

## **Information for Replacement of FR-F500J** **Series**

Replacement model

FR- D700 Series

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

## 1. Size

When the FR-F500J series inverters are replaced with the FR-D700 series inverters, the required installation space of the FR-D700 series inverters is the same as that of the corresponding FR-F500J series inverters.

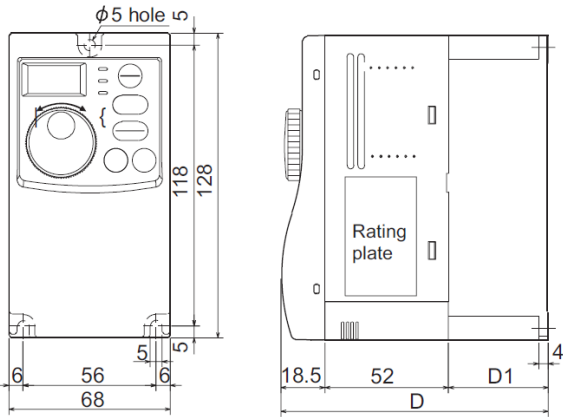
For more information about the product size, refer to the outline dimension drawings on the following pages.

Power supply voltage	Existing inverter	New inverter	Installation space comparison
Three-phase 200 V	FR-F520J-0.4K	FR-D720-0.4K	Same
	FR-F520J-0.75K	FR-D720-0.75K	Same
	FR-F520J-1.5K	FR-D720-1.5K	Same
	FR-F520J-2.2K	FR-D720-2.2K	Same
	FR-F520J-3.7K	FR-D720-3.7K	Same
	FR-F520J-5.5K	FR-D720-5.5K	Same
	FR-F520J-7.5K	FR-D720-7.5K	Same
	FR-F520J-11K	FR-D720-11K	Same
	FR-F520J-15K	FR-D720-15K	Same
Three-phase 400 V	FR-F540J-0.4K	FR-D740-0.4K	Same
	FR-F540J-0.75K	FR-D740-0.75K	Same
	FR-F540J-1.5K	FR-D740-1.5K	Same
	FR-F540J-2.2K	FR-D740-2.2K	Same
	FR-F540J-3.7K	FR-D740-3.7K	Same
	FR-F540J-5.5K	FR-D740-5.5K	Same
	FR-F540J-7.5K	FR-D740-7.5K	Same
	FR-F540J-11K	FR-D740-11K	Same
	FR-F540J-15K	FR-D740-15K	Same

\* The installation space is the same for inverters of the same capacity between the FR-F500J series and the FR-D700 series.

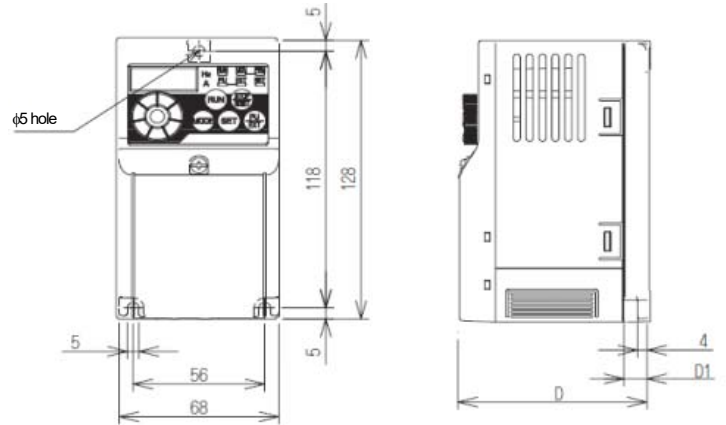
Outline dimension drawings (Unit: mm)

■FR-F520J-0.4K, 0.75K



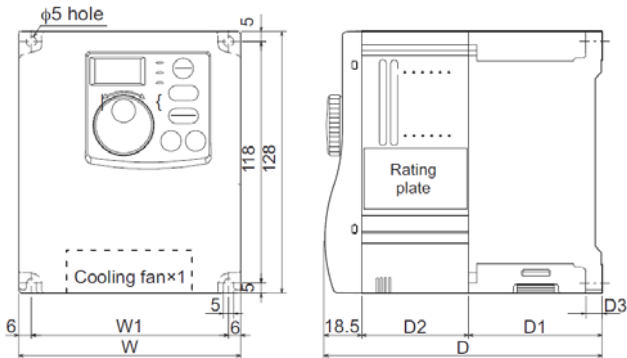
Inverter model	D	D1	D2
FR-F520J-0.4K	112.5	42	52
FR-F520J-0.75K	132.5	62	52

■FR-D720-0.4K, 0.75K



Inverter model	D	D1
FR-D720-0.4K	112.5	42
FR-D720-0.75K	132.5	62

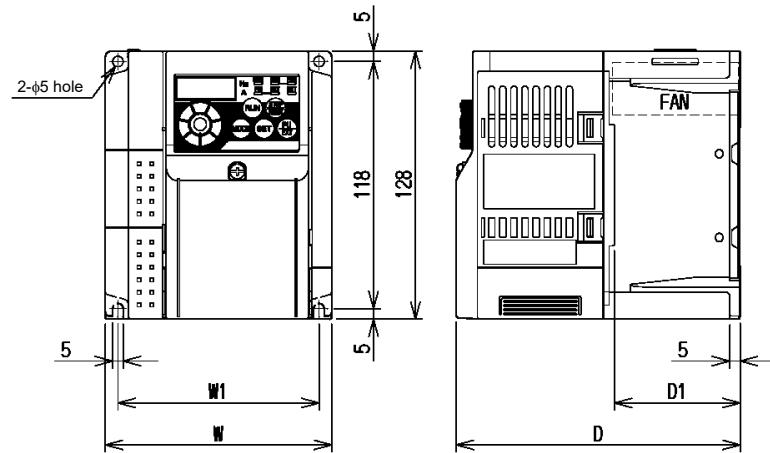
■FR-F520J-1.5K to 3.7K



Inverter model	W	W1
FR-F520J-1.5K, 2.2K	108	96
FR-F520J-3.7K	170	158

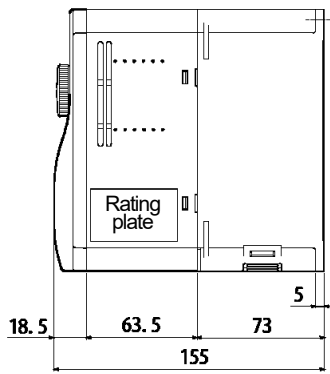
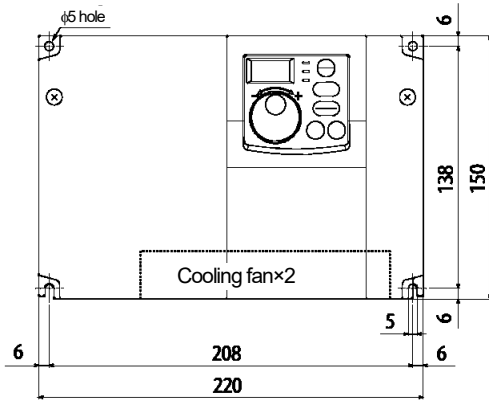
Inverter model	D	D1	D2	D3
FR-F520J-1.5K, 2.2K	135.5	65	52	8
FR-F520J-3.7K	142.5	72	52	5

■FR-D720-1.5K to 3.7K

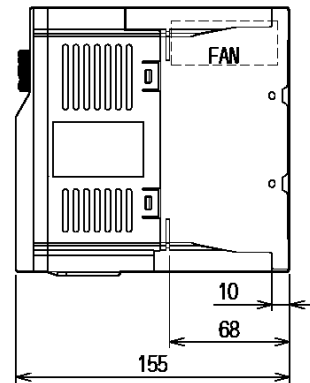
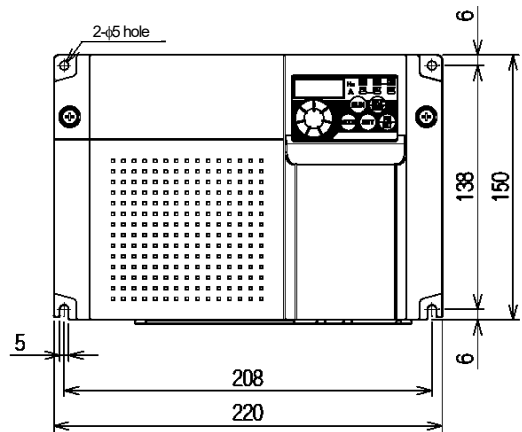


