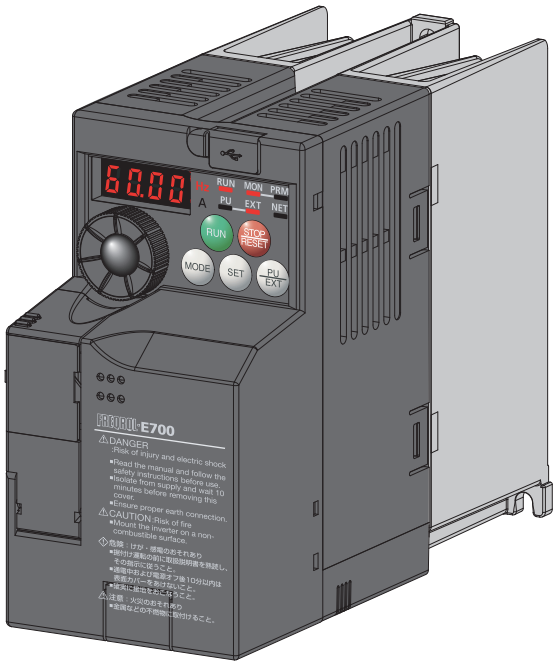
MITSUBISHI ELECTRIC

700 series

INVERTER FR-E700 INSTRUCTION MANUAL (Applied)

CC-Link communication function

FR-E720-0.1KNC to 15KNC
FR-E740-0.4KNC to 15KNC
FR-E720S-0.1KNC to 2.2KNC



5.2 Parameter list

5.2.1 Parameter list

For simple variable-speed operation of the inverter, the initial setting of the parameters may be used as they are. Set the necessary parameters to meet the load and operational specifications. Parameter setting, change and check are available from the operation panel.

REMARKS

- ◎ indicates simple mode parameters. (Initially set to extended mode)
- The parameters surrounded by a black border in the table allow their settings to be changed during operation even if "0" (initial value) is set in *Pr. 77 Parameter write selection*. (Note that the *Pr. 77* setting cannot be changed through the CC-Link communication.)

- These instruction codes are used for parameter read and write by using CC-Link communication. (*Refer to the Chapter 4* for CC-Link communication)
- "○" indicates valid and "×" indicates invalid of "control mode-based correspondence", "parameter clear", and "all parameter clear".

Function	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting	Parameter	Instruction Code Read	Instruction Code Write	Instruction Code Extended	Control Mode-based Correspondence V/F	Control Mode-based Correspondence AD MFVC	Control Mode-based Correspondence GP MFVC	Parameter Clear	Parameter All clear
Basic functions	◎ 0	Torque boost	0 to 30%	0.1%	6/4/3/2% *1	*113*		◎ 0	00	80	0	○	×	×	○	○
	◎ 1	Maximum frequency	0 to 120Hz	0.01Hz	120Hz	*124*		◎ 1	01	81	0	○	○	○	○	○
	◎ 2	Minimum frequency	0 to 120Hz	0.01Hz	0Hz	*124*		◎ 2	02	82	0	○	○	○	○	○
	◎ 3	Base frequency	0 to 400Hz	0.01Hz	60Hz	*126*		◎ 3	03	83	0	○	×	×	○	○
	◎ 4	Multi-speed setting (high speed)	0 to 400Hz	0.01Hz	60Hz	*130*		◎ 4	04	84	0	○	○	○	○	○
	◎ 5	Multi-speed setting (middle speed)	0 to 400Hz	0.01Hz	30Hz	*130*		◎ 5	05	85	0	○	○	○	○	○
	◎ 6	Multi-speed setting (low speed)	0 to 400Hz	0.01Hz	10Hz	*130*		◎ 6	06	86	0	○	○	○	○	○
	◎ 7	Acceleration time	0 to 3600/360s	0.1/0.01s	5/10/15s *2	*135*		◎ 7	07	87	0	○	○	○	○	○
	◎ 8	Deceleration time	0 to 3600/360s	0.1/0.01s	5/10/15s *2	*135*		◎ 8	08	88	0	○	○	○	○	○
	◎ 9	Electronic thermal O/L relay	0 to 500A	0.01A	Rated inverter current	*142*		◎ 9	09	89	0	○	○	○	○	○
DC injection brake	10	DC injection brake operation frequency	0 to 120Hz	0.01Hz	3Hz	*154*		10	0A	8A	0	○	○	○	○	○
	11	DC injection brake operation time	0 to 10s	0.1s	0.5s	*154*		11	0B	8B	0	○	○	○	○	○
	12	DC injection brake operation voltage	0 to 30%	0.1%	6/4/2% *3	*154*		12	0C	8C	0	○	○	○	○	○
—	13	Starting frequency	0 to 60Hz	0.01Hz	0.5Hz	*138*		13	0D	8D	0	○	○	○	○	○
—	14	Load pattern selection	0 to 3	1	0	*128*		14	0E	8E	0	○	×	×	○	○
JOG operation	15	Jog frequency	0 to 400Hz	0.01Hz	5Hz	*201*		15	0F	8F	0	○	○	○	○	○
	16	Jog acceleration/deceleration time	0 to 3600/360s	0.1/0.01s	0.5s	*201*		16	10	90	0	○	○	○	○	○
—	17	MRS input selection	0, 2, 4	1	0	*166*		17	11	91	0	○	○	○	○	○
—	18	High speed maximum frequency	120 to 400Hz	0.01Hz	120Hz	*124*		18	12	92	0	○	○	○	○	○
—	19	Base frequency voltage	0 to 1000V, 8888, 9999	0.1V	9999	*126*		19	13	93	0	○	×	×	○	○
Acceleration/ deceleration time	20	Acceleration/deceleration reference frequency	1 to 400Hz	0.01Hz	60Hz	*135*		20	14	94	0	○	○	○	○	○
	21	Acceleration/deceleration time increments	0, 1	1	0	*135*		21	15	95	0	○	○	○	○	○
Stall prevention	22	Stall prevention operation level	0 to 200%	0.1%	150%	*120*		22	16	96	0	○	○	○	○	○
	23	Stall prevention operation level compensation factor at double speed	0 to 200%, 9999	0.1%	9999	*120*		23	17	97	0	○	○	○	○	○
Multi-speed setting	24	Multi-speed setting (speed 4)	0 to 400Hz, 9999	0.01Hz	9999	*130*		24	18	98	0	○	○	○	○	○
	25	Multi-speed setting (speed 5)	0 to 400Hz, 9999	0.01Hz	9999	*130*		25	19	99	0	○	○	○	○	○
	26	Multi-speed setting (speed 6)	0 to 400Hz, 9999	0.01Hz	9999	*130*		26	1A	9A	0	○	○	○	○	○
	27	Multi-speed setting (speed 7)	0 to 400Hz, 9999	0.01Hz	9999	*130*		27	1B	9B	0	○	○	○	○	○

