0 to 9999	0	◎	
285	Overspeed detection frequency (Excessive speed deviation 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%	◎	
287	Droop filter time constant	0 to 1 s	0.3 s	287	Droop filter time constant	0 to 1 s	0.3 s	◎	
288	Droop function activation selection	0, 1, 2, 10, 11	0	288	Droop function activation selection	0, 1, 2, 10, 11	0	◎	
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, 5, 6, 11	0	292	Automatic acceleration/deceleration	0, 1, 3, 5 to 8, 11	0	△	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
293	Acceleration/deceleration separate selection	0 to 2	0	293	Acceleration/deceleration separate selection	0 to 2	0	◎	
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	◎	
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.
359	Encoder rotation direction	0, 1	1	359	Encoder rotation direction	0, 1, 100,101	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	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 400 Hz	0 Hz	385	Frequency for zero input pulse	0 to 590 Hz	0 Hz	◎	
386	Frequency for maximum input pulse	0 to 400 Hz	60 Hz	386	Frequency for maximum input pulse	0 to 590 Hz	60 Hz	◎	
428	Command pulse selection	0 to 5	0	428	Command pulse selection	0 to 5	0	◎	
450	Second applied motor	0, 1, 3 to 8, 13 to 18, 20, 23, 24, 30, 33, 34, 40, 43, 44, 50, 53, 54, 9999	9999	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, 9999	9999	△	Value for A700-A1 → Replacement value for A800-R2R Use the setting in parentheses instead when Pr.96 in the A700 A1 inverter is set to "3 or 103". 2 → 0 7 → 5 (3) 8 → 6 (3) 17 → 15 (13) 18 → 16 (13)