Inverter model	W	W1	D	D1
FR-D720-1.5K, 2.2K	108	96	135.5	60
FR-D720-3.7K	170	158	142.5	66.5

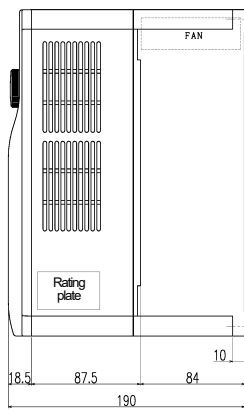
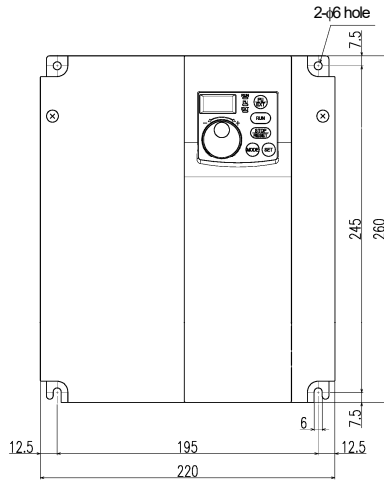
■FR-F520J-5.5K, 7.5K



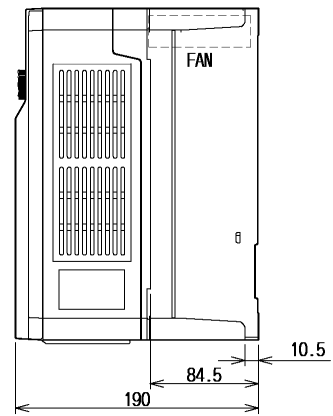
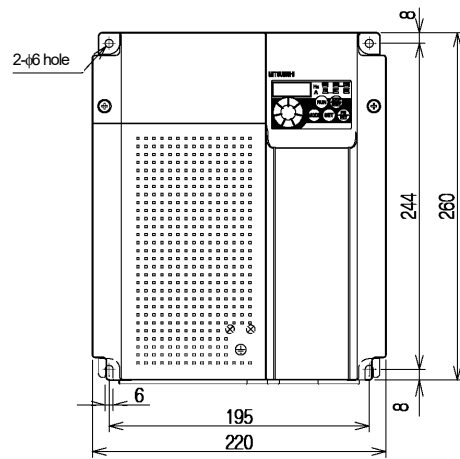
■FR-D720-5.5K, 7.5K



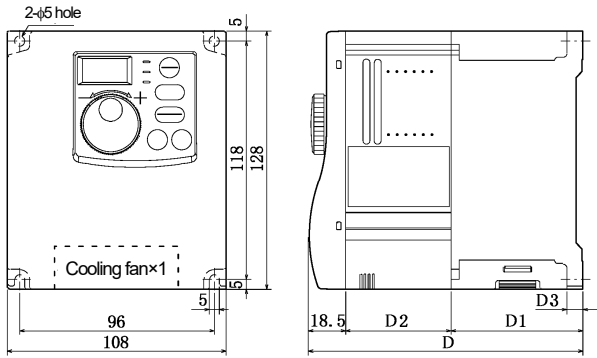
■FR-F520J-11K, 15K



■FR-D720-11K, 15K



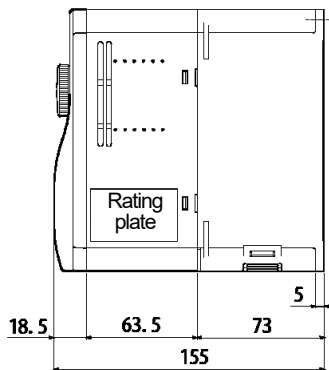
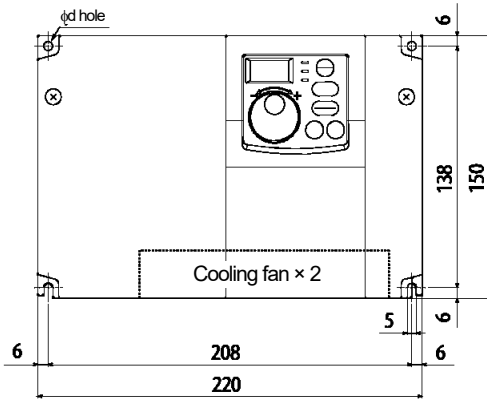
■FR-F540J-0.4K to 3.7K



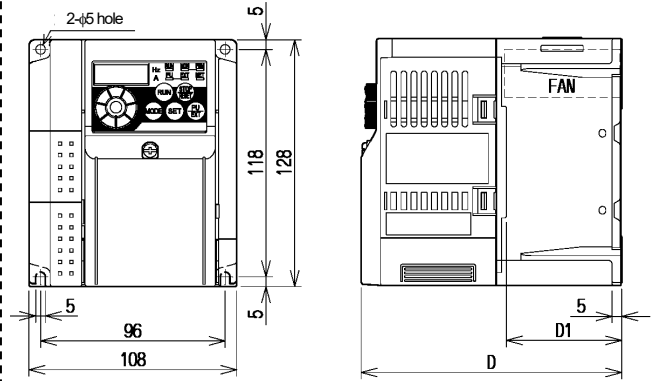
Inverter model	D	D1	D2	D3
FR-F540J-0.4K	129.5	59	52	5
FR-F540J-0.75K				
FR-F540J-1.5K	135.5	65	52	8
FR-F540J-2.2K	155.5	65	72	8
FR-F540J-3.7K	165.5	65	82	8

Note: The 0.4K inverters and 0.75K inverters are not provided with a cooling fan.

■FR-F540J-5.5K, 7.5K



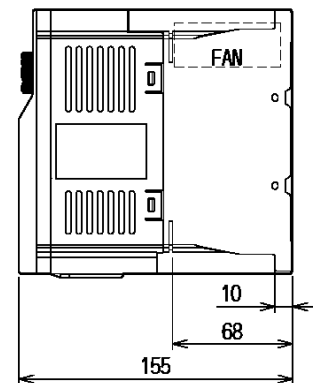
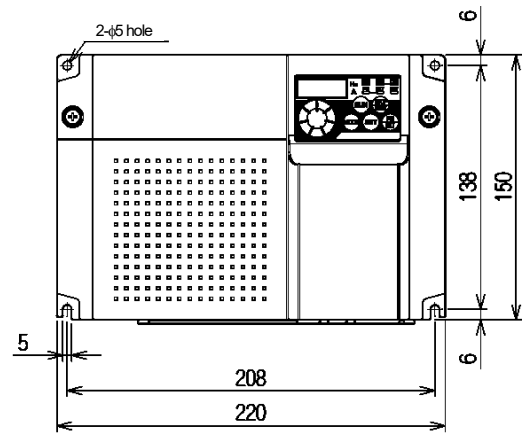
■FR-D740-0.4K to 3.7K



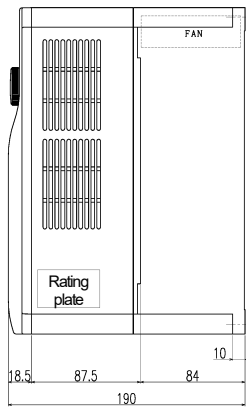
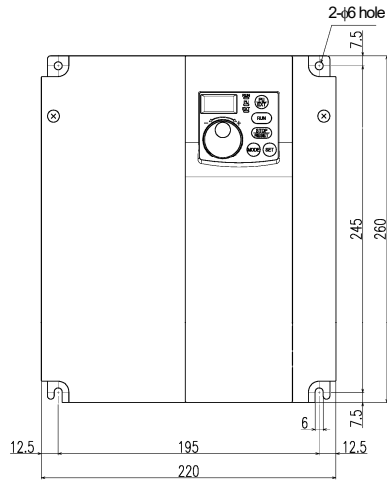
Inverter model	D	D1
FR-D740-0.4K	129.5	54
FR-D740-0.75K		
FR-D740-1.5K	135.5	60
FR-D740-2.2K	155.5	60
FR-D740-3.7K	165.5	60

Note: The 0.4K inverters and 0.75K inverters are not provided with a cooling fan.