Func-tion	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	29	Acceleration/deceleration pattern selection	0, 1, 2	1	0	*139*	
—	30	Regenerative function selection	0, 1, 2	1	0	*155, 180*	
Frequency jump	31	Frequency jump 1A	0 to 400Hz, 9999	0.01Hz	9999	*125*	
	32	Frequency jump 1B	0 to 400Hz, 9999	0.01Hz	9999	*125*	
	33	Frequency jump 2A	0 to 400Hz, 9999	0.01Hz	9999	*125*	
	34	Frequency jump 2B	0 to 400Hz, 9999	0.01Hz	9999	*125*	
	35	Frequency jump 3A	0 to 400Hz, 9999	0.01Hz	9999	*125*	
	36	Frequency jump 3B	0 to 400Hz, 9999	0.01Hz	9999	*125*	
—	37	Speed display	0, 0.01 to 9998	0.001	0	*175*	
—	40	RUN key rotation direction selection	0, 1	1	0	*223*	
Frequency detection	41	Up-to-frequency sensitivity	0 to 100%	0.1%	10%	*171*	
	42	Output frequency detection	0 to 400Hz	0.01Hz	6Hz	*171*	
	43	Output frequency detection for reverse rotation	0 to 400Hz, 9999	0.01Hz	9999	*171*	
Second functions	44	Second acceleration/deceleration time	0 to 3600/360s	0.1/0.01s	5/10/15s *2	*135*	
	45	Second deceleration time	0 to 3600/360s, 9999	0.1/0.01s	9999	*135*	
	46	Second torque boost	0 to 30%, 9999	0.1%	9999	*113*	
	47	Second V/F (base frequency)	0 to 400Hz, 9999	0.01Hz	9999	*126*	
	48	Second stall prevention operation current	0 to 200%, 9999	0.1%	9999	*120*	
	51	Second electronic thermal O/L relay	0 to 500A, 9999	0.01A	9999	*142*	
—	52	DU/PU main display data selection	0, 5, 7 to 12, 14, 20, 23 to 25, 52 to 57, 61, 62, 100	1	0	*176*	
—	54	Parameter for manufacturer setting. Do not set.					
—	55						
—	56						
Automatic restart functions	57	Restart coasting time	0, 0.1 to 5s, 9999	0.1s	9999	*180*	
	58	Restart cushion time	0 to 60s	0.1s	1s	*180*	
—	59	Remote function selection	0, 1, 2, 3	1	0	*132*	
—	60	Energy saving control selection	0, 9	1	0	*191*	
Automatic acceleration /deceleration	61	Reference current	0 to 500A, 9999	0.01A	9999	*140*	
	62	Reference value at acceleration	0 to 200%, 9999	1%	9999	*140*	
	63	Reference value at deceleration	0 to 200%, 9999	1%	9999	*140*	
—	65	Retry selection	0 to 5	1	0	*188*	
—	66	Stall prevention operation reduction starting frequency	0 to 400Hz	0.01Hz	60Hz	*120*	
Retry	67	Number of retries at fault occurrence	0 to 10, 101 to 110	1	0	*188*	
	68	Retry waiting time	0.1 to 360s	0.1s	1s	*188*	
	69	Retry count display erase	0	1	0	*188*	
—	70	Special regenerative brake duty	0 to 30%	0.1%	0%	*155*	
—	71	Applied motor	0, 1, 3 to 6, 13 to 16, 23, 24, 40, 43, 44, 50, 53, 54	1	0	*114, 117, 144, 146,*	
—	72	PWM frequency selection	0 to 15	1	1	*192*	
—	73	Parameter for manufacturer setting. Do not set.					
—	74						
—	75	Reset selection/PU stop selection	0 to 3, 14 to 17	1	14	*194*	