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
451	Second motor control method selection	10, 11, 12, 20, 9999	9999	451	Second motor control method selection	10 to 12, 20, 110 to 112, 9999	9999	◎	
453	Second motor capacity	55K or lower: 0.4 to 55K, 9999/ 75K or higher: 0 to 3600 kW, 9999	9999	453	Second motor capacity	55K or lower: 0.4 to 55K, 9999/ 75K or higher: 0 to 3600 kW, 9999	9999	◎	
454	Number of second motor poles	2, 4, 6, 8, 10, 9999	9999	454	Number of second motor poles	2, 4, 6, 8, 10, 12, 9999	9999	◎	
455	Second motor excitation current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	455	Second motor excitation current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	◎	
456	Rated second motor voltage	0 to 1000 V	Other than the below class: 200 V 400 V class: 400 V	456	Rated second motor voltage	0 to 1000 V	Other than the below class: 200 V 400 V class: 400 V	◎	
457	Rated second motor frequency	10 to 120 Hz	60 Hz	457	Rated second motor frequency	10 to 400 Hz	9999	◎	
458	Second motor constant (R1)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	458	Second motor constant (R1)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	◎	
459	Second motor constant (R2)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	459	Second motor constant (R2)	55K or lower: 0 to 50 Ω, 9999 75K or higher: 0 to 400 mΩ, 9999	9999	◎	
460	Second 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	460	Second motor constant (L1)	55K or lower: 0 to 6000 mH, 9999 75K or higher: 0 to 400 mH, 9999	9999	△	75K or higher: When Pr.71="5, 6, 15, or 16", set the number rounded off to the first decimal place.
461	Second 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	461	Second motor constant (L2)	55K or lower: 0 to 6000 mH, 9999 75K or higher: 0 to 400 mH, 9999	9999	△	75K or higher: When Pr.71="5, 6, 15, or 16", set the number rounded off to the first decimal place.
462	Second motor constant (X)	55K or lower: 0 to 500 Ω (0 to 100%), 9999 75K or higher: 0 to 100 mΩ (0 to 100%), 9999	9999	462	Second motor constant (X)	55K or lower: 0 to 500 Ω (0 to 100%), 9999 75K or higher: 0 to 100 mΩ (0 to 100%), 9999	9999	◎	
463	Second motor auto tuning setting/status	0, 1, 101	0	463	Second motor auto tuning setting/status	0, 1, 11,101	0	△	Perform tuning again as required.
464	Second PID proportional band	0.1 to 1000%, 9999	9999	467	Second PID proportional band	0.1 to 1000%, 9999	9999	◎	
465	Second PID integral time	0.1 to 3600 s, 9999	9999	468	Second PID integral time	0.1 to 3600 s, 9999	9999	◎	
466	Second PID differential time	0.01 to 10 s, 9999	9999	469	Second PID differential time	0.01 to 10 s, 9999	9999	◎	
467	Second PID proportional band for under-set point value	0.1 to 1000%, 9999	9999	470	Second PID proportional band for values below set point	0.1 to 1000%, 9999	9999	◎	
468	Second PID integral time for under-set point value	0.1 to 3600 s, 9999	9999	471	Second PID integral time for values below set point	0.1 to 3600 s, 9999	9999	◎	
469	Second PID differential time for under-set point value t	0.01 to 10 s, 9999	9999	472	Second PID differential time for values below set point	0.01 to 10 s, 9999	9999	◎	
470	Third PID proportional band	0.1 to 1000%, 9999	9999	473	Third PID proportional band	0.1 to 1000%, 9999	9999	◎	
471	Third PID integral time	0.1 to 3600 s, 9999	9999	474	Third PID integral time	0.1 to 3600 s, 9999	9999	◎	
472	Third PID differential time	0.01 to 10 s, 9999	9999	475	Third PID differential time	0.01 to 10 s, 9999	9999	◎	
473	Third PID proportional band for under-set point value	0.1 to 1000%, 9999	9999	476	Third PID proportional band for values below set point	0.1 to 1000%, 9999	9999	◎	
474	Third PID integral time for under-set point value	0.1 to 3600 s, 9999	9999	477	Third PID integral time for values below set point	0.1 to 3600 s, 9999	9999	◎	
475	Third PID differential time for under-set point value	0.01 to 10 s, 9999	9999	478	Third PID differential time for values below set point	0.01 to 10 s, 9999	9999	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
476	Fourth PID proportional band	0.1 to 1000%, 9999	9999	479	Fourth PID proportional band	0.1 to 1000%, 9999	9999	◎	
477	Fourth PID integral time	0.1 to 3600 s, 9999	9999	480	Fourth PID integral time	0.1 to 3600 s, 9999	9999	◎	
478	Fourth PID differential time	0.01 to 10 s, 9999	9999	481	Fourth PID differential time	0.01 to 10 s, 9999	9999	◎	
479	Fourth PID proportional band for under-set point value	0.1 to 1000%, 9999	9999	482	Fourth PID proportional band for values below set point	0.1 to 1000%, 9999	9999	◎	
480	Fourth PID integral time for under-set point value	0.1 to 3600 s, 9999	9999	483	Fourth PID integral time for values below set point	0.1 to 3600 s, 9999	9999	◎	
481	Fourth PID differential time for under-set point value	0.01 to 10 s, 9999	9999	484	Fourth PID differential time for values below set point	0.01 to 10 s, 9999	9999	◎	
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 1 warning 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	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 999.8s, 9999	9999	539	MODBUS RTU communication check time interval	0 to 999.8s, 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	9999	◎	The initial value has been replaced to “9999” (USB automatic recognition).
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	55K or lower: 0 to 500 A/ 75K or higher: 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.
569	Second motor speed control gain	0 to 200%, 9999	9999	569	Second motor speed control gain	0 to 200%, 9999	9999	◎	
571	Holding time at a start	0 to 10 s, 9999	9999	571	Holding time at a start	0 to 10 s, 9999	9999	◎	
574	Second motor online auto tuning	0, 1	0	574	Second motor online auto tuning	0, 1	0	◎	
575	Output interruption detection time	0 to 3600 s, 9999	9999	575	Output interruption detection time	0 to 3600 s, 9999	1 s	◎	
576	Output interruption detection level	0 to 400 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	55K or lower: 5 s/ 75K or higher: 15 s	611	Acceleration time at a restart	0 to 3600 s, 9999	9999	◎	
665	Regeneration avoidance frequency gain	0 to 200%	100%	665	Regeneration avoidance frequency gain	0 to 200%	100%	◎	
684	Tuning data unit switchover	0, 1	0	684	Tuning data unit switchover	0, 1	0	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
702	Dancer position detection level	0 to 100%	10%	423	Dancer / tension feedback position detection level	0 to 100%	10%	◎	
703	Minimum number of input pulse	0 to 100k pulses/s	0k pulses/s	354	Line speed command pulse input bias	0 to 500	0	◎	
704	Maximum input pulse	0 to 100k pulses/s	100k pulses/s	355	Line speed command pulse input gain	0 to 500	100	◎	
707	Sampling time for winding diameter calculation	0.01 to 1 s, 9999	9999	1245	Sampling time for winding diameter calculation	0.01 to 1 s, 9999	9999	◎	
708	Filter time constant for dancer control input	0 to 5 s	0 s	1227	Dancer / tension feedback input filter time constant	0 to 5 s	0 s	◎	
709	Integral clamp (positive polarity)	0 to 100%, 9999	9999	135	Integral clamp (positive polarity)	0 to 100%, 9999	9999	◎	
710	Integral clamp (negative polarity)	0 to 100%, 9999	9999	136	Integral clamp (negative polarity)	0 to 100%, 9999	9999	◎	
711	Signal loss detection stationary time	0 to 100 s, 9999	9999	425	Break detection waiting time	0 to 100 s, 9999	9999	◎	
712	Initial winding diameter calculation dead zone 2	0 to 50%, 9999	9999	1254	Initial winding diameter calculation deadband 2	0 to 50%, 9999	9999	◎	
713	Initial inertia moment	0 to 500 kg • m^2	0 kg • m^2	1410	Motor inertia	0 to 500 kg • m^2	0 kg • m^2	×	Note that the value set in these parameters is not the same. A700-A1: 4 times number of the total amount of Inertia moment of the motor and the empty reel A800-R2R: The value of motor inertia (inertia moment) (Input the empty reel inertia in Pr.1411 separately.) For the details of the calculation method, refer to Section "5.5.5 Inertia compensation function" of the FR-A800 Roll to Roll Function Manual.
714	Roll width	0 to 5000 mm	0 mm	1412	Roll width	0 to 5000 mm	0 mm	◎	
715	Material specific gravity	0 to 20 g/cm^3	0 g/cm^3	1413	Material specific gravity	0 to 20 g/cm^3	0 g/cm^3	◎	
716	Inertia compensation cushion time	0 to 360 s	0 s	1418	Inertia compensation cushion time	0 to 360 s	0 s	◎	
717	Tension command cushion time	0 to 360 s	0 s	1282	Tension command cushion time	0 to 360 s	0 s	◎	
718	Dancer tension setting bias	0 to 200%	0%	426	Dancer tension setting bias	0 to 200%	0%	◎	
719	Dancer tension setting gain	0 to 200%	100%	427	Dancer tension setting gain	0 to 200%	100%	◎	
720	Maximum winding diameter 1	1 to 6553 mm	2 mm	1235	Maximum winding diameter 1	1 to 6553 mm	2 mm	◎	
721	Minimum winding diameter 1	1 to 6553 mm	1 mm	1236	Minimum winding diameter 1	1 to 6553 mm	1 mm	◎	
722	Maximum winding diameter 2	1 to 6553 mm	2 mm	1237	Maximum winding diameter 2	1 to 6553 mm	2 mm	◎	
723	Minimum winding diameter 2	1 to 6553 mm	1 mm	1238	Minimum winding diameter 2	1 to 6553 mm	1 mm	◎	
724	Maximum winding diameter 3	1 to 6553 mm	2 mm	1239	Maximum winding diameter 3	1 to 6553 mm	2 mm	◎	
725	Minimum winding diameter 3	1 to 6553 mm	1 mm	1240	Minimum winding diameter 3	1 to 6553 mm	1 mm	◎	
726	Maximum winding diameter 4	1 to 6553 mm	2 mm	1241	Maximum winding diameter 4	1 to 6553 mm	2 mm	◎	
727	Minimum winding diameter 4	1 to 6553 mm	1 mm	1242	Minimum winding diameter 4	1 to 6553 mm	1 mm	◎	
728	Main speed analog gain 2	0 to 400 Hz, 9999	9999					-	There are no replacement parameters for the FR-A800-R2R inverters. Setting is not required because the command method is changed from motor speed to line speed. To change the line speed, change the command value of the line speed.
729	Main speed analog gain 3	0 to 400 Hz, 9999	9999					-	
730	Main speed analog gain 4	0 to 400 Hz, 9999	9999					-	
731	Dancer signal input selection	3 to 6	5	363	Dancer signal / tension feedback input selection	3, 6, 9999	9999	△	The initial value is "9999" used in the FR-A800-R2R inverters indicates that the parameter function is disabled.