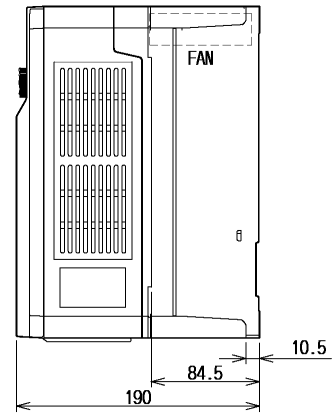
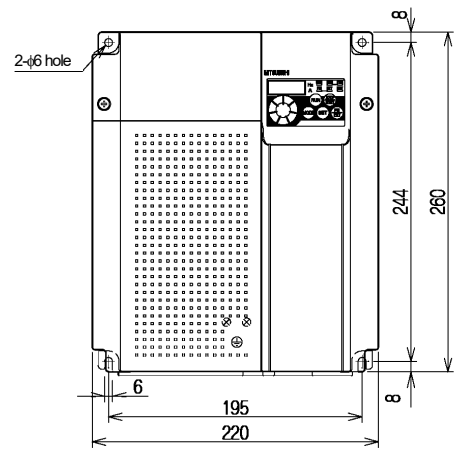
■FR-D740-5.5K, 7.5K



■FR-F540J-11K, 15K



■FR-D740-11K, 15K



## 2. 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..

For the terminal screw size, refer to page 9 and 10.

[Standard inverter]

Type		FR-F500J terminal name	FR-D700 compatible terminal name	Remarks
Main circuit		R/L1, S/L2, T/L3	R/L1, S/L2, T/L3	
		U, V, W	U, V, W	
		P/+	P/+, PR	Terminal PR is not provided for the FR-F500J series inverters.
		P/+, N/-	P/+, N/-	
		P/+, P1	P/+, P1	
		⊕	⊕	
Control circuit input signal	Contact	STF	STF	
		STR	STR	
		RH	RH	
		RM	RM	
		AU	RL	The function of terminal can be selected using the input terminal function selection.
		SD	SD	Isolated from terminals 5 and SE.
		PC	PC	
Analog	Frequency setting	10	10	
		2	2	
		5	5	Isolated from terminals SD and SE.
		4	4	
Control circuit output signal	Relay	A, B, C	A, B, C	
	Open collector	RUN	RUN	
		SE	SE	Isolated from terminals 5 and SD.
	Pulse	FM	FM	
Communication	RS-485	PU connector	PU connector	



Terminal screw size

[Main circuit terminal]

Voltage class	Capacity	FR-F500J				FR-D700			
		R/L1, S/L2, T/L3	U, V, W	P/+, N/- P1	⊕	R/L1, S/L2, T/L3	U, V, W	P/+, N/- P1, PR	⊕
Three-phase 200 V	0.4K to 0.75K	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5
	1.5K to 2.2K	M4	M4	M4	M4	M4	M4	M4	M4
	3.7K	M4	M4	M4	M4	M4	M4	M4	M4
	5.5K	M5	M5	M5	M5	M5	M5	M5	M5
	7.5K, 11K	M5	M5	M5	M5	M5	M5	M5	M5
	15K	M6	M6	M6	M6	M6	M6	M6	M5
Three-phase 400 V	0.4K to 11K	M4	M4	M4	M4	M4	M4	M4	M4
	15K	M6	M6	M6	M6	M5	M5	M5	M5

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BCN-C21002-107C

[Control circuit terminal]

FR-F500J		FR-D700
Control circuit		Control circuit
Other than A, B, C	A, B, C	
M2 Insertion type $\Theta$ screw terminal	M3 Insertion type $\Theta$ screw terminal	Spring clamp terminal

Note 1: When using our authorized ferrules manufactured by Phoenix Contact for the FR-F500J series inverters, they cannot be used for the FR-D700 series inverters since they are not compatible with the spring clamp terminal block. (Even other crimp terminals, they may not be used for the FR-D700 series inverters due to differences in size.)

To use the wires of the FR-F500J series inverters for the FR-D700 series inverters, disconnect the existing crimp terminal at the end of each wire, and strip wires or use crimp terminals shown below. Check the applicable wire gauge.

Table. Applicable wire gauge (stripped wire) for the FR-D700 control terminal block

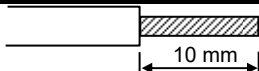
	Wire strip length	Applicable stripped wire gauge
		Single wire (mm <sup>2</sup> )
	Twist the stripped end of wires to prevent them from fraying. Do not solder it.	0.3 to 0.75

Table. Applicable wire gauge (crimped wire) for the FR-D700 control terminal block

Ferrule part No. (Phoenix Contact Co., Ltd.)		Applicable stripped wire gauge (mm <sup>2</sup> )
With insulation sleeve	Without insulation sleeve	
AI 0.5-10WH	-	0.3 to 0.5
AI 0.75-10GY	AI 0.75-10	0.75
AI 1-10RD	A 1-10	1
AI 1.5-10BK	AI 1.5-10	1.25, 1.5
AI-TWIN 2×0.75-GY	-	0.75 (two wires)

Blade terminal part No. (NICHIFU Co., Ltd.)		Applicable stripped wire gauge (mm <sup>2</sup> )
BT 0.75-11	VC 0.75	0.3 to 0.75

\* The length of applicable crimp terminals differs between the FR-D700 series inverters and the FR-F500J series inverters. (FR-D700: 10 mm, FR-F500J: 6 mm)

### 3. Parameter

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

#### List of FR-D700 series inverter parameters compatible with the FR-F500J series inverter parameters

The following table shows the parameter settings required when replacing FR-F500J series inverters with FR-D700 series inverters.

For parameters of the FR-F500J series inverters whose setting has been changed from the initial value, set the corresponding parameters of the FR-D700 series inverters according to the following table.

For parameters of the FR-F500J series 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-D700 series inverters.

The number of the parameter in    is different from that of the FR-F500J series inverters.

Setting  $\odot$ : Use the same setting of the FR-F500J inverters.

$\triangle$ : Change the setting of the the FR-F500J inverters as needed.

$\times$ : Adjust and set the FR-D700 inverter parameters independently.