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
29	1D	9D	0	○	○	○	○	○
30	1E	9E	0	○	○	○	○	○
31	1F	9F	0	○	○	○	○	○
32	20	A0	0	○	○	○	○	○
33	21	A1	0	○	○	○	○	○
34	22	A2	0	○	○	○	○	○
35	23	A3	0	○	○	○	○	○
36	24	A4	0	○	○	○	○	○
37	25	A5	0	○	○	○	○	○
40	28	A8	0	○	○	○	○	○
41	29	A9	0	○	○	○	○	○
42	2A	AA	0	○	○	○	○	○
43	2B	AB	0	○	○	○	○	○
44	2C	AC	0	○	○	○	○	○
45	2D	AD	0	○	○	○	○	○
46	2E	AE	0	○	×	×	○	○
47	2F	AF	0	○	×	×	○	○
48	30	B0	0	○	○	○	○	○
51	33	B3	0	○	○	○	○	○
52	34	B4	0	○	○	○	○	○
54	Parameter for manufacturer setting. Do not set.							
55								
56								
57	39	B9	0	○	○	○	○	○
58	3A	BA	0	○	○	○	○	○
59	3B	BB	0	○	○	○	○	○
60	3C	BC	0	○	×	×	○	○
61	3D	BD	0	○	○	○	○	○
62	3E	BE	0	○	○	○	○	○
63	3F	BF	0	○	○	○	○	○
65	41	C1	0	○	○	○	○	○
66	42	C2	0	○	○	○	○	○
67	43	C3	0	○	○	○	○	○
68	44	C4	0	○	○	○	○	○
69	45	C5	0	○	○	○	○	○
70	46	C6	0	○	○	○	○	○
71	47	C7	0	○	○	○	○	○
72	48	C8	0	○	○	○	○	○
73	Parameter for manufacturer setting. Do not set.							
74								
75	4B	CB	0	○	○	○	×	×