732	Dancer main speed command input selection	0 to 7	0	361	Line speed command input selection	0, 8, 9999	9999	△	
733	Taper setting analog input selection	3, 6, 9999	9999	1285	Taper setting analog input selection	3, 6, 9999	9999	◎	
734	Dancer tension setting input selection	3, 6, 9999	9999	364	Dancer tension setting input selection	3, 6, 9999	9999	◎	
736	Tension command cushion time during stall condition	0 to 360 s, 9999	9999	1409	Tension command cushion time during stall condition	0 to 360 s, 9999	9999	◎	
737	Stall torque setting	0 to 200%	20%	1406	Commanded tension reduction scaling factor during stall condition	0 to 200%	20%	◎	
738	Speed limit for stall operation	0 to 60 Hz	1 Hz	1407	Speed limit during stall condition	0 to 60 Hz	1 Hz	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
739	Mechanical loss setting frequency bias	400 to 600%	500%	1419	Mechanical loss setting frequency bias	900 to 1100%	1000%	△	The setting of compensation value (setting of Mechanical loss 1 to 5 and Mechanical loss setting frequency bias) is different between two inverters. For the FR-A700-A1 inverters, set the total amount of the actual setting value and 500. For the FR-A800-R2R inverters, set the total amount of the actual setting value and 1000. The minimum setting increment is changed from 1% to 0.1%. Use the same setting of the parameters of Mechanical loss setting frequency 1 to 5.
740	Mechanical loss setting frequency 1	0 to 400 Hz, 9999	9999	1420	Mechanical loss setting frequency 1	0 to 400 Hz, 9999	9999	◎	
741	Mechanical loss 1	400 to 600%	500%	1421	Mechanical loss 1	900 to 1100%	1000%	△	
742	Mechanical loss setting frequency 2	0 to 400 Hz, 9999	9999	1422	Mechanical loss setting frequency 2	0 to 400 Hz, 9999	9999	◎	
743	Mechanical loss 2	400 to 600%	500%	1423	Mechanical loss 2	900 to 1100%	1000%	△	
744	Mechanical loss setting frequency 3	0 to 400 Hz, 9999	9999	1424	Mechanical loss setting frequency 3	0 to 400 Hz, 9999	9999	◎	
745	Mechanical loss 3	400 to 600%	500%	1425	Mechanical loss 3	900 to 1100%	1000%	△	
746	Mechanical loss setting frequency 4	0 to 400 Hz, 9999	9999	1426	Mechanical loss setting frequency 4	0 to 400 Hz, 9999	9999	◎	
747	Mechanical loss 4	400 to 600%	500%	1427	Mechanical loss 4	900 to 1100%	1000%	△	
748	Mechanical loss setting frequency 5	0 to 400 Hz, 9999	9999	1428	Mechanical loss setting frequency 5	0 to 400 Hz, 9999	9999	◎	
749	Mechanical loss 5	400 to 600%	500%	1429	Mechanical loss 5	900 to 1100%	1000%	△	
750	Target winding diameter	1 to 6553 mm	1 mm	648	Target winding diameter	1 to 6553 mm	1 mm	◎	
751	Dancer input offset	400 to 600%	500%	424	Dancer / tension feedback input offset	400 to 600%	500%	◎	
752	Material thickness d1	0 to 20 mm, 9999	9999	1231	Material thickness d1	0 to 20 mm, 9999	9999	◎	
753	Material thickness d2	0 to 20 mm	1 mm	1232	Material thickness d2	0 to 20 mm	1 mm	◎	
754	Material thickness d3	0 to 20 mm	1 mm	1233	Material thickness d3	0 to 20 mm	1 mm	◎	
755	Material thickness d4	0 to 20 mm	1 mm	1234	Material thickness d4	0 to 20 mm	1 mm	◎	
756	First acceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	394	First acceleration time for line speed command	0 to 3600 s	15 s	△	Note that the parameter for acceleration/deceleration reference is changed from Pr.20 to Pr.393 because the command method is changed.
757	First deceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	395	First deceleration time for line speed command	0 to 3600 s	15 s	△	
758	Second acceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	100	Second acceleration time for line speed command	0 to 3600 s	15 s	△	
759	Second deceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	101	Second deceleration time for line speed command	0 to 3600 s	15 s	△	
760	Third acceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	102	Third acceleration time for line speed command	0 to 3600 s	15 s	△	
761	Third deceleration time for main speed	0 to 3600 s/0 to 360 s	15 s	103	Third deceleration time for line speed command	0 to 3600 s	15 s	△	
762	Winding/unwinding selection	0, 1, 10, 11	0	1230	Winding/unwinding selection	0, 1	0	△	Value for A700-A1 → Replacement value for A800-R2R 0, 10 → 0 1, 11 → 1
763	Line speed input selection	0 to 7	0	362	Actual line speed input selection	0, 7, 9999	0	△	When "9999" is set to Pr.278 to Pr.281, the settings for the corresponding line speed command (Pr.350 to Pr.353) are applied for calibration. When the parameter for the line speed input selection is set to "0", the line speed command (in increments set by Pr.358) is used for the A800-R2R inverters although the main speed command (in Hz) is used for the FR-A700-A1 inverters.
764	Pulse reference for line speed input	0.01 to 200 k pulses/s	30 k pulses/s	283	Actual line speed pulse input gain	0, 500, 9999	9999	△	
765	Voltage/current reference 2 for line speed input	0.1 to 100%	50%	278	Actual line speed voltage/current gain	0 to 100%, 9999	9999	△	
766	Line speed reference 2	1 to 6553.4	1000	279	Actual line speed gain	0, 6553.4, 9999	9999	△	
767	Line speed unit	0, 1, 2, 3	0	358	Line speed unit	0 to 3	0	△	
768	Line speed input filter time constant	0 to 5 s	0.025 s	284	Actual line speed input filter time constant	0 to 5 s	0.02 s	△	
769	Filter treatment waiting time	0 to 100 s	0 s	1250	Winding diameter compensation speed filtering waiting time	0 to 100 s	0 s	◎	
770	Filter time constant	0 to 100 s	0 s	1251	Winding diameter compensation speed filter time constant	0 to 100 s	0 s	◎	
771	r-r' limit value (diameter)	0 to 9.998, 9999	1 mm	1247	Winding diameter change increment amount limit	0 to 9.998 mm, 9999	9999	△	The winding diameter calculation is disabled by the initial value (Pr.1247 = 9999). Always set the parameter when performing winding diameter calculation.
772	r-r' limit disable time	0 to 100 s	0 s	1248	Winding diameter change limit disable time	0 to 100 s	0 s	◎	
773	Gear ratio numerator (driver side)	1 to 65534	1	1243	Gear ratio numerator (follower side)	1 to 65534	1	◎	
774	Gear ratio denominator (follower side)	1 to 65534	1	1244	Gear ratio denominator (driver side)	1 to 65534	1	◎	
775	Speed control proportional term applied diameter 1	1 to 99%, 9999	9999	639	Speed control proportional term applied diameter 1	1 to 99%, 9999	9999	◎	
776	Speed control proportional term applied diameter 2	1 to 99%, 9999	9999	640	Speed control proportional term applied diameter 2	1 to 99%, 9999	9999	◎	
777	Speed control proportional gain 1	0 to 1000%, 9999	9999	641	Speed control proportional gain 1	0 to 1000%, 9999	9999	◎	
778	Speed control proportional gain 2	0 to 1000%, 9999	9999	642	Speed control proportional gain 2	0 to 1000%, 9999	9999	◎	
779	Speed control proportional gain 3	0 to 1000%, 9999	9999	643	Speed control proportional gain 3	0 to 1000%, 9999	9999	◎	
780	Speed control proportional gain 4	0 to 1000%, 9999	9999	644	Speed control proportional gain 4	0 to 1000%, 9999	9999	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
781	Winding diameter storage selection	0, 1	0	645	Winding diameter storage selection	0, 1	0	◎	
782	Stored winding diameter	1 to 6553	1 mm	646	Stored winding diameter	1 to 6553 mm	1 mm	◎	
783	Operation time with stored winding diameter	0 to 100 s	0 s	647	Operation time with stored winding diameter	0 to 100 s	0 s	◎	
785	Terminal 4 function selection	1, 2, 9999	9999	650	Terminal 4 input compensation selection	0, 1	0	×	When "9999" is set for the FR-A700-A1 inverters, set "0" for the FR-A800-F2-R2R. When "2" is set, set "9999" in Pr.1287 and set "4" in Pr.1285.
786	Number of averaging for winding diameter calculation	0 to 10	4	1249	Number of averaging for winding diameter calculation	0 to 10	4	◎	
787	Taper ratio setting	0 to 100%, 9999	0%	1287	Taper ratio setting	0 to 100%, 9999	0%	◎	
788	Winding diameter at taper start	1 to 6553 mm, 9999	9999	1286	Winding diameter at taper start	0 to 6553 mm, 9999	9999	◎	
789	Dancer tension setting	1 to 100, 9999	100	430	Dancer tension setting	1 to 100, 9999	100	◎	
790	Initial winding diameter calculation start point	400% to 600%	400%	1252	Dancer lower limit position	400 to 600%	400%	◎	
791	Initial winding diameter calculation dead zone	0 to 50%	1%	1253	Initial winding diameter calculation deadband	0 to 50%	1%	◎	
792	Accumulated amount	1 to 5000 mm, 8888, 9999	160 mm	1255	Accumulated amount	1 to 5000, 8888, 9999	9999	△	The winding diameter calculation is disabled by the initial value (Pr.1247 = 9999). Always set the parameter when performing winding diameter calculation.
793	Speed control P gain at a start	0 to 1000%	60%	1256	Speed control P gain at start	0 to 1000%	60%	◎	
794	Speed control integral time at a start	0 to 20 s	2 s	1257	Speed control integral time at start	0 to 20 s	2 s	◎	
795	Integral term limit at a start	0 to 100%	2.5%	1258	Integral term limit at start	0 to 100%	2.5%	◎	
796	PID term limit at a start	0 to 100%	2.5%	1259	PID term limit at start	0 to 100%	2.5%	◎	
797	Rotation speed at winding diameter calculated value activation	0 to 400 Hz	3 Hz	1246	Line speed at winding diameter calculated value activation	0 to 6553.4	1	×	The line speed in increments set by Pr.358 is used for the FR-A800-R2R inverters although the motor speed in Hz is used for the FR-A700-A1 inverters. Convert the motor speed to the line speed and configure the setting of Pr.1246. The conversion equation is as follows. $V = \pi \cdot D \cdot \omega \cdot Z$ V: Line speed [m/min] ω: Rotation speed converted from frequency [r/min] Z: Gear ratio D: Reference roll diameter [m] (Minimum diameter for the winding roller, maximum diameter for the unwinding roller)
798	Speed compensation bias	0 to 200%	60%	798	Speed compensation bias	0 to 200%	60%	-	Setting not required. (Refer to Section 4.4.)
799	Winding diameter monitoring reference	1 to 6553 mm	1000 mm	1280	Winding diameter monitoring reference	1 to 6553 mm	1000 mm	◎	