FR-F500J parameter				FR-D700 compatible parameter				Description about parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
0	Torque boost	0 to 15%	Other than the below: 6% F520J-5.5K, 7.2K: 4% F520J-11K, 15K: 3% F540J-1.5K, 2.2K: 5% F540J-3.7K: 4% F540J-5.5, 7.5K: 3% F540J-11K, 15K: 2%	0	Torque boost	0 to 30%	0.75K or lower: 6% 1.5K to 3.7K: 4% 5.5K, 7.5K: 3% 11K, 15K: 2%	$\triangle$	When this parameter has been used at the initial setting in the FR-F500J inverters, use it at the initial setting in the FR-D700J inverters as well. When the setting has been changed from the initial value in the FR-F500J inverters, set the value obtained by multiplying the ratio of the set value to the initial value by the initial value in the FR-D700 inverters. Example) When the FR-F500J-1.5K has been used at the setting of 6%, the value for the FR-D740-1.5K can be obtained as follows: $6/5 \times 4 = 4.8(\%)$ .
1	Maximum frequency	0 to 120 Hz	60 Hz	1	Maximum frequency	0 to 120 Hz	120 Hz	$\odot$	The initial value differs between inverters in both series.
2	Minimum frequency	0 to 120 Hz	0 Hz	2	Minimum frequency	0 to 120 Hz	0 Hz	$\odot$	
3	Base frequency	0 to 120 Hz	60 Hz	3	Base frequency	0 to 400 Hz	60 Hz	$\odot$	
4	Multi-speed setting (high speed)	0 to 120 Hz	60 Hz	4	Multi-speed setting (high speed)	0 to 400 Hz	60 Hz	$\odot$	
5	Multi-speed setting (middle speed)	0 to 120 Hz	30 Hz	5	Multi-speed setting (middle speed)	0 to 400 Hz	30 Hz	$\odot$	
6	Multi-speed setting (low speed)	0 to 120 Hz	10 Hz	6	Multi-speed setting (low speed)	0 to 400 Hz	10 Hz	$\odot$	
7	Acceleration time	0 to 999 s	7.5K or lower: 5 s 11K or higher: 15 s	7	Acceleration time	0 to 3600 s	3.7K or lower: 5 s 5.5K, 7.5K: 10 s 11K, 15K: 15 s	$\odot$	The initial value differs between inverters in both series.
8	Deceleration time	0 to 999 s	7.5K or lower: 10 s 11K or higher: 30 s	8	Deceleration time	0 to 3600 s	3.7K or lower: 5 s 5.5K, 7.5K: 10 s 11K, 15K: 15 s	$\odot$	The initial value differs between inverters in both series.
9	Electronic thermal O/L relay	0 to 50 A	Inverter rated current	9	Electronic thermal O/L relay	0 to 500 A	Inverter rated current	$\odot$	Set the rated motor current.
10	DC injection brake operation frequency	0 to 120 Hz	3 Hz	10	DC injection brake operation frequency	0 to 120 Hz	3 Hz	$\odot$	
11	DC injection brake operation time	0 to 10 s	0.5 s	11	DC injection brake operation time	0 to 10 s	0.5 s	$\odot$	
12	DC injection brake operation voltage	0 to 15%	7.5K or lower: 4% 11K or higher: 2%	12	DC injection brake operation voltage	0 to 30%	0.1K, 0.2K: 6% 0.4K to 7.5K: 4% 11K, 15K: 2%	$\odot$	When this parameter has been used at the initial setting in the FR-F500J inverters, use it at the initial setting in the FR-D700J inverters as well. When the setting has been changed from the initial value in the FR-F500J inverters, set the value obtained by multiplying the ratio of the set value to the initial value by the initial value in the FR-D700 inverters. Example) When the FR-F500J-0.2K has been used at the setting of 7%, the value for the FR-D740-0.2K can be obtained as follows: $7/4 \times 6 = 10.5(\%)$ .
13	Starting frequency	0 to 60 Hz	0.5 Hz	13	Starting frequency	0 to 60 Hz	0.5 Hz	$\odot$	
14	Load pattern selection	0 to 3	1	14	Load pattern selection	0 to 3	0	$\odot$	The initial value differs between inverters in both series.
15	Jog frequency	0 to 120 Hz	5 Hz	15	Jog frequency	0 to 400 Hz	5 Hz	$\odot$	
16	Jog acceleration/ deceleration time	0 to 999 s	0.5 s	16	Jog acceleration/ deceleration time	0 to 3600 s	0.5 s	$\odot$	
17	RUN key rotation direction selection	0, 1	0	40	RUN key rotation direction selection	0, 1	0	$\odot$	
19	Base frequency voltage	0 to 1000 V, 888, ---	---	19	Base frequency voltage	0 to 1000 V, 8888, 9999	9999	$\odot$	
20	Acceleration/deceleration reference frequency	1 to 120 Hz	60 Hz	20	Acceleration/deceleration reference frequency	1 to 400 Hz	60 Hz	$\odot$	

FR-F500J parameter				FR-D700 compatible parameter				Description about parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
21	Stall prevention operation selection	0 to 31, 100	0	156	Stall prevention operation selection	0 to 31, 100, 101	0	⊙	
22	Stall prevention operation level	0 to 200%	120%	22	Stall prevention operation level	0 to 200%	150%	⊙	The initial value differs between inverters in both series.
23	Stall prevention operation level compensation factor at double speed	0 to 200%, ---	---	23	Stall prevention operation level compensation factor at double speed	0 to 200%, 9999	9999	⊙	
24	Multi-speed setting (speed 4)	0 to 120 Hz, ---	---	24	Multi-speed setting (speed 4)	0 to 400 Hz, 9999	9999	⊙	
25	Multi-speed setting (speed 5)	0 to 120 Hz, ---	---	25	Multi-speed setting (speed 5)	0 to 400 Hz, 9999	9999	⊙	
26	Multi-speed setting (speed 6)	0 to 120 Hz, ---	---	26	Multi-speed setting (speed 6)	0 to 400 Hz, 9999	9999	⊙	
27	Multi-speed setting (speed 7)	0 to 120 Hz, ---	---	27	Multi-speed setting (speed 7)	0 to 400 Hz, 9999	9999	⊙	
28	Stall prevention operation reduction starting frequency	0 to 120 Hz	60 Hz	66	Stall prevention operation reduction starting frequency	0 to 400 Hz	60 Hz	⊙	
29	Acceleration/deceleration pattern selection	0, 1, 2	0	29	Acceleration/deceleration pattern selection	0, 1, 2	0	⊙	
30	Extended function display selection	0, 1	0	160	Extended function function selection	0, 9999	9999	△	Set 0 to display extended parameters as well on the PU.
31	Frequency jump 1A	0 to 120 Hz, ---	---	31	Frequency jump 1A	0 to 400 Hz, 9999	9999	⊙	
32	Frequency jump 1B	0 to 120 Hz, ---	---	32	Frequency jump 1B	0 to 400 Hz, 9999	9999	⊙	
33	Frequency jump 2A	0 to 120 Hz, ---	---	33	Frequency jump 2A	0 to 400 Hz, 9999	9999	⊙	
34	Frequency jump 2B	0 to 120 Hz, ---	---	34	Frequency jump 2B	0 to 400 Hz, 9999	9999	⊙	
35	Frequency jump 3A	0 to 120 Hz, ---	---	35	Frequency jump 3A	0 to 400 Hz, 9999	9999	⊙	
36	Frequency jump 3B	0 to 120 Hz, ---	---	36	Frequency jump 3B	0 to 400 Hz, 9999	9999	⊙	
37	Speed display	0, 0.1 to 999	0	37	Speed display	0,0.01 to 9998	0	⊙	
38	Frequency setting voltage gain frequency	1 to 120 Hz	60 Hz	125	Terminal 2 frequency setting gain frequency	0 to 400 Hz	60 Hz	△	The frequency at 5 V (10 V) input is set for the F500J inverters. The frequency at input of the voltage set in Pr.C4 is set for the D700 inverters. If the frequency deviates, calibrate again.
39	Frequency setting current gain frequency	1 to 120 Hz	60 Hz	126	Terminal 4 frequency setting gain frequency	0 to 400 Hz	60 Hz	△	The frequency at 20 mA input is set for the F500J inverters. The frequency at the input of the current set in Pr.C7 is set for the D700 inverters. If the frequency deviates, calibrate again.
40	Start-time earth (ground) fault detection selection	0, 1	0	249	Earth (ground) fault detection at start	0, 1	0	⊙	
41	Up-to-frequency sensitivity	0 to 100%	10%	41	Up-to-frequency sensitivity	0 to 100%	10%	⊙	
42	Output frequency detection	0 to 120 Hz	6 Hz	42	Output frequency detection	0 to 400 Hz	6 Hz	⊙	
43	Output frequency detection for reverse rotation	0 to 120 Hz, ---	---	43	Output frequency detection for reverse rotation	0 to 400 Hz, 9999	9999	⊙	
44	Second acceleration/deceleration time	0 to 999 s	5 s	44	Second acceleration/deceleration time	0 to 3600 s	3.7K or lower: 5 s 5.5K, 7.5K: 10 s 11K, 15K: 15 s	⊙	The initial values for some capacities differs between inverters in both series.
45	Second deceleration time	0 to 999s, ---	-	45	Second deceleration time	0 to 3600 s, 9999	9999	⊙	
46	Second torque boost	0 to 15%, ---	---	46	Second torque boost	0 to 30%, 9999	9999	△	Set the same value as the value set in the F500J inverters (when Pr.72 PWM frequency selection = "1" in the F500J).
47	Second V/F (base frequency)	0 to 120 Hz, ---	---	47	Second V/F (base frequency)	0 to 400 Hz, 9999	9999	⊙	
48	Output current detection level	0 to 200%	120%	150	Output current detection level	0 to 200%	150%	⊙	The initial value differs between inverters in both series.
49	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	⊙	
50	Zero current detection level	0 to 200%	5%	152	Zero current detection level	0 to 200%	5%	⊙	
51	Zero current detection period	0.05 to 1 s	0.5 s	153	Zero current detection time	0 to 1 s	0.5 s	⊙	
52	Operation panel display data selection	0, 1, 100	0	52	DU/PU main display data selection	0, 5, 7 to 12, 14, 20, 23 to 25, 52 to 57, 61, 62, 100	0	⊙	The increment of the actual operation time displayed on the monitor (Pr.52= "23") differs between inverters in both series.
53	Frequency setting operation selection	0, 1	0	161	Frequency setting/key lock operation selection	0, 1, 10, 11	0	⊙	
54	FM terminal function selection	0, 1	0	54	FM terminal function selection	1 to 3, 5, 7 to 12, 14, 21, 24, 52, 53, 61, 62	1	△	When this parameter has been set to "0" in the FR-F500J inverters, set it to "1" in the FR-D700 inverters. When it has been set to "1", set it to "2".
55	Frequency monitoring reference	0 to 120 Hz	60 Hz	55	Frequency monitoring reference	0 to 400 Hz	60 Hz	⊙	
56	Current monitoring reference	0 to 50 A	Rated inverter current	56	Current monitoring reference	0 to 500 A	Rated inverter current	⊙	
57	Restart coasting time	0 to 5 s, ---	---	57	Restart coasting time	0, 0.1 to 5 s, 9999	9999	△	The coasting time at the setting of "0" differs between inverters in both series. Basically the setting in the FR-D700 inverters does not need to be changed for use. To set the same coasting time in the FR-F500J inverters, set 0.5 second for 1.5K inverters or lower, or 1.0 second for 2.2K inverters or higher.