Function	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	77	Parameter write selection	0, 1, 2	1	0	*196*	
—	78	Reverse rotation prevention selection	0, 1, 2	1	0	*197*	
—	◎ 79	Operation mode selection	0, 1, 2, 3, 4, 6, 7	1	0	*103*	
Motor constants	80	Motor capacity	0.1 to 15kW, 9999	0.01kW	9999	*112, 114, 117, 146*	
	81	Number of motor poles	2, 4, 6, 8, 10, 9999	1	9999	*112, 114, 117, 146*	
	82	Motor excitation current	0 to 500A (0 to ****), 9999 *5	0.01A (1) *5	9999	*146*	
	83	Rated motor voltage	0 to 1000V	0.1V	200V/400V *4	*146*	
	84	Rated motor frequency	10 to 120Hz	0.01Hz	60Hz	*146*	
	89	Speed control gain (Advanced magnetic flux vector)	0 to 200%, 9999	0.1%	9999	*114*	
	90	Motor constant (R1)	0 to 50Ω (0 to ****) , 9999 *5	0.001Ω (1) *5	9999	*146*	
	91	Motor constant (R2)	0 to 50Ω (0 to ****) , 9999 *5	0.001Ω (1) *5	9999	*146*	
	92	Motor constant (L1)	0 to 1000mH (0 to 50Ω, 0 to ****), 9999 *5	0.1mH (0.001Ω, 1) *5	9999	*146*	
	93	Motor constant (L2)	0 to 1000mH (0 to 50Ω, 0 to ****) , 9999 *5	0.1mH (0.001Ω, 1) *5	9999	*146*	
	94	Motor constant (X)	0 to 100% (0 to 500Ω, 0 to ****) , 9999 *5	0.1% (0.01Ω, 1) *5	9999	*146*	
	96	Auto tuning setting/status	0, 1, 11, 21	1	0	*146, 180*	
—	117	Parameter for manufacturer setting. Do not set.					
—	118						
—	119						
—	120						
—	121						
—	122						
—	123						
—	124						
—	◎125	Frequency setting gain	0 to 400Hz	0.01Hz	60Hz	*203*	
—	126	Parameter for manufacturer setting. Do not set.					
PID operation	127	PID control automatic switchover frequency	0 to 400Hz, 9999	0.01Hz	9999	*203*	
	128	PID action selection	0, 20, 21, 40 to 43, 50, 51, 60, 61	1	0	*203*	
	129	PID proportional band	0.1 to 1000%, 9999	0.1%	100%	*203*	
	130	PID integral time	0.1 to 3600s, 9999	0.1s	1s	*203*	
	131	PID upper limit	0 to 100%, 9999	0.1%	9999	*203*	
	132	PID lower limit	0 to 100%, 9999	0.1%	9999	*203*	
—	133	Parameter for manufacturer setting. Do not set.					
—	134	PID differential time	0.01 to 10.00s, 9999	0.01s	9999	*203*	
—	145	Parameter for manufacturer setting. Do not set.					
—	146						
—	147	Acceleration/deceleration time switching frequency	0 to 400Hz, 9999	0.01Hz	9999	*135*	
Current detection	150	Output current detection level	0 to 200%	0.1%	150%	*172*	
	151	Output current detection signal delay time	0 to 10s	0.1s	0s	*172*	
	152	Zero current detection level	0 to 200%	0.1%	5%	*172*	
	153	Zero current detection time	0 to 1s	0.01s	0.5s	*172*	

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
77	4D	— *9	0	○	○	○	○	○
78	4E	CE	0	○	○	○	○	○
◎ 79	4F	— *9	0	○	○	○	○	○
80	50	D0	0	×	○	○	○	○
81	51	D1	0	×	○	○	○	○
82	52	D2	0	×	○	○	×	○
83	53	D3	0	×	○	○	○	○
84	54	D4	0	×	○	○	○	○
89	59	D9	0	×	○	×	×	○
90	5A	DA	0	○	○	○	×	○
91	5B	DB	0	×	○	○	×	○
92	5C	DC	0	×	○	○	×	○
93	5D	DD	0	×	○	○	×	○
94	5E	DE	0	×	○	○	×	○
96	60	E0	0	○	○	○	×	○
117	Parameter for manufacturer setting. Do not set.							
118								
119								
120								
121								
122								
123								
124								
◎ 125	19	99	1	○	○	○	×	○
126	Parameter for manufacturer setting. Do not set.							
127	1B	9B	1	○	○	○	○	○
128	1C	9C	1	○	○	○	○	○
129	1D	9D	1	○	○	○	○	○
130	1E	9E	1	○	○	○	○	○
131	1F	9F	1	○	○	○	○	○
132	20	A0	1	○	○	○	○	○
133	Parameter for manufacturer setting. Do not set.							
134	22	A2	1	○	○	○	○	○
145	Parameter for manufacturer setting. Do not set.							
146								
147	2F	AF	1	○	○	○	○	○
150	32	B2	1	○	○	○	○	○
151	33	B3	1	○	○	○	○	○
152	34	B4	1	○	○	○	○	○
153	35	B5	1	○	○	○	○	○