800	Control method selection	0, 1, 2, 6, 9 to 12, 16, 20	20	800	Control method selection	0 to 2, 9 to 12, 20, 100 to 102, 109 to 112	20	×	When Pr.862 in the FR-A700-A1 is set to "1", set Pr.800 to the total amount of setting value for the FR-A700-A1 inverters and 100
802	Pre-excitation selection	0, 1	0	802	Pre-excitation selection	0, 1	0	◎	
803	Constant power range torque characteristic selection	0, 1	0	803	Constant output range torque characteristic selection	0, 1, 10, 11	0	◎	
804	Torque command source selection	0 to 6	0	804	Tension /Torque command source selection	0, 1, 3 to 6	0	◎	
805	Torque command value (RAM)	600 to 1400%	1000%	805	Torque command value (RAM)	600 to 1400%	1000%	-	Setting not required.
806	Torque command value (RAM, EEPROM)	600 to 1400%	1000%	806	Torque command value (RAM, EEPROM)	600 to 1400%	1000%	◎	
807	Speed limit selection	0, 1, 2	0	807	Speed limit selection	0, 1, 2	0	◎	
808	Forward rotation speed limit	0 to 120 Hz	60 Hz	808	Forward rotation speed limit/speed limit	0 to 400 Hz	60 Hz	◎	
809	Reverse rotation speed limit	0 to 120 Hz, 9999	9999	809	Reverse rotation speed limit/reverse-side speed limit	0 to 400 Hz, 9999	9999	◎	
810	Torque limit input method selection	0, 1	0	810	Torque limit input method selection	0, 1	0	◎	
811	Set resolution switchover	0, 1, 10, 11	0	811	Set resolution switchover	0, 1, 10, 11	0	◎	
812	Torque limit level (regeneration)	0 to 400%, 9999	9999	812	Torque limit level (regeneration)	0 to 400%, 9999	9999	◎	
813	Torque limit level (3rd quadrant)	0 to 400%, 9999	9999	813	Torque limit level (3rd quadrant)	0 to 400%, 9999	9999	◎	
814	Torque limit level (4th quadrant)	0 to 400%, 9999	9999	814	Torque limit level (4th quadrant)	0 to 400%, 9999	9999	◎	
815	Torque limit level 2	0 to 400%, 9999	9999	815	Torque limit level 2	0 to 400%, 9999	9999	◎	
816	Torque limit level during acceleration	0 to 400%, 9999	9999	816	Torque limit level during acceleration	0 to 400%, 9999	9999	◎	
817	Torque limit level during deceleration	0 to 400%, 9999	9999	817	Torque limit level during deceleration	0 to 400%, 9999	9999	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
818	Easy gain tuning response level setting	1 to 15	2	818	Easy PI gain tuning response level setting	1 to 15	2	◎	
819	Easy gain tuning selection	0 to 2	0	819	Easy gain tuning selection	0 to 2	0	◎	
820	Speed control P gain 1	0 to 1000%	60%	820	Speed control P gain 1	0 to 1000%	60%	◎	
823	Speed detection filter 1	0 to 0.1 s	0.001 s	823	Speed detection filter 1	0 to 0.1 s	0.001 s	◎	
824	Torque control P gain 1	0 to 200%	100%	824	Torque control P gain 1 (current loop proportional gain)	0 to 500%	100%	◎	
825	Torque control integral time 1	0 to 500 ms	5 ms	825	Torque control integral time 1 (current loop integral time)	0 to 500 ms	5 ms	◎	
826	Torque setting filter 1	0 to 5 s, 9999	9999	826	Torque setting filter 1	0 to 5 s, 9999	9999	◎	
827	Torque detection filter 1	0 to 0.1s	0 s	827	Torque detection filter 1	0 to 0.1s	0 s	◎	
828	Model speed control gain	0 to 1000%	60%	828	Model speed control gain	0 to 1000%	60%	◎	
830	Speed control P gain 2	0 to 1000%, 9999	9999	830	Speed control P gain 2	0 to 1000%, 9999	9999	◎	
831	Speed control integral time 2	0 to 20 s, 9999	9999	831	Speed control integral time 2	0 to 20 s, 9999	9999	◎	
832	Speed setting filter 2	0 to 5 s, 9999	9999	832	Speed setting filter 2	0 to 5 s, 9999	9999	◎	
833	Speed detection filter 2	0 to 0.1 s, 9999	9999	833	Speed detection filter 2	0 to 0.1 s, 9999	9999	◎	
834	Torque control P gain 2	0 to 200%, 9999	9999	834	Torque control P gain 2	0 to 500%, 9999	9999	◎	
835	Torque control integral time 2	0 to 500 ms, 9999	9999	835	Torque control integral time 2	0 to 500 ms, 9999	9999	◎	
836	Torque setting filter 2	0 to 5 s, 9999	9999	836	Torque setting filter 2	0 to 5 s, 9999	9999	◎	
837	Torque detection filter 2	0 to 0.1 s, 9999	9999	837	Torque detection filter 2	0 to 0.1 s, 9999	9999	◎	
840	Torque bias selection	0 to 3, 9999	9999	840	Torque bias selection	0 to 3, 24, 25, 9999	9999	◎	
841	Torque bias 1	600 to 1400%, 9999	9999	841	Torque bias 1	600 to 1400%, 9999	9999	◎	
842	Torque bias 2	600 to 1400%, 9999	9999	842	Torque bias 2	600 to 1400%, 9999	9999	◎	
843	Torque bias 3	600 to 1400%, 9999	9999	843	Torque bias 3	600 to 1400%, 9999	9999	◎	
844	Torque bias filter	0 to 5 s, 9999	9999	844	Torque bias filter	0 to 5 s, 9999	9999	◎	
845	Torque bias operation time	0 to 5 s, 9999	9999	845	Torque bias operation time	0 to 5 s, 9999	9999	◎	
846	Torque bias balance compensation	0 to 10 V, 9999	9999	846	Torque bias balance compensation	0 to 10 V, 9999	9999	◎	
847	Fall-time torque bias terminal 1 bias	0 to 400%, 9999	9999	847	Fall-time torque bias terminal 1 bias	0 to 400%, 9999	9999	◎	
848	Fall-time torque bias terminal 1 gain	0 to 400%, 9999	9999	848	Fall-time torque bias terminal 1 gain	0 to 400%, 9999	9999	◎	
849	Analog input offset adjustment	0 to 200%	100%	849	Analog input offset adjustment	0 to 200%	100%	◎	
850	Brake operation selection	0, 1	0	850	Brake operation selection	0, 1, 2	0	◎	
851	Voltage/current reference 1 for line speed input	0 to 100%	0%	280	Actual line speed voltage/current bias	0 to 100%, 9999	9999	◎	
852	Line speed reference 1	0 to 6553.4	0	281	Actual line speed bias	0, 6553.4, 9999	9999	△	The initial value is set, the calibration of the line speed command is used.
853	Speed deviation time	0 to 100 s	1 s	853	Speed deviation time	0 to 100 s	1 s	◎	
854	Excitation ratio	0 to 100%	100%	854	Excitation ratio	0 to 100%	100%	◎	
858	Terminal 4 function assignment	0, 1, 4, 9999	0	858	Terminal 4 function assignment	0, 1, 4, 9999	0	◎	
859	Torque current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	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	◎	
860	Second motoring torque current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	860	Second motor torque current/Rated PM motor current	55K or lower: 0 to 500 A, 9999 75K or higher: 0 to 3600 A, 9999	9999	◎	
862	(Notch filter time constant)	0 to 60	0	1004	Notch filter depth	0 to 3	0	△	Refer to Section “4.2. Notch Filter Setting”.
863	Notch filter depth	0, 1, 2, 3	0						
864	Torque detection	0 to 400%	150%	864	Torque detection	0 to 400%	150%	◎	
865	Low speed detection	0 to 400 Hz	1.5 Hz	865	Low speed detection	0 to 590 Hz	1.5 Hz	◎	
866	Torque monitor reference	0 to 400%	150%	866	Torque monitor reference	0 to 400%	150%	◎	
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 to 6, 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	◎	
873	Speed limit	0 to 120 Hz	20 Hz	873	Speed limit	0 to 400 Hz	20 Hz	◎	
874	OLT level setting	0 to 200%	150%	874	OLT level setting	0 to 400%	150%	◎	
875	Fault definition	0, 1	0	875	Fault definition	0, 1	0	◎	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
877	Speed feed forward control/ model adaptive speed control selection	0, 1, 2	0	877	Speed feed forward control/ model adaptive speed control selection	0, 1, 2	0	◎	
878	Speed feed forward filter	0 to 1 s	0 s	878	Speed feed forward filter	0 to 1 s	0 s	◎	
879	Speed feed forward torque limit	0 to 400%	150%	879	Speed feed forward torque limit	0 to 400%	150%	◎	
880	Load inertia ratio	0 to 200 times	7	880	Load inertia ratio	0 to 200 times	7	◎	
881	Speed feed forward gain	0 to 1000%	0%	881	Speed feed forward gain	0 to 1000%	0%	◎	
882	Regeneration avoidance operation selection	0, 1, 2, 3	0	882	Regeneration avoidance operation selection	0, 1, 2	0	◎	
883	Regeneration avoidance operation level	300 to 800 VDC	380/760 VDC	883	Regeneration avoidance operation level	300 to 1000 VDC	380/760 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	◎	
C0 (900)	FM terminal calibration	-	-	C0 (900)	FM/CA terminal calibration	-	-	×	Use this parameter for calibration as required.
C1 (901)	AM terminal calibration	-	-	C1 (901)	AM terminal calibration	-	-	×	Use this parameter for calibration as required.
C2 (902)	Terminal 2 frequency setting bias frequency	0 to 400 Hz	0 Hz	C2 (902)	Terminal 2 frequency setting bias frequency	0 to 590 Hz	0 Hz	or	Set the parameter as required. For the details, refer to Section "5.12.5 Frequency setting voltage (current) bias and gain" and "5.12.6 Torque (magnetic flux) setting voltage (current) bias and gain" in the FR-A800 Instruction Manual (Detailed). When the input method is set to the analog input terminal using the dedicated function selection Pr.361 to Pr.364 and Pr.1285, the setting ranges of Pr.C3 (902), Pr.C4 (903), Pr.C6 8 (904), Pr.C7 (905), Pr.C13 (917), and Pr.C15 (918) are clamped at 100%. For the details, refer to "3.5.6 Dancer roll setting" or "4.5.1 Tension feedback setting" in the FR-A800 Roll to Roll Function Manual.
C3 (902)	Terminal 2 frequency setting bias	0 to 300%	0%	C3 (902)	Terminal 2 frequency setting bias	0 to 300%	0%	△	
125 (903)	Terminal 2 frequency setting gain frequency	0 to 400 Hz	60 Hz	125 (903)	Terminal 2 frequency setting gain frequency	0 to 590 Hz	60 Hz	△	
C4 (903)	Terminal 2 frequency setting gain	0 to 300%	100%	C4 (903)	Terminal 2 frequency setting gain	0 to 300%	100%	△	
C5 (904)	Terminal 4 frequency setting bias frequency	0 to 400 Hz	0 Hz	C5 (904)	Terminal 4 frequency setting bias frequency	0 to 590 Hz	0 Hz	△	
C6 (904)	Terminal 4 frequency setting bias	0 to 300%	20%	C6 (904)	Terminal 4 frequency setting bias	0 to 300%	20%	△	
126 (905)	Terminal 4 frequency setting gain frequency	0 to 400 Hz	60 Hz	126 (905)	Terminal 4 frequency setting gain frequency	0 to 590 Hz	60 Hz	△	
C7 (905)	Terminal 4 frequency setting gain	0 to 300%	100%	C7 (905)	Terminal 4 frequency setting gain	0 to 300%	100%	△	
C12 (917)	Terminal 1 bias frequency (speed)	0 to 400 Hz	0 Hz	C12 (917)	Terminal 1 bias frequency (speed)	0 to 590 Hz	0 Hz	△	
C13 (917)	Terminal 1 bias (speed)	0 to 300%	0%	C13 (917)	Terminal 1 bias (speed)	0 to 300%	0%	△	
C14 (918)	Terminal 1 gain frequency (speed)	0 to 400 Hz	60 Hz	C14 (918)	Terminal 1 gain frequency (speed)	0 to 590 Hz	60 Hz	△	
C15 (918)	Terminal 1 gain (speed)	0 to 300%	100%	C15 (918)	Terminal 1 gain (speed)	0 to 300%	100%	△	