FR-F500J parameter				FR-D700 compatible parameter				Description about parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
58	Restart cushion time	0 to 60 s	1.0 s	58	Restart cushion time	0 to 60 s	1.0 s	⊙	
59	Remote setting function selection	0, 1, 2	0	59	Remote function selection	0, 1, 2, 3	0	⊙	
60	AU terminal function selection	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 16, ---	4	180	RL terminal function selection	0 to 5, 7, 8, 10, 12, 14, 16, 18, 24, 25, 62, 65 to 67, 9999	0	×	To operate the FR-D700 inverters by inputting current to the inverter, set "4" to assign the AU signal, set Pr.267 to "0", and set the voltage/current selection switch to the current input.
61	RM terminal function selection		1	181	RM terminal function selection		1	⊙	
62	RH terminal function selection		2	182	RH terminal function selection		2	⊙	
63	STR terminal function selection		---	179	STR terminal function selection		0 to 5, 7, 8, 10, 12, 14, 16, 18, 24, 25, 61, 62, 65 to 67, 9999	61	
64	RUN terminal function selection	0, 1, 3, 4, 11, 12, 13, 14, 15, 16, 95, 98, 99	0	190	RUN terminal function selection	0, 1, 3, 4, 7, 8, 11 to 16, 25, 26, 46, 47, 64, 70, 90, 91, 93, 95, 96, 98, 99, 100, 101, 103, 104, 107, 108, 111 to 116, 125, 126, 146, 147, 164, 170, 190, 191, 193, 195, 196, 198, 199, 9999	0	⊙	
65	A, B, C terminal function selection		99	192	A, B, C terminal function selection		0, 1, 3, 4, 7, 8, 11 to 16, 25, 26, 46, 47, 64, 70, 90, 91, 95, 96, 98, 99, 100, 101, 103, 104, 107, 108, 111 to 116, 125, 126, 146, 147, 164, 170, 190, 191, 195, 196, 198, 199, 9999	99	⊙
66	Retry selection	0, 1, 2, 3	0	65	Retry selection	0 to 5	0	⊙	
67	Number of retries at alarm occurrence	0 to 10, 101 to 110	0	67	Number of retries at fault occurrence	0 to 10, 101 to 110	0	⊙	
68	Retry waiting time	0.1 to 360 s	1 s	68	Retry waiting time	0.1 to 360 s	1s	⊙	
69	Retry count display erase	0	0	69	Retry count display erase	0	0	⊙	
70	Soft-PWM setting	0, 1, 10, 11	11	240	Soft-PWM operation selection	0, 1	1	△	When this parameter has been set to "10" in the FR-F500J inverters, set it to "0" in the FR-D700 inverters. When it has been set to "11", set it to "1".
71	Applied motor	0, 1	0	71	Applied motor	0, 1, 3 to 6, 13 to 16, 23, 24, 40, 43, 44, 50, 53, 54	0	⊙	
				450	Second applied motor	0, 1, 9999	9999	×	
72	PWM frequency selection	0 to 15	1	72	PWM frequency selection	0 to 15	1	⊙	
73	0-5V/0-10V selection	0, 1	0	73	Analog input selection	0, 1, 10, 11	1	△	When this parameter has been set to "0" in the FR-F500J inverters, set it to "1" in the FR-D700 inverters. When it has been set to "1", set it to "0".
74	Input filter time constant	0 to 8	1	74	Input filter time constant	0 to 8	1	⊙	
75	Reset selection/PU stop selection	0, 1, 14, 15,	14	75	Reset selection/disconnected PU detection/PU stop selection	0 to 3, 14 to 17	14	⊙	
76	Cooling fan operation selection	0, 1	0	244	Cooling fan operation selection	0, 1	1	⊙	
77	Parameter write disable selection	0, 1, 2	0	77	Parameter write selection	0, 1, 2	0	⊙	
78	Reverse rotation prevention selection	0, 1, 2	0	78	Reverse rotation prevention selection	0, 1, 2	0	⊙	
79	Operation mode selection	0 to 4, 7, 8	0	79	Operation mode selection	0 to 4, 6, 7	0	△	When this parameter has been set to "8" in the FR-F500J inverters, set Pr.79 = "7" and Pr.182 = "16" for the FR-D700 inverters.
80	Multi-speed setting (speed 8)	0 to 120 Hz, ---	---	232	Multi-speed setting (speed 8)	0 to 400Hz, 9999	9999	⊙	
81	Multi-speed setting (speed 9)	0 to 120 Hz, ---	---	233	Multi-speed setting (speed 9)	0 to 400Hz, 9999	9999	⊙	
82	Multi-speed setting (speed 10)	0 to 120 Hz, ---	---	234	Multi-speed setting (speed 10)	0 to 400Hz, 9999	9999	⊙	
83	Multi-speed setting (speed 11)	0 to 120 Hz, ---	---	235	Multi-speed setting (speed 11)	0 to 400Hz, 9999	9999	⊙	
84	Multi-speed setting (speed 12)	0 to 120 Hz, ---	---	236	Multi-speed setting (speed 12)	0 to 400 Hz, 9999	9999	⊙	
85	Multi-speed setting (speed 13)	0 to 120 Hz, ---	---	237	Multi-speed setting (speed 13)	0 to 400 Hz, 9999	9999	⊙	
86	Multi-speed setting (speed 14)	0 to 120 Hz, ---	---	238	Multi-speed setting (speed 14)	0 to 400 Hz, 9999	9999	⊙	
87	Multi-speed setting (speed 15)	0 to 120 Hz, ---	---	239	Multi-speed setting (speed 15)	0 to 400 Hz, 9999	9999	⊙	