Function	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	156	Stall prevention operation selection	0 to 31, 100, 101	1	0	*120*	
—	157	OL signal output timer	0 to 25s, 9999	0.1s	0s	*120*	
—	◎ 160	User group read selection	0, 1, 9999	1	0	*197*	
—	161	Frequency setting/key lock operation selection	0, 1, 10, 11	1	0	*224*	
Automatic restart functions	162	Automatic restart after instantaneous power failure selection	0, 1, 10, 11	1	1	*180*	
	165	Stall prevention operation level for restart	0 to 200%	0.1%	150%	*180*	
—	168	Parameter for manufacturer setting. Do not set.					
—	169						
Cumulative monitor clear	170	Watt-hour meter clear	0, 10, 9999	1	9999	*176*	
	171	Operation hour meter clear	0, 9999	1	9999	*176*	
User group	172	User group registered display/batch clear	9999, (0 to 16)	1	0	*197*	
	173	User group registration	0 to 999, 9999	1	9999	*197*	
	174	User group clear	0 to 999, 9999	1	9999	*197*	
—	178	Parameter for manufacturer setting. Do not set.					
—	179						
Input terminal function assignment	180	RY4 function selection	0 to 5, 7, 8, 10, 12, 14 to 16, 18, 24, 25, 62, 65 to 67, 9999	1	0	*163*	
	181	RY3 function selection		1	1	*163*	
	182	RY2 function selection		1	2	*163*	
	183	RY9 function selection		1	24	*163*	
	184	RYB function selection		1	62	*163*	
Output terminal function assignment	190	RX2 (terminal Y0) function selection	0, 1, 3, 4, 7, 8, 11 to 16, 20, 25, 26, 46, 47, 64, 68 , 80 , 81, 90, 91, 93, 95, 96, 98, 99, 100, 101, 103, 104, 107, 108, 111 to 116, 120, 125, 126, 146, 147, 164, 168, 180, 181, 190, 191, 193, 195, 196, 198, 199, 9999	1	0	*167*	
	191	RX6 function selection		1	4	*167*	
	192	RX7 function selection	0, 1, 3, 4, 7, 8, 11 to 16, 20, 25, 26, 46, 47, 64, 68, 80, 81, 90, 91, 95, 96, 98, 99, 100, 101, 103, 104, 107, 108, 111 to 116, 120, 125, 126, 146, 147, 164, 168, 180, 181, 190, 191, 195, 196, 198, 199, 9999	1	99	*167*	
Multi-speed setting	232	Multi-speed setting (speed 8)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	233	Multi-speed setting (speed 9)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	234	Multi-speed setting (speed 10)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	235	Multi-speed setting (speed 11)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	236	Multi-speed setting (speed 12)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	237	Multi-speed setting (speed 13)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	238	Multi-speed setting (speed 14)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
	239	Multi-speed setting (speed 15)	0 to 400Hz, 9999	0.01Hz	9999	*130*	
—	240	Soft-PWM operation selection	0, 1	1	1	*192*	
—	241	Parameter for manufacturer setting. Do not set.					

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
156	38	B8	1	○	○	○	○	○
157	39	B9	1	○	○	○	○	○
◎ 160	00	80	2	○	○	○	○	○
161	01	81	2	○	○	○	×	○
162	02	82	2	○	○	○	○	○
165	05	85	2	○	○	○	○	○
168	Parameter for manufacturer setting. Do not set.							
169								
170	0A	8A	2	○	○	○	×	○
171	0B	8B	2	○	○	○	×	×
172	0C	8C	2	○	○	○	×	×
173	0D	8D	2	○	○	○	×	×
174	0E	8E	2	○	○	○	×	×
178	Parameter for manufacturer setting. Do not set.							
179								
180	14	94	2	○	○	○	×	○
181	15	95	2	○	○	○	×	○
182	16	96	2	○	○	○	×	○
183	17	97	2	○	○	○	×	○
184	18	98	2	○	○	○	×	○
190	1E	9E	2	○	○	○	×	○
191	1F	9F	2	○	○	○	×	○
192	20	A0	2	○	○	○	×	○
232	28	A8	2	○	○	○	○	○
233	29	A9	2	○	○	○	○	○
234	2A	AA	2	○	○	○	○	○
235	2B	AB	2	○	○	○	○	○
236	2C	AC	2	○	○	○	○	○
237	2D	AD	2	○	○	○	○	○
238	2E	AE	2	○	○	○	○	○
239	2F	AF	2	○	○	○	○	○
240	30	B0	2	○	○	○	○	○
241	Parameter for manufacturer setting. Do not set.							