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Number	Name	Setting range	Initial value	Number	Name	Setting range	Initial value	Setting	Remarks
C16 (919)	Terminal 1 bias command (torque/magnetic flux)	0 to 400%	0%	C16 (919)	Terminal 1 bias command (torque / magnetic flux)	0 to 400%	0%	△	Set the parameter as required. For the details, refer to Section "5.12.5 Frequency setting voltage (current) bias and gain" and "5.12.6 Torque (magnetic flux) setting voltage (current) bias and gain" in the FR-A800 Instruction Manual (Detailed).
C17 (919)	Terminal 1 bias (torque/magnetic flux)	0 to 300%	0%	C17 (919)	Terminal 1 bias (torque / magnetic flux)	0 to 300%	0%	△	
C18 (920)	Terminal 1 gain command (torque/magnetic flux)	0 to 400%	150%	C18 (920)	Terminal 1 gain command (torque / magnetic flux)	0 to 400%	150%	△	
C19 (920)	Terminal 1 gain (torque/magnetic flux)	0 to 300%	100%	C19 (920)	Terminal 1 gain (torque / magnetic flux)	0 to 300%	100%	△	
C38 (932)	Terminal 4 bias command (torque/magnetic flux)	0 to 400%	0%	C38 (932)	Terminal 4 bias command (torque / magnetic flux)	0 to 400%	0%	△	
C39 (932)	Terminal 4 bias (torque/magnetic flux)	0 to 300%	20%	C39 (932)	Terminal 4 bias (torque / magnetic flux)	0 to 300%	20%	△	
C40 (933)	Terminal 4 gain command (torque/magnetic flux)	0 to 400%	150%	C40 (933)	Terminal 4 gain command (torque / magnetic flux)	0 to 400%	150%	△	
C41 (933)	Terminal 4 gain (torque/magnetic flux)	0 to 300%	100%	C41 (933)	Terminal 4 gain (torque / magnetic flux)	0 to 300%	100%	△	
989	Parameter copy alarm release	55K or lower: 10 75K or higher: 100	55K or lower: 10 75K or higher: 100	989	Parameter copy alarm release	55K or lower: 10 75K or higher: 100	55K or lower: 10 75K or higher: 100	△	
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	◎	