FR-F500J parameter				FR-D700 compatible parameter				Description about parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
88	PID action selection	20, 21	20	128	PID action selection	0, 20, 21, 40 to 43	0	△	Set the same value as the value set in the F500J inverters
89	PID proportional band	0.1 to 999%, ---	100%	129	PID proportional band	0.1 to 1000%, 9999	100%	⊙	
90	PID integral time	0.1 to 999 s, ---	1 s	130	PID integral time	0.1 to 3600 s, 9999	1	⊙	
91	PID upper limit	0 to 100%, ---	---	131	PID upper limit	0 to 100%, 9999	9999	⊙	
92	PID lower limit	0 to 100%, ---	---	132	PID lower limit	0 to 100%, 9999	9999	⊙	
93	PID action set point for PU operation	0 to 100%	0%	133	PID action set point	0 to 100%, 9999	9999	△	To use the value input via terminal 2 as a set point for the FR-D700 inverters, set "9999". When the value other than "9999" is set, the set value will be also used as a set point during operations other than the PU operation.
94	PID differential time	0.01 to 10 s, ---	---	134	PID differential time	0.01 to 10.00 s, 9999	9999	⊙	
95	Rated slip	0 to 50%, ---	---	245	Rated slip	0 to 50%, 9999	9999	⊙	
96	Slip compensation time constant	0.01 s to 10 s	0.5 s	246	Slip compensation time constant	0.01 to 10 s	0	⊙	
97	Constant-power range slip compensation selection	0, ---	---	247	Constant-power range slip compensation selection	0, 9999	9999	⊙	
98	Automatic torque boost selection (Motor capacity)	0.1 to 15 kW	---	80	Motor capacity	0.1 to 7.5 kW, 9999	9999	⊙	When the automatic torque boost function is used in the FR-F500J inverters, perform General-purpose magnetic flux vector control in the FR-D700 inverters. Set the same motor capacity of the FR-F500J inverters in Pr.80 in the FR-D700 inverters, and perform the auto tuning after setting Pr.71, Pr.83, and Pr.84.
				82	Motor excitation current	0 to 500 A, 9999	9999	×	
				83	Rated motor voltage	0 to 1000 V	200/400 V	×	
				84	Rated motor frequency	10 to 120 Hz	60 Hz	×	
				90	Motor constant (R1)	0 to 50 Ω, 9999	9999	×	
				96	Auto tuning setting/status	0, 11, 21	0	×	
H1 (503)	Maintenance timer	0 to 999	0	503	Maintenance timer	0 to 9998	0	-	Read only.
H2 (504)	Maintenance timer alarm output set time	0 to 999, ---	87	504	Maintenance timer alarm output set time	0 to 10 s	0	△	To configure the same setting of the FR-F500J inverters in the FR-D700 inverters, set a value of ten times larger than the setting value of the FR-F500J inverters.
H8 (251)	Output phase failure protection selection	0, 1	0	251	Output phase loss protection selection	0, 1	1	△	To configure the same settings as the FR-F500J inverters in the FR-D700 inverters, set "0".
C1 (900)	FM terminal calibration	—	—	900	FM terminal calibration	—	—	⊙	
C2 (902)	Frequency setting voltage bias frequency	0 to 60 Hz	0 Hz	902	Terminal 2 frequency setting bias frequency	0 to 400 Hz	0 Hz	△	The calibration method differs between inverters in both series.
C3 (902)	Frequency setting voltage bias	0 to 300%	0%	902	Terminal 2 frequency setting bias	0 to 300%	0%	△	The calibration method differs between inverters in both series.
				903	Terminal 2 frequency setting gain frequency	0 to 400 Hz	60 Hz	△	The calibration method differs between inverters in both series.
C4 (903)	Frequency setting voltage gain	0 to 300%	96%	903	Terminal 2 frequency setting gain	0 to 300%	100%	△	The calibration method differs between inverters in both series.
C5 (904)	Frequency setting current bias frequency	0 to 60 Hz	0 Hz	904	Terminal 4 frequency setting bias frequency	0 to 400 Hz	0 Hz	△	The calibration method differs between inverters in both series.
C6 (904)	Frequency setting current bias	0 to 300%	20%	904	Terminal 4 frequency setting bias	0 to 300%	20%	△	The calibration method differs between inverters in both series.
				905	Terminal 4 frequency setting gain frequency	0 to 400 Hz	60 Hz	△	The calibration method differs between inverters in both series.
C7 (905)	Frequency setting current gain	0 to 300%	100%	905	Terminal 4 frequency setting gain	0 to 300%	100%	△	The calibration method differs between inverters in both series.
n1 (331)	Communication station number	0 to 31	0	117	PU communication station number	0 to 31	0	⊙	
n2 (332)	Communication speed	48, 96, 192	192	118	PU communication speed	48, 96, 192, 384	192	⊙	
n3 (333)	Stop bit length	0, 1, 10, 11	1	119	PU communication stop bit length	0, 1, 10, 11	1	⊙	
n4 (334)	Parity check presence/absence	0, 1, 2	2	120	PU communication parity check	0, 1, 2	2	⊙	
n5 (335)	Number of communication retries	0 to 10, ---	1	121	Number of PU communication retries	0 to 10, 9999	1	⊙	
n6 (336)	Communication check time interval	0 to 999 s	0 s	122	PU communication check time interval	0 to 999.8 s, 9999	0	⊙	



FR-F500J parameter				FR-D700 compatible parameter				Description about parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
n7 (337)	Waiting time setting	0 to 150 ms, ---	---	123	PU communication waiting time setting	0 to 150 ms, 9999	9999	△	
n8 (338)	Operation command source	0, 1	0	338	Communication operation command source	0, 1	0	◎	
n9 (339)	Speed command source	0, 1	0	339	Communication speed command source	0, 1, 2	0	◎	
n10 (340)	Link startup mode selection	0, 1	0	340	Communication startup mode selection	0, 1, 10	0	◎	
n11 (341)	CR/LF selection	0, 1, 2	1	124	PU communication CR/LF selection	0, 1, 2	1	◎	
n12 (342)	EEPROM write selection	0, 1	0	342	Communication EEPROM write selection	0, 1	0	◎	
n13 (145)	PU display language selection	0 to 7	0	145	PU display language selection	0 to 7	0	◎	
n14 (990)	PU buzzer control	0, 1	1	990	PU buzzer control	0, 1	1	◎	
n15 (991)	PU contrast adjustment	0 to 63	58	991	PU contrast adjustment	0 to 63	58	◎	
n16 (992)	PU main display screen data selection	0, 100	0						In the FR-D700 inverters, this function is set by the setting of Pr.52.
n17 (993)	Disconnected PU detection/PU setting lock	0, 1, 10	0	75	Reset selection/ disconnected PU detection/ PU stop selection	0 to 3, 14 to 17	14	△	When this parameter has been set to "0 or 10" in the FR-F500J inverters, set it to "14" in the FR-D700 inverters. When it has been set to "1", set it to "16".

#### 4. Option

The following table shows the comparison of options between the FR-F500J series inverters and the FR-D700 series inverters.

Name		Option model	
		FR-F500J	FR-D700
Stand-alone	Parameter unit	FR-PU04	Some function restricted (parameter copy, etc.)
	Parameter unit connection cable	FR-CB201, 203, 205	Compatible
	Brake resistor	MRS□□, MYS□□	Compatible
		FR-ABR-(H)□□K	Compatible
	Brake unit	BU-1500 to 15K, H7.5K, H15K	Compatible
		Discharging resistor	GZG□□, GRZG□□
	Power factor improving AC reactor	FR-BAL-(H)□□K	Compatible
	Power factor improving DC reactor	FR-BEL-(H)□□K	Compatible
	Radio noise filter	FR-BIF-(H)	Compatible
	Line noise filter	FR-BSF01, FR-BLF	Compatible
	FR-CV power regeneration common converter	FR-CV-(H)7.5K(-AT)	Compatible
		Dedicated stand-alone reactor	FR-CVL-(H)7.5K
	FR-HC high power factor converter	FR-HC-(H)7.5K	Compatible
	Surge voltage suppression filter	FR-ASF-H□□K	Compatible
Filterpack	FR-BFP	Compatible*1, *2	
Manual Controller/ Speed Controller	Manual controller	FR-AX	Compatible
	DC tach. follower	FR-AL	Compatible
	Three speed selector	FR-AT	Compatible
	Motorized speed setter	FR-FK	Compatible
	Ratio setter	FR-FH	Compatible
	Speed detector	FR-FP	Compatible
	Master controller	FR-FG	Compatible
	Soft starter	FR-FC	Compatible
	Deviation detector	FR-FD	Compatible
	Preamplifier	FR-FA	Compatible
Others	Pilot generator	QVAH-10	Compatible
	Deviation sensor	YVGC-500W-NS	Compatible
	Frequency setting potentiometer	WA2W 1 kΩ	Compatible
	Analog frequency meter	YM206NRI 1 mA	Compatible
	Calibration resistor	RV24YN 10 kΩ	Compatible
	Inverter setup software	FR-SW1-SETUP-WJ	Not compatible (Use FR-SW3-SETUP-WJ.)