Function	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	244	Cooling fan operation selection	0, 1	1	1	*213*	
Slip compensation	245	Rated slip	0 to 50%, 9999	0.01%	9999	*119*	
	246	Slip compensation time constant	0.01 to 10s	0.01s	0.5s	*119*	
	247	Constant-power range slip compensation selection	0, 9999	1	9999	*119*	
—	249	Earth (ground) fault detection at start	0, 1	1	0	*190*	
—	250	Stop selection	0 to 100s, 1000 to 1100s, 8888, 9999	0.1s	9999	*157*	
—	251	Output phase loss protection selection	0, 1	1	1	*190*	
Life diagnosis	255	Life alarm status display	(0 to 15)	1	0	*214*	
	256	Inrush current limit circuit life display	(0 to 100%)	1%	100%	*214*	
	257	Control circuit capacitor life display	(0 to 100%)	1%	100%	*214*	
	258	Main circuit capacitor life display	(0 to 100%)	1%	100%	*214*	
	259	Main circuit capacitor life measuring	0, 1 (2, 3, 8, 9)	1	0	*214*	
Power failure stop	261	Power failure stop selection	0, 1, 2	1	0	*186*	
—	267	Parameter for manufacturer setting. Do not set.					
—	268	Monitor decimal digits selection	0, 1, 9999	1	9999	*176*	
—	269	Parameter for manufacturer setting. Do not set.					
—	270	Stop-on contact control selection	0, 1	1	0	*158*	
Stop-on contact control	275	Stop-on contact excitation current low-speed multiplying factor	0 to 300%, 9999	0.1%	9999	*158*	
	276	PWM carrier frequency at stop-on contact	0 to 9, 9999	1	9999	*158*	
—	277	Stall prevention operation current switchover	0, 1	1	0	*120*	
Brake sequence function	278	Brake opening frequency	0 to 30Hz	0.01Hz	3Hz	*160*	
	279	Brake opening current	0 to 200%	0.1%	130%	*160*	
	280	Brake opening current detection time	0 to 2s	0.1s	0.3s	*160*	
	281	Brake operation time at start	0 to 5s	0.1s	0.3s	*160*	
	282	Brake operation frequency	0 to 30Hz	0.01Hz	6Hz	*160*	
	283	Brake operation time at stop	0 to 5s	0.1s	0.3s	*160*	
Droop control	286	Droop gain	0 to 100%	0.1%	0%	*210*	
	287	Droop filter time constant	0 to 1s	0.01s	0.3s	*210*	
—	292	Automatic acceleration/deceleration	0, 1, 7, 8, 11	1	0	*140*	
—	293	Acceleration/deceleration separate selection	0 to 2	1	0	*140*	
—	295	Magnitude of frequency change setting	0, 0.01, 0.1, 1, 10	0.01	0	*226*	
Password function	296	Password lock level	0 to 6, 99, 100 to 106, 199, 9999	1	9999	*199*	
	297	Password lock/unlock	(0 to 5), 1000 to 9998, 9999	1	9999	*199*	
—	298	Frequency search gain	0 to 32767, 9999	1	9999	*180*	
—	299	Rotation direction detection selection at restarting	0, 1, 9999	1	0	*180*	
Digital output	◎ 313	RX9 function selection	0, 1, 3, 4, 7, 8, 11 to 16, 20, 25, 26, 46, 47, 64, 68, 80, 81, 90, 91, 93, 95, 96, 98, 99, 100, 101, 103, 104, 107, 108, 111 to 116, 120, 125, 126, 146, 147, 164, 168, 180, 181, 190, 191, 193, 195, 196, 198, 199, 9999	1	9999	*167*	
	◎ 314	RXA function selection		1	9999	*167*	
	◎ 315	RXB function selection		1	9999	*167*	

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
244	34	B4	2	○	○	○	○	○
245	35	B5	2	○	×	○	○	○
246	36	B6	2	○	×	○	○	○
247	37	B7	2	○	×	○	○	○
249	39	B9	2	○	○	○	○	○
250	3A	BA	2	○	○	○	○	○
251	3B	BB	2	○	○	○	○	○
255	3F	BF	2	○	○	○	×	×
256	40	C0	2	○	○	○	×	×
257	41	C1	2	○	○	○	×	×
258	42	C2	2	○	○	○	×	×
259	43	C3	2	○	○	○	○	○
261	45	C5	2	○	○	○	○	○
267	Parameter for manufacturer setting. Do not set.							
268	4C	CC	2	○	○	○	○	○
269	Parameter for manufacturer setting. Do not set.							
270	4E	CE	2	×	○	○	○	○
275	53	D3	2	×	○	○	○	○
276	54	D4	2	×	○	○	○	○
277	55	D5	2	○	○	○	○	○
278	56	D6	2	×	○	○	○	○
279	57	D7	2	×	○	○	○	○
280	58	D8	2	×	○	○	○	○
281	59	D9	2	×	○	○	○	○
282	5A	DA	2	×	○	○	○	○
283	5B	DB	2	×	○	○	○	○
286	5E	DE	2	×	○	×	○	○
287	5F	DF	2	×	○	×	○	○
292	64	E4	2	○	○	○	○	○
293	65	E5	2	○	○	○	○	○
295	67	E7	2	○	○	○	○	○
296	68	E8	2	○	○	○	×	○
297	69	E9	2	○	○	○	×*8	○
298	6A	EA	2	○	○	○	×	○
299	6B	EB	2	○	○	○	○	○
◎ 313	0D	8D	3	○	○	○	○	○
◎ 314	0E	8E	3	○	○	○	○	○
◎ 315	0F	8F	3	○	○	○	○	○