4.2. Notch Filter Setting

When Pr.862 (Notch filter time constant) is set in the FR-A700-A1, refer to the following table to set Pr.1003 (Notch filter frequency) in the FR-A800-R2R.

FR-A700-A1 Pr.862 setting (Notch filter time constant)	FR-A800-R2R Pr.1003 setting (Notch filter frequency)	Remarks
0	0	
1	1000	The fast-response operation must be set. (Set Pr.800 to the total amount of the setting value of Pr.800 in the FR-A700-A1 inverters and 100.)
2	500	
3	333	
4	250	
5	200	
6	167	
7	143	
8	125	
9	111	
10	100	
11	91	
12	83	
13	77	
14	71	
15	67	
16	63	
17	59	
18	56	
19	53	
20	50	
21	48	
22	46	
23	44	
24	42	
25	40	
26	39	
27	37	
28	36	
29	35	
30	33	
31	32	
32	31	
33	30	
34	29	
35	29	
36	28	
37	27	
38	26	
39	26	
40	25	
41	24	
42	24	
43	23	
44	23	
45	22	

FR-A700-A1 Pr.862 setting (Notch filter time constant)	FR-A800-R2R Pr.1003 setting (Notch filter frequency)	Remarks
46	22	
47	21	
48	21	
49	20	
50	20	
51	20	
52	19	
53	19	
54	19	
55	18	
56	18	
57	18	
58	17	
59	17	
60	17	

4.3. Compatibility of the Terminal Response Speed

The response of the input/output terminals of the FR-A800-R2R inverters is improved compared to the FR-A700-A1 inverters. Operation timing of the device may differ depending on the usage.
In such cases, use Pr.289 (Inverter output terminal filter) and Pr.699 (Input terminal filter) to adjust the terminal response time.
Set about 5 to 8 ms in Pr.289 and Pr.699 and adjust according to the system.

4.4. Input Signals not Inherited from FR-A700-A1 Inverters

Some I/O signals are added or deleted for the FR-A800-R2R inverters compared to the FR-A700-A1 inverters.
The following shows the replacement setting method for the input signals not inherited to the FR-A800-R2R inverters from the FR-A700-A1 inverters.

Input signal used in the FR-A700-A1	Replacement input signal used in the FR-A800-R2R	Remarks
X35 (Speed compensation gain selection)	No signal	Setting is not required because the speed compensation gain is initially enabled in the FR-A800-R2R inverters.
X56 (Winding/unwinding selection)	X126 (Two-way operation)	During tension feedback speed control or tension sensor feedback control → In addition to the winding/unwinding selection, PID action (forward/reverse), and start command (STF/STR) are changed at once, which allows easy switching between two directions.
		During tension sensorless torque control →The signal has the same function of the Winding/unwinding selection (X56) signal in the FR-A700-A1 inverters.

4.5. Dedicated Monitor Items

Some dedicated monitor items are added or deleted for the FR-A800-R2R inverters compared to the FR-A700-A1 inverters.
Accordingly, the setting value used in Pr.52 (Operation panel main monitor selection) is changed.
The following table shows the correlation in setting values and monitor item name between two inverters.

Monitor item in the FR-A700-A1		Monitor item in the FR-A800-R2R		Remarks
Pr.52 setting	Monitor item name	Pr.52 setting	Monitor item name	
26	Terminal 1 input voltage	85	Terminal 1 input voltage	
27		86	Terminal 1 input after calibration (%)	Name changed.
39	Dancer tension command	19	Analog output signal for dancer tension control	Name changed.
40	Winding diameter	22	Winding diameter	
41	Main speed	26	Line speed command	Monitor item changed due to the changed command input method.
42	Line speed	27	Actual line speed	Name changed.
43	Dancer compensation speed	28	Dancer compensation speed	
44	Winding diameter compensation speed	97	Winding diameter compensation speed	
45	Winding/unwinding length	29	Winding length (lower 4 digits)	Name changed.
46	Dancer tension command 2	30	Analog output signal 2 for dancer tension control	Name changed.
52	Dancer roll set point	52	PID set point	Name changed.
53	Measured dancer roll value	53	PID measured value	Name changed.
54	Dancer roll position deviation	54	PID deviation	Name changed.
62	Line speed pulse monitor	31	Line speed pulse monitor	
63	Tension command	82	Winding diameter compensation torque command	Name changed.
64	Mechanical loss compensation	84	Mechanical loss compensation	
65	Inertia compensation	83	Inertia compensation	

5. OPTION

5.1. Option List

The following table shows the comparison of options between the FR-A700-A1 inverters and the FR-A800-R2R inverters.

Name			Option model	
			FR-A700-A1	FR-A800-R2R
Plug-in type	12-bit digital input		FR-A7AX	FR-A8AX
	Digital output, additional analog output		FR-A7AY	FR-A8AY
	Relay output		FR-A7AR	FR-A8AR
	Bipolar analog output High resolution analog input Motor thermistor interface		FR-A7AZ	FR-A8AZ
	Orientation/encoder/pulse train input		FR-A7AP	FR-A8AP
	Orientation/encoder/vector position Pulse division		FR-A7AL	FR-A8AL
	PROFIBUS-DP		FR-A7NP	FR-A8NP
	DeviceNet		FR-A7ND	FR-A8ND
	CC-Link		FR-A7NC	FR-A8NC
	FL remote communication		FR-A7NF	N/A
Stand-alone type	Parameter unit		FR-PU07	Compatible Parameter copy can be performed for only one unit. Some parameter names are different. The parameter unit cannot be directly installed on the inverter.
	Parameter unit connection cable		FR-CB201, 203, 205	Compatible
	Inter-compatibility attachment		FR-AAT, FR-A5AT	Compatible
	Panel through attachment		FR-A7CN	FR-A8CN Panel cutout is compatible except for some capacities. The depth of the inverter within/without the enclosure differs. For the details, refer to the Instruction Manual of FR-A8CN (1).
	Surge voltage suppression filter		FR-ASF-H	Compatible
	Power factor improving DC reactor		FR-BEL(-H)	FR-HEL(-H)
	Power factor improving AC reactor		FR-BAL(-H), MT-BAL(-H)	FR-HAL(-H)*
	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
	FR-CV type power regeneration common converter		FR-CV-(H)7.5K(-AT) to 55K	Compatible
	Stand-alone reactor dedicated for the FR-CV		FR-CVL-(H)7.5K to 55K	Compatible
	FR-HC type high power factor converter		FR-HC(-H), MT-HC(-H), FR-HC2(-H)	Compatible
	Sine wave filter	Reactor	MT-BSL(-H)	Compatible
		Capacitor	MT-BSC(-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 1kΩ	Compatible
	Frequency meter		YM206NRI 1mA	Compatible
	Calibration resistor		RV24YN 10kΩ	Compatible

* When the FR-RC(-H) or MT-RC(-H) converter is used, use the FR-BAL(-H) or MT-BAL(-H).

5.2. Replacement of the FR-A7NC

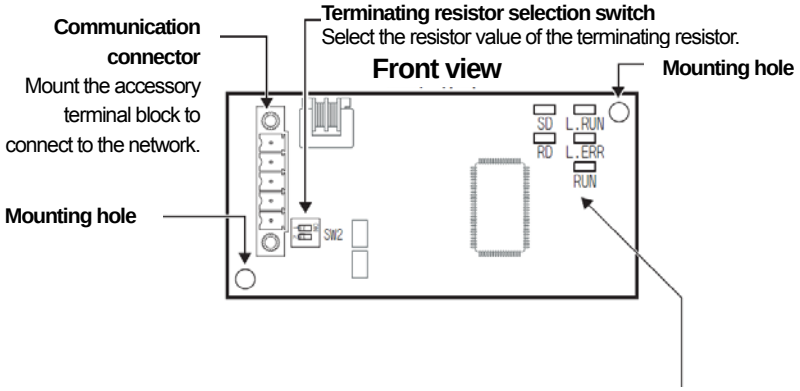
When the FR-A7NC (CC-Link IE Field communication option) is used for the FR-A700-A1 inverters, the FR-A7NC is not compatible with the FR-A800-R2R inverters as the replacement of the FR-A700-A1 inverters. For the CC-Link communication with the FR-A800-R2R inverters, use the FR-A8NC.