\*1: When using the FR-BFP for the FR-D700 series inverters, the output current of some FR-D700 series inverters need to be limited to the rated current of the compatible FR-F500J series inverters.

#### Rated current of the FR-F500J and FR-D700 series inverters

Class \ Capacity		0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K
		0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K
Rated current of three-phase 200 V	FR-F520J	2.5 A	4.1 A	7.0 A	10.0 A	16.5 A	23.8 A	31.8 A	45.0 A	58.0 A
	FR-D720	2.5 A	4.2 A	7.0 A	10.0 A	16.5 A	23.8 A	31.8 A	45.0 A	58.0 A
Rated current of three-phase 400 V	FR-F540J	1.1 A	2.1 A	3.7 A	4.8 A	8.1 A	12.0 A	16.3 A	23.0 A	29.5 A
	FR-D740	1.2 A	2.2 A	3.6 A	5.0 A	8.0 A	12.0 A	16.0 A	23.0 A	29.5 A

The output current in shaded cells in the table above needs to be limited to the rated current of the corresponding FR-F500J series inverter.



\*2: When using the FR-BFP2

The following table shows the permissible output current of inverters for the FR-BFP2. To use the FR-BFP2 for FR-D700 series inverters, be sure to use the FR-BFP2 in combination with the applicable FR-D720 or D740 inverters shown below.

Filterpack	Permissible inverter output current (A)	Applicable inverter model	Inverter rated output current (A)
FR-BPF2-0.4K	2.5	FR-D720-0.4K	2.5
FR-BPF2-0.75K	4.2	FR-D720-0.75K	4.2
FR-BPF2-1.5K	7.0	FR-D720-1.5K	7.0
FR-BPF2-2.2K	10.0	FR-D720-2.2K	10.0
FR-BPF2-3.7K	16.5	FR-D720-3.7K	16.5
FR-BPF2-5.5K	23.8	FR-D720-5.5K	23.8
FR-BPF2-7.5K	31.8	FR-D720-7.5K	31.8
FR-BPF2-11K	45.0	FR-D720-11K	45.0
FR-BPF2-15K	58.0	FR-D720-15K	58.0
FR-BPF2-H0.4K	1.2	FR-D740-0.4K	1.2
FR-BPF2-H0.75K	2.2	FR-D740-0.75K	2.2
FR-BPF2-H1.5K	3.7	FR-D740-1.5K	3.6
FR-BPF2-H2.2K	5.0	FR-D740-2.2K	5.0
FR-BPF2-H3.7K	8.1	FR-D740-3.7K	8.0
FR-BPF2-H5.5K	12.0	FR-D740-5.5K	12.0
FR-BPF2-H7.5K	16.3	FR-D740-7.5K	16.0
FR-BPF2-H11K	23.0	FR-D740-11K	23.0
FR-BPF2-H15K	29.5	FR-D740-15K	29.5

Note: For the combination of the FR-BFP2 and the FR-D700 series inverters, consider the capacity of both so that the output current of the load (inverter) does not exceed the permissible output current of inverters for the FR-BFP2.

## 5. Major differences between the FR-F500J and FR-D700 series inverters

### (1) Specification comparison and major differences

Item		FR-F500J	FR-D700
Inverter model	Three-phase 200 V class	FR-F520J-0.4K to 15K (9 models)	FR-D720-0.1K to 15K (11 models)
	Three-phase 400 V class	FR-F540J-0.4K to 15K (9 models)	FR-D740-0.4K to 15K (9 models)
Control method		Soft-PWM control, high carrier frequency PWM control (selectable between V/F control and automatic torque boost control). Long-wiring mode available.	Soft-PWM control, high carrier frequency PWM control (selectable between V/F control, General-purpose magnetic flux vector control, and Optimum excitation control) Long-wiring mode not available (not supported due to no necessity).
Overload capacity		120% 60 s, 150% 0.5 s (inverse-time characteristics)	150% 60 s, 200% 0.5 s (inverse-time characteristics)
Frequency setting signal	Analog input	Terminal 2: Selectable between the range from 0 to 10 V and the range from 0 to 5 V Terminal 4: 4 to 20 mA	Terminal 2: Selectable between the range from 0 to 10 V and the range from 0 to 5 V Terminal 4: Selectable between the range from 0 to 10 V, the range from 0 to 5 V, and the range from 4 to 20 mA
	Digital input	Input using the setting dial on the operation panel or parameter unit	Input using the setting dial on the operation panel or parameter unit
Input signal	Terminal function		<Additional function (signal name)> Inverter run enable (X10), PU operation external interlock (X12), V/F switchover (X18), PU/NET operation switchover (X65), External/NET operation switchover (X66), Command source switchover (X67)
	Terminal function selection	Pr.60 to 63 (Input terminal function selection)	Pr.178 (for terminal STF) has been added.
Output signal	Terminal function	Current average monitor (Y93) signal available.	<Additional function (signal name)> Regenerative brake pre-alarm (RBP), Electronic thermal O/L relay pre-alarm (THP), Brake opening request (BOF), Fan fault output (FAN), Heatsink overheat pre-alarm (FIN), During deceleration at occurrence of power failure (retained until release) (Y46), During PID control activated (PID), During retry (Y64), PID output interruption (SLEEP), Life alarm (Y90), Current average monitor signal (Y93) A negative logic setting is available to all functions.
	Monitor item	Output frequency and output voltage only.	<Additional item> Output voltage, frequency setting, converter output voltage, regenerative brake duty, electronic thermal relay function load factor, output current peak value, converter output voltage peak value, output power, reference voltage output, motor load factor, cumulative power, PID set point, PID measured value, PID deviation, motor thermal load factor, inverter thermal load factor
Protective function		Brake transistor alarm available.	<Additional function> Input phase loss, Brake transistor alarm detection, Output phase loss, Output current detection value exceeded, Inrush current limit circuit fault, Communication fault, Analog input fault, PTC thermistor operation, Safety circuit fault, Regenerative brake pre-alarm, Electronic thermal relay function pre-alarm, Maintenance signal output, Safety stop, Operation panel lock, Password locked

Item	FR-F500J	FR-D700	
Outline dimensions*1	Compatible		
Installation space*1	Compatible		
Main circuit terminal block*1	Compatible (screw type terminal block)		
Control circuit terminal block and screw size*1	Fixed to the insertion terminal block Ø M3 screw: ABC terminal Ø M2 screw: Other than ABC terminal	Spring clamp terminal	
Control terminal cable size (when crimp terminals used)*1	0.3 to 0.75 mm <sup>2</sup>	0.3 to 1.5 mm <sup>2</sup>	
Cooling fan location*1	Installed at the bottom of the inverter. (For 11K and 15K inverters, installed at the top of the inverter.)	Installed at the top of the inverter for inverters of any capacities. For replacing the cooling fan, a space is necessary at the top of the inverter.	
Operation panel	Not removable since it is integrated to the inverter.	Not removable since it is integrated to the inverter.	
Parameter (function)	Compatible with the conventional models (some functions are changed or removed).		
Parameter unit	FR-PU07	Available	Available
	FR-PU04	Available	Available (with some restrictions)
	FR-PU03/FR-ARW03	Not available	Not available
	FR-DU01		
FR-PU02/FR-ARW			
Parameter unit connection cable	FR-CB2□□	Available	Available
	FR-CBL□□	Not available	Not available
Plug-in option	Not available	Not available	
Inrush current limit circuit	Equipped with inverters of any capacities.	Equipped with inverters of any capacities.	
Design life	Cooling fan	2 to 3 years	10 years
	Electrolytic capacitor	5 years	10 years
Stand-alone option (noise filter, reactor, etc.)*2	Compatible		

\*1: Refer to Chapter 1 "Size".

\*2: Refer to Chapter 4 "Option".