Func-tion	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	338	Parameter for manufacturer setting. Do not set.					
—	339						
—	340						
—	342	Communication EEPROM write selection	0, 1	1	0	*110*	
—	343	Parameter for manufacturer setting. Do not set.					
—	◎ 349	Communication reset selection	0, 1	1	0	*110*	
Second motor constant	450	Second applied motor	0, 1, 9999	1	9999	*144*	
Output	495	Remote output selection	0, 1, 10, 11	1	0	*174*	
	496	Remote output data 1	0 to 4095	1	0	*174*	
—	497	Parameter for manufacturer setting. Do not set.					
Communication error	◎ 500	Communication error execution waiting time	0 to 999.8s	0.1s	0	*107*	
	◎ 501	Communication error occurrence count display	0	1	0	*107*	
	502	Stop mode selection at communication error	0, 1, 2, 3	1	0	*107*	
Maintenance	503	Maintenance timer	0 (1 to 9998)	1	0	*217*	
	504	Maintenance timer alarm output set time	0 to 9998, 9999	1	9999	*217*	
CC-Link	◎ 541	Frequency command sign selection (CC-Link)	0, 1	1	0	*105*	
	◎ 542	Communication station number (CC-Link)	1 to 64	1	1	*105*	
	◎ 543	Baud rate selection (CC-Link)	0 to 4	1	0	*105*	
	◎ 544	CC-Link extended setting	0, 1, 12, 14, 18	1	0	*105*	
USB	547	USB communication station number	0 to 31	1	0	*220*	
	548	USB communication check time interval	0 to 999.8s, 9999	0.1s	9999	*220*	
—	549	Parameter for manufacturer setting. Do not set.					
—	550						
—	551	PU mode operation command source selection	2 to 4, 9999	1	9999	*220*	
Current average time monitor	555	Current average time	0.1 to 1.0s	0.1s	1s	*218*	
	556	Data output mask time	0 to 20s	0.1s	0s	*218*	
	557	Current average value monitor signal output reference current	0 to 500A	0.01A	Rated inverter current	*218*	

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
338	Parameter for manufacturer setting. Do not set.							
339								
340								
342	2A	AA	3	○	○	○	○	○
343	Parameter for manufacturer setting. Do not set.							
◎ 349	31	B1	3	○	○	○	○ *7	○ *7
450	32	B2	4	○	○	○	○	○
495	5F	DF	4	○	○	○	○	○
496	60	E0	4	○	○	○	×	×
497	Parameter for manufacturer setting. Do not set.							
◎ 500	00	80	5	○	○	○	○	○
◎ 501	01	81	5	○	○	○	○	○
502	02	82	5	○	○	○	○	○
503	03	83	5	○	○	○	×	×
504	04	84	5	○	○	○	×	○
◎ 541	29	A9	5	○	○	○	○ *7	○ *7
◎ 542	2A	AA	5	○	○	○	○ *7	○ *7
◎ 543	2B	AB	5	○	○	○	○ *7	○ *7
◎ 544	2C	AC	5	○	○	○	○ *7	○ *7
547	2F	AF	5	○	○	○	○ *7	○ *7
548	30	B0	5	○	○	○	○ *7	○ *7
549	Parameter for manufacturer setting. Do not set.							
550								
551	33	B3	5	○	○	○	○ *7	○ *7
555	37	B7	5	○	○	○	○	○
556	38	B8	5	○	○	○	○	○
557	39	B9	5	○	○	○	○	○

Func-tion	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
—	563	Energization time carrying-over times	(0 to 65535)	1	0	*176*	
—	564	Operating time carrying-over times	(0 to 65535)	1	0	*176*	
—	571	Holding time at a start	0 to 10s, 9999	0.1s	9999	*138*	
—	611	Acceleration time at a restart	0 to 3600s, 9999	0.1s	9999	*180*	
—	653	Speed smoothing control	0 to 200%	0.1%	0	*193*	
—	665	Regeneration avoidance frequency gain	0 to 200%	0.1%	100	*211*	
—	800	Control method selection	20, 30	1	20	*112*, *114*, *117*	
—	859	Torque current	0 to 500A (0 to ****) , 9999 *5	0.01A (1) *5	9999	*146*	
Protective functions	872 *6	Input phase loss protection selection	0, 1	1	1	*190*	
Regeneration avoidance function	882	Regeneration avoidance operation selection	0, 1, 2	1	0	*211*	
	883	Regeneration avoidance operation level	300 to 800V	0.1V	400VDC/ 780VDC *4	*211*	
	885	Regeneration avoidance compensation frequency limit value	0 to 10Hz, 9999	0.01Hz	6Hz	*211*	
	886	Regeneration avoidance voltage gain	0 to 200%	0.1%	100%	*211*	
Free parameter	888	Free parameter 1	0 to 9999	1	9999	*222*	
	889	Free parameter 2	0 to 9999	1	9999	*222*	
—	C0	Parameter for manufacturer setting. Do not set.					
—	C2	Frequency setting bias	0 to 400Hz	0.01Hz	0Hz	*203*	
—	C3	Parameter for manufacturer setting. Do not set.					
—	C4						
—	C5						
—	C6						
—	C7						
—	C22						
—	C23						
—	C24						
—	C25						
—	990						
—	991						