(1) Shape and installation method

The following table shows the differences in the shape and installation method between the FR-A7NC and FR-A8NC.

Item	FR-A7NC	FR-A8NC	Remarks
Shape	Inverter plug-in option, terminal block connection	Inverter plug-in option, terminal block connection	Although the connection method is the same, the circuit board of the option has a different shape.
Terminal block	Dedicated terminal block (M2 small flathead screw)	A6CON-L5P insertion wiring	The shape of the terminal block and wiring method differ. A terminal block is not enclosed.
Installation position	Option connector 3. * After connecting the terminal block, install the front cover of the inverter.	Option connector 1. * After connecting the terminal block, install the front cover of the inverter.	
Terminating resistor selection	Terminating resistor selection switch	Terminating resistor selection switch	
Connection cable	CC-Link dedicated cable	CC-Link dedicated cable	
Communication connector position	Side area on the board	Bottom on the board	The wiring route is different. Check the connection cable length.

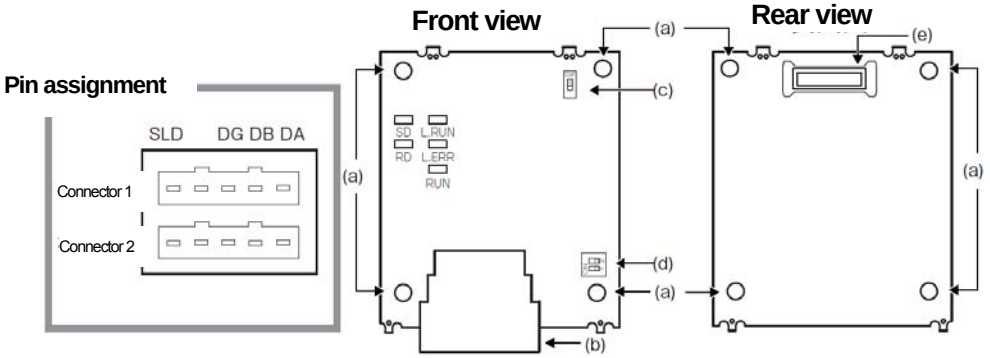
【Shape of the FR-A7NC】



LED (operation status indicator)

The operating status is indicated by turning ON/blinking of the LED.

【Shape of the FR-A8NC】



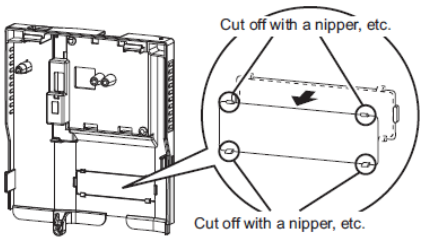
Symbol	Name	Description
a	Mounting hole	Fixes the option to the inverter with screws, or installs spacers.
b	CC-Link communication one-touch connector	CC-Link communication can be performed with the CC-Link communication connector.
c	Switch for manufacturer setting	Switch for manufacturer setting. Do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

[Installation procedure of the FR-A8NC]

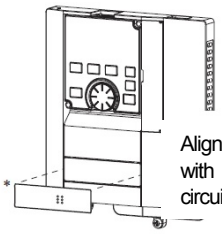
◆ **Installing the communication option LED display cover**

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

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



(3) Fit the communication option LED display cover to the front side of the front cover. Push the LED display cover until it is fixed with the hooks.



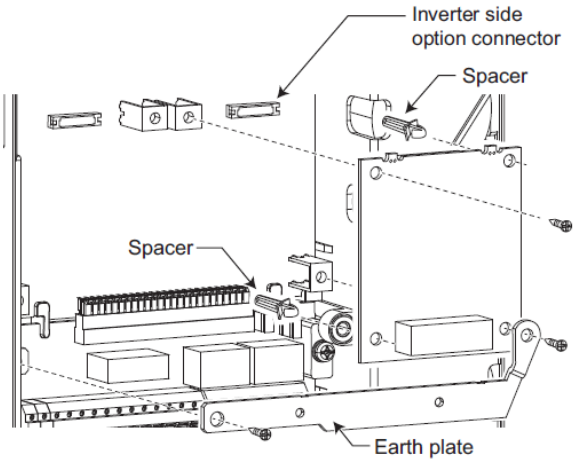
Align the LED display cover with the LED position on the circuit board of the option.

NOTE

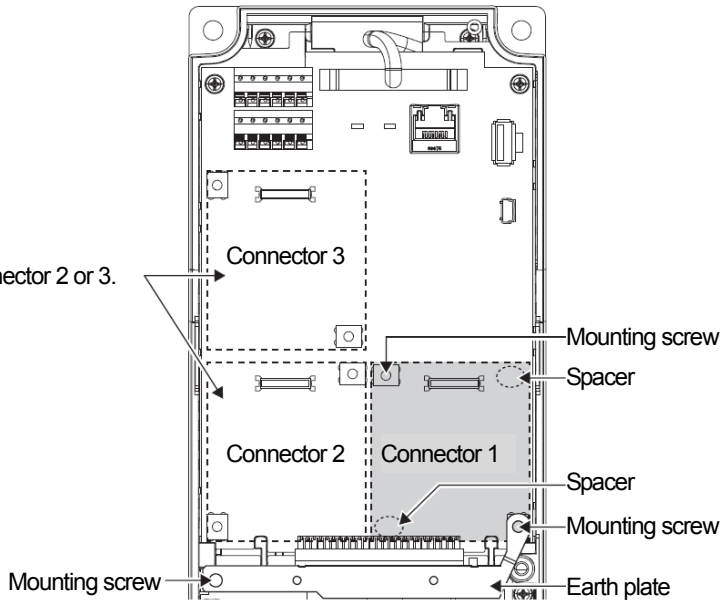
• The protective structure (JEM1030) changes to the open type (IP00).

◆ **Installing the option**

(1) For the two mounting holes (as shown in the next page) that will not be tightened with mounting screws, insert spacers.
(2) Fit the connector of the plug-in option to the guide of the connector on the inverter unit side, and insert the plug-in option as far as it goes. (Insert it to the inverter option connector 1.)
(3) Fit the one location on the left of the earth plate (as shown in the next page) securely to the inverter unit by screwing in the supplied mounting screw. (tightening torque 0.33 N·m to 0.40 N·m)
(4) Fit the one location on the left of the plug-in option securely to the inverter unit and the right of the plug-in option to the inverter unit together with the earth plate by screwing in the supplied mounting screws. (tightening torque 0.33 N·m to 0.40 N·m) If the screw holes do not line up, the connector may not be inserted deep enough. Check the connector.



Do not insert the plug-in option to the connector 2 or 3.