(2) Parameter comparison and major differences

No.	Function	Change in FR-D700 from FR-F500J				Remarks
		Newly added	Function changed	Name changed	Parameter No. changed	
1	Torque boost (Pr.0)		○			Initial value is changed. FR-F500J Other than the below: 6% F520J-5.5K, 7.5K: 4% F520J-11K, 15K: 3% F540J-1.5K, 2.2K: 5% F540J-3.7K: 4% F540J-5.5, 7.5K: 3% F540J-11K, 15K: 2% FR-D700 0.75K or lower: 6% 1.5K to 3.7K: 4% 5.5K, 7.5K: 3% 11K, 15K: 2%
2	DC injection brake operation voltage (Pr.12)		○			Initial value is changed. FR-F500J 7.5K or lower: 4% 11K or higher: 2% FR-D700 0.1K,0.2K: 6% 0.4K to 7.5K: 4% 11K, 15K: 2%
3	MRS input selection	○				New function for selection of NO/NC contact input for MRS signal is added.
4	Function for operation panel	○				RUN key rotation direction selection (Pr.40), Frequency setting/key lock operation selection (Pr.161), and Monitor decimal digit selection (Pr.268) are added.
5	Stall prevention function	○	○			1) New parameter "Second stall prevention operation level setting" (Pr.48) is added. 2) New option for fast-response current limit operation selection during power driving is added in Pr.156. 3) New parameter "OL signal output timer" (Pr.157) is added.
6	Second electronic thermal O/L relay				○	Parameter number is changed from Pr.H7 (559) to Pr.51.
7	Monitor function (DU/PU display selection, FM terminal function selection)	○	○			1) New options are added and some options are changed for monitoring on operation panel (Pr.52) and via terminal FM (Pr.54). 2) New parameter "Watt-hour meter clear" (Pr.170) is added. 3) New parameters for the energization and operating time carrying-over times (Pr.563 and Pr.564) are added.
8	Remote setting function		○			New option to clear remotely-set frequency by turning OFF the STF/STR signal is added in Pr.59.
9	Energy saving control selection	○				New parameter (Pr.60) to select optimum excitation control under V/F control is added.
10	Retry selection		○			New options are added in the parameter, and target faults are changed.
11	Applied motor (second applied motor)	○	○			1) New options for SF-HR and SF-HRCA motors are added in Pr.71. 2) New options for reading/changing offline auto tuning data are added. 3) New parameter "Second applied motor" (Pr.450) is added. 4) Method to select the second function has been changed from turning ON the RT signal for Pr.71 to selecting the second function parameter (Pr.450).
12	Analog input selection	○	○	○		1) Parameter name of Pr.73 has been changed from "0-5V/0-10V selection" to "Analog input selection". 2) The initial setting value of Pr.73 is changed as the information corresponding to each setting value has been changed. FR-F500J 0: 0 to 5 V (initial value) 1: 0 to 10 V FR-D700 0: 0 to 10 V 1: 0 to 5 V (initial value) 3) New parameter "Terminal 4 input selection" (Pr.267) is added.

No.	Function	Change in FR-D700 from FR-F500J			Remarks	
		Newly added	Function changed	Name changed		Parameter No. changed
13	Operation mode selection and command I/O source selection	○	○			<ul style="list-style-type: none"> <li>1) New option is added in Pr.339 Communication speed command source.</li> <li>2) Parameter name is changed and new option is added in Pr.340.</li> <li>3) New parameter "PU mode operation command source selection" (Pr.551) is added.</li> <li>4) The method available by setting "8" has been removed from option of Pr.79 but is supported by using the X16 signal.</li> </ul>
14	Offline auto tuning	○	○			<ul style="list-style-type: none"> <li>1) New parameter "Motor constant (R1)" (Pr.90) is added.</li> <li>2) New parameter "Auto tuning setting/status" (Pr.96) is added for Pr.90.</li> <li>3) Setting range of the parameter for rated motor frequency (Pr.84 for the FR-D700) is changed.</li> </ul>
15	Communication setting	○	○			<ul style="list-style-type: none"> <li>1) New option for communication speed of 38400 bps is added (Pr.118 for the FR-D700).</li> <li>2) New parameter "Protocol selection" (Pr.549) is added because MODBUS RTU communication has been available.</li> <li>3) New parameter "Stop mode selection at communication error" (Pr.502) is added.</li> <li>4) Multi-command data transaction is available.</li> <li>5) Setting range for MODBUS RTU communication is added in the parameter for station number setting (Pr.117 for FR-D700).</li> </ul>
16	Terminal 2/4 frequency setting bias / bias frequency, terminal 2/4 frequency setting gain / gain frequency (Pr.902 to Pr.905)	○	○	○		<ul style="list-style-type: none"> <li>1) Parameter names are changed ("Terminal 2/4" is added and "setting voltage/current" is changed to "setting").</li> <li>2) New parameter "Analog input display unit switchover" (Pr.241) is added.</li> <li>3) Setting range of the parameter for bias/gain frequency is changed.</li> <li>4) The number of parameter for gain frequency (frequency at maximum voltage (current) input) is changed from Pr.38 to Pr.125 (for terminal 2) and from Pr.39 to Pr.126 (for terminal 4).</li> </ul>
17	PID control function	○	○			<ul style="list-style-type: none"> <li>1) New parameter "PID control automatic switchover frequency" (Pr.127) is added.</li> <li>2) New options are added in the parameter for PID action selection (Pr.128 for FR-D700).</li> <li>3) The name of the X14 input signal is changed from "PID control presence/absence selection" to "PID control valid terminal". The During PID control activated (PID) output signal is added.</li> </ul>
18	Output current detection function		○			Modified: Setting range of zero current detection time (Pr.153)
19	Extended function display selection (Pr.160)				○	Parameter number is changed from Pr.30 to Pr.160.
20	Automatic restart after instantaneous power failure	○				Automatic restart after instantaneous power failure selection (Pr.162), Stall prevention operation level for restart (Pr.165), Rotation direction detection selection at restarting (Pr.299), and Acceleration time at a restart (Pr.611) are added.
21	Input terminal function selection (Pr.178 to 182)		○			<ul style="list-style-type: none"> <li>1) New parameter "STF terminal function selection" is added.</li> <li>2) More functions (signals) are available.</li> </ul>
22	Output terminal function selection (Pr.190, 192)		○			More functions (signals) are available.
23	Function for cooling fan		○			Initial value in the parameter "Cooling fan operation selection" (Pr.244 for FR-D700) is changed from "0" to "1" (Cooling fan ON-OFF control enabled).

No.	Function	Change in FR-D700 from FR-F500J			Remarks
		Newly added	Function changed	Name changed Parameter No. changed	
24	Long wiring mode in Soft-PWM setting		○		Long-wiring mode not available (not supported due to no necessity).
25	Life diagnosis of inverter parts	○			Parameters for life diagnosis of inrush current limit circuit, control circuit capacitor, main circuit capacitor, and parameter for life alarm display for cooling fan are added (Pr.255 to 259).
26	Power failure stop selection	○			New parameter "Power failure stop selection" (Pr.261) is added.
27	Stop selection	○			New parameter (Pr.250) to select motor operation at a stop of the start signal is added.
28	Maintenance timer alarm			○	Parameter names of Pr.503 and Pr.504 are changed: "Capacitor life timer" and "Capacitor life warning output set time" have been changed to "Maintenance timer" and "Maintenance timer alarm output set time".
29	Current average monitor	○			New parameters (Pr.555 to 557) to set the average value of the output current during constant-speed operation and the pulse output function for maintenance timer function are added.
30	Holding time at a start	○			New parameter (Pr.571) to set the time to hold the starting frequency is added.
31	General-purpose magnetic flux vector control	○			New parameters (Pr.80, Pr.82 to Pr.84) for motor settings for general-purpose magnetic flux vector control are added.
32	Speed smoothing control	○			New parameter (Pr.653) to reduce the vibration generated mechanically and electrically is added.
33	Input phase loss protective function	○			New parameter "Input phase loss protection selection" (Pr.872) is added (Pr.251 Output phase loss protection selection has been available).
34	Regeneration avoidance function	○			New parameters (Pr.882 to Pr.886) for regeneration avoidance function operation selection and operation level setting are added.
35	Free parameter	○			New parameters (Pr.888, Pr.889) are added in which any value can be set.