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
563	3F	BF	5	○	○	○	×	×
564	40	C0	5	○	○	○	×	×
571	47	C7	5	○	○	○	○	○
611	0B	8B	6	○	○	○	○	○
653	35	B5	6	○	○	○	○	○
665	41	C1	6	○	○	○	○	○
800	00	80	8	×	○	○	○	○
859	3B	BB	8	×	○	○	×	○
872	48	C8	8	○	○	○	○	○
882	52	D2	8	○	○	○	○	○
883	53	D3	8	○	○	○	○	○
885	55	D5	8	○	○	○	○	○
886	56	D6	8	○	○	○	○	○
888	58	D8	8	○	○	○	×	×
889	59	D9	8	○	○	○	×	×
C0	Parameter for manufacturer setting. Do not set.							
C2	5E	DE	1	○	○	○	×	○
C3	Parameter for manufacturer setting. Do not set.							
C4								
C5								
C6								
C7								
C22								
C23								
C24								
C25								
990								
991								

Function	Parameter	Name	Setting Range	Minimum Setting Increments	Initial Value	Refer to Page	Customer Setting
Clear parameters Initial value change list	Pr.CL	Parameter clear	0, 1	1	0	*227*	
	ALLC	All parameter clear	0, 1	1	0	*227*	
	Er.CL	Faults history clear	0, 1	1	0	*229*	
	Pr.CH	Initial value change list	—	—	—	*228*	

∗1 Differ according to capacities.
6%: 0.75K or lower
4%: 1.5K to 3.7K
3%: 5.5K, 7.5K
2%: 11K, 15K

∗2 Differ according to capacities.
5s: 3.7K or lower
10s: 5.5K, 7.5K
15s: 11K, 15K

∗3 Differ according to capacities.
6%: 0.1K, 0.2K
4%: 0.4K to 7.5K
2%: 11K, 15K

∗4 The initial value differs according to the voltage class. (200V class/400V class)

∗5 The range differs according to the *Pr. 71* setting.

∗6 Available only for the three-phase power input model.

∗7 These parameters are communication parameters that are not cleared when parameter clear (all clear) is executed from CC-Link communication. (*Refer to page 64* for parameter clear (all parameter clear) from CC-Link communication).

∗8 If a password has been registered (*Pr.297* ≠ "9999"), the parameter setting can be cleared (the password lock can be unlocked) only via CC-Link communication.

∗9 Settings cannot be written during CC-Link communication (under Network operation mode).

Parameter	Instruction Code			Control Mode-based Correspondence			Parameter	
	Read	Write	Extended	V/F	AD MFVC	GP MFVC	Clear	All clear
Pr.CL	—	FC	—	—	—	—	—	—
ALLC	—	FC	—	—	—	—	—	—
Er.CL	—	F4	—	—	—	—	—	—
Pr.CH	—	—	—	—	—	—	—	—

FR-E700-NC Series
Instruction Manual Supplement

1 For the terminating resistor selection switch

Please make corrections to the following error in this manual.

Connection of several inverters

- Instruction Manual (Basic) : page 17
- Instruction Manual (Applied): page 50

(Incorrect)

∗2 Set "1" and "2" of the terminating resistor selection switch (SW1) to OFF (without terminating resistor) in the middle units.

	1	2	Description
	OFF	OFF	Without terminating resistor (initial setting)
	ON	OFF	Do not use.
	OFF	ON	130Ω
	ON	ON	110Ω

130Ω is a resistance value for the CC-Link Ver. 1.00 dedicated high performance cable

(Correct)

∗2 Set "1" and "2" of the terminating resistor selection switch (SW1) to OFF (without terminating resistor) in the middle units.

	1	2	Description
	OFF	OFF	Without terminating resistor (initial setting)
	ON	OFF	130Ω
	OFF	ON	Do not use.
	ON	ON	110Ω

130Ω is a resistance value for the CC-Link Ver. 1.00 dedicated high performance cable

2 Additional notes for instructions for UL and cUL

- Instruction Manual (Basic) : page 43

General precaution

CAUTION - Risk of Electric Shock -
The bus capacitor discharge time is 10 minutes. Before starting wiring or inspection, switch power off, wait for more than 10 minutes.

ATTENTION - Risque de choc électrique -
La durée de décharge du condensateur de bus est de 10 minutes.
Avant de commencer le câblage ou l'inspection, mettez l'appareil hors tension et attendez plus de 10 minutes.

Motor overload protection

When using the electronic thermal relay function as motor overload protection, set the rated motor current to *Pr. 9 "Electronic thermal O/L relay"*.

NOTE

- Motor over temperature sensing is not provided by the drive.

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