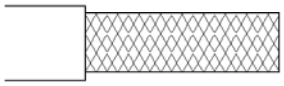
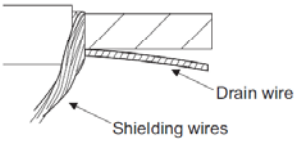
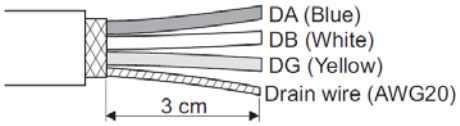


Insertion positions for screws and spacers

[Connection cable of the FR-A8NC]

In the CC-Link system, use CC-Link dedicated cables.
If the cable used is other than the CC-Link dedicated cable, the performance of the CC-Link system is not guaranteed.
For the specifications of the CC-Link dedicated cable, refer to the website of the CC-Link Partner Association.
Website of the CC-Link Partner Association http://www.cc-link.org/

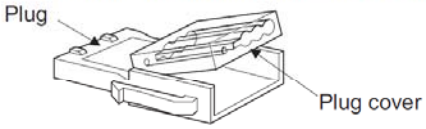
(1) Cable-end treatment
Apply the following treatment at wire end of the CC-Link dedicated cable that is inserted to a CC-Link communication one-touch connector plug (accessory).

<table>
<tr>
<td>1. Cut the sheath
  </td>
<td>2. Separate shielding wires from the drain wire. Cut the shielding wires.
 
</td>
</tr>
<tr>
<td>3. Cut the aluminum tape and braid.
</td>
<td>4. Straighten the drain wire and twist it from the root.
(Twist seven times or more per 3 cm.)
 
</td>
</tr>
</table>

NOTE

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

(2) Plug cover check
Check that the plug cover is snapped into the CC-Link communication one-touch connector plug.



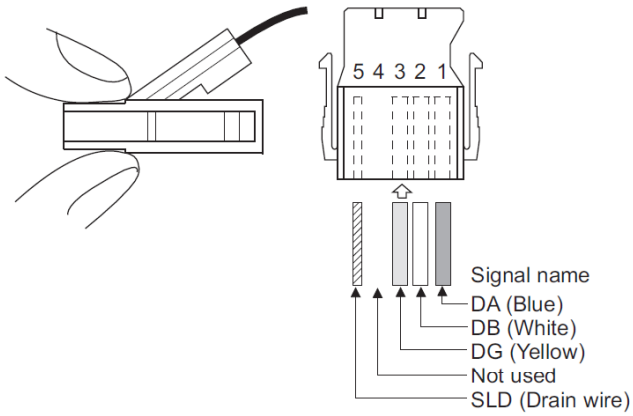
NOTE

- Do not push the plug cover onto the plug before inserting a cable. Once crimped, the plug cover cannot be reused.
- CC-Link communication one-touch connector plug (As of July 2013. The product may be changed without notice.)
  If purchasing a CC-Link communication one-touch connector plug separately, refer to the plugs in the following list.

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

(3) Cable insertion

Lift up the tail of the plug cover. Fully insert each signal cable into the CC-Link communication one-touch connector plug as shown in the right figure.

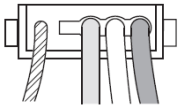


NOTE

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

(4) Crimping the plug cover

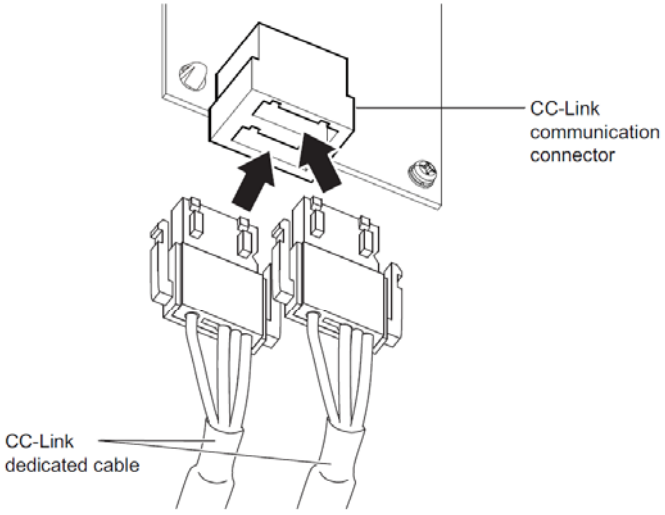
Push the plug cover onto the plug with a tool such as pliers. After crimping, check that the plug cover is securely snapped into the plug as shown in the right figure.



NOTE

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

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



NOTE

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

[Setting of the terminating resistor selection switch of the FR-A8NC]
For the inverter (FR-A8NC) of the end station, configure the terminating resistor selection switch setting in advance.
The following table lists the specifications of the terminating resistor selection switch.
Use the same setting of the terminating resistor selection switch on the FR-A7NC.

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

The parameter numbers are the same between two options. Refer to the following table to set the parameters.

List of inverter parameters for the FR-A8NC compatible with the inverter parameters for the FR-A7NC

The following table shows the parameter settings required when replacing the FR-A700-A1 inverter and the FR-A7NC with the FR-A800-1-R2R inverter and the FR-A8NC.
For parameters of the FR-A700-A1 inverters whose setting has been changed from the initial value, set the corresponding parameters of the FR-A800-R2R inverters according to the following table.
For parameters of the FR-A700-A1 inverters whose setting has not been changed from the initial value, it is basically not necessary to change the setting of the corresponding parameters of the FR-A800-R2R inverters.

Setting ◎: Use the same setting of the FR-A700-A1 inverter.
△: Change the setting of the FR-A700-A1 inverter as needed.
×: Adjust and set the FR-A800-R2R parameter independently.

FR-A700-A1 parameter				FR-A800-1-R2R (ND rating) compatible parameter				Description about parameter setting	
Function number	Name	Setting Range	Initial value	Function number	Name	Setting Range	Initial value	Setting	Remarks
313	DO0 output selection	0 to 8, 10 to 20, 25 to 28, 30 to 36, 39, 41 to 47, 64, 70, 84 to 99, 100 to 108, 110 to 116, 120, 125 to 128, 130 to 136, 139, 141 to 147, 164, 170, 184 to 199, 9999	9999	313	DO0 output selection	0 to 8, 10 to 20, 22, 25 to 28, 30 to 36, 38, 39, 41 to 54, 56, 57, 61, 63, 64, 68, 70, 84 to 99, 100 to 108, 110 to 116, 120, 122, 125 to 128, 130 to 136, 138, 139, 141 to 154, 156, 157, 161, 163, 164, 168, 170, 184 to 199, 200 to 205, 300 to 305, 9999	9999	◎	
314	DO1 output selection		9999	314	DO1 output selection		9999	◎	
315	DO2 output selection		9999	315	DO2 output selection		9999	◎	
338	Communication operation command source	0, 1	0	338	Communication operation command source	0, 1	0	◎	
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	◎	
342	Communication EEPROM write selection	0, 1	0	342	Communication EEPROM write selection	0, 1	0	◎	
349	Communication reset selection	0, 1	0	349	Communication reset selection	0, 1	0	◎	
500	Communication error execution waiting time	0 to 999.8 s	0 s	500	Communication error execution waiting time	0 to 999.8 s	0 s	◎	
501	Communication error occurrence count display	0	0	501	Communication error occurrence count display	0	0	◎	
502	Stop mode selection at communication error	0 to 3	0	502	Stop mode selection at communication error	0 to 3	0	◎	
541	Frequency command sign selection	0, 1	0	541	Frequency command sign selection	0, 1	0	◎	
542	Communication station number (CC-Link)	1 to 64	1	542	Communication station number (CC-Link)	1 to 64	1	◎	
543	Baud rate selection (CC-Link)	0 to 4	0	543	Baud rate selection (CC-Link)	0 to 4	0	◎	
544	CC-Link extended setting	0, 1, 12, 14, 18	0	544	CC-Link extended setting	0, 1, 12, 14, 18, 100, 112, 114, 118	0	◎	
550	NET mode operation command source selection	0, 1, 9999	9999	550	NET mode operation command source selection	0, 1, 9999	9999	◎	
804	Torque command source selection	0, 1, 3 to 6	0	804	Torque command source selection	0, 1, 3 to 6	0	◎	

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