MITSUBISHI ELECTRIC AUTOMATION, INC.

MODEL F700

START-UP PROCEDURE FOR HVAC & PUMPS

TECH SUPPORT

ELECTRO POWER

MINNESOTA

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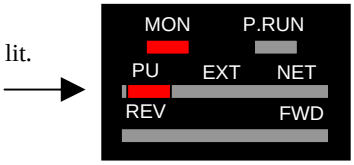
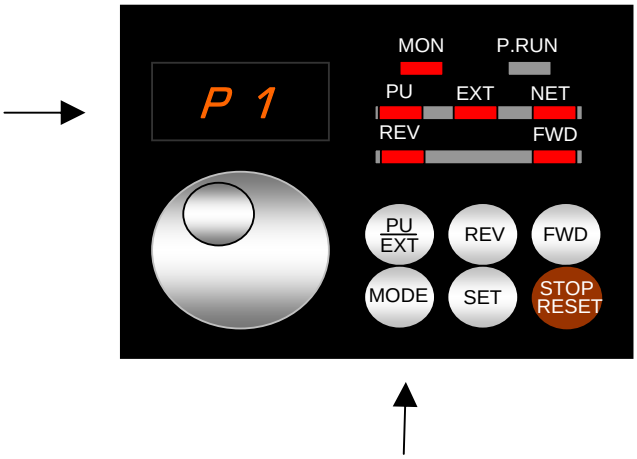
PROGRAMMING THE F700 MITSUBISHI DRIVE.

Make sure drive is not running.

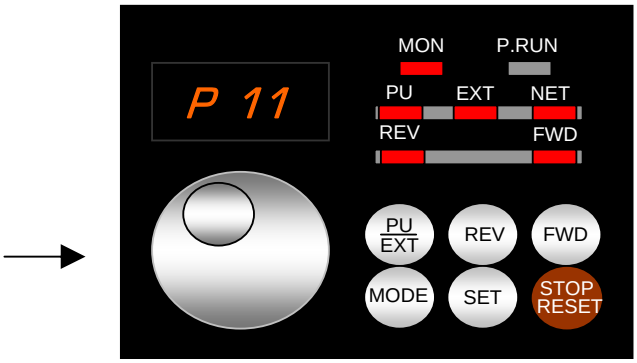
1 Push PU/EXT until PU Light is lit.



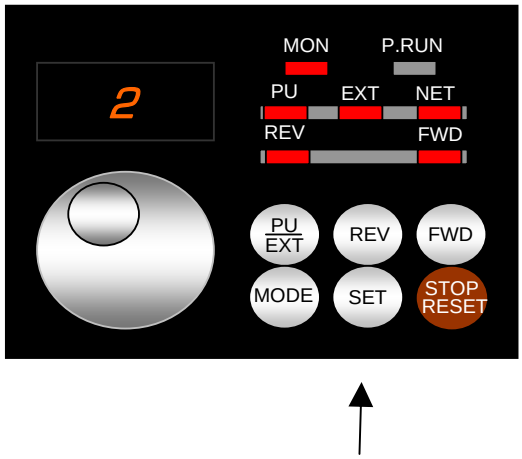
2 Push MODE Button until 1st letter of display is "P 1" or some other P number.



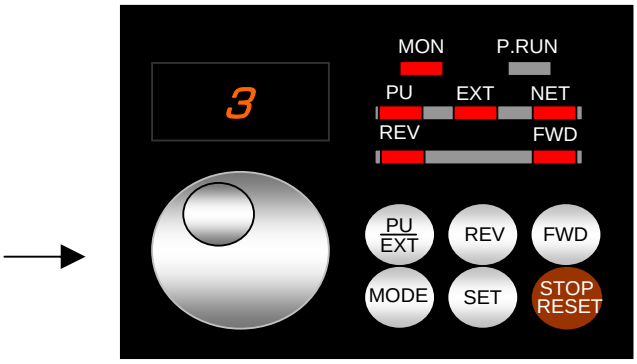
3 With Dial scroll thru the Parameters until you get to the one you want to change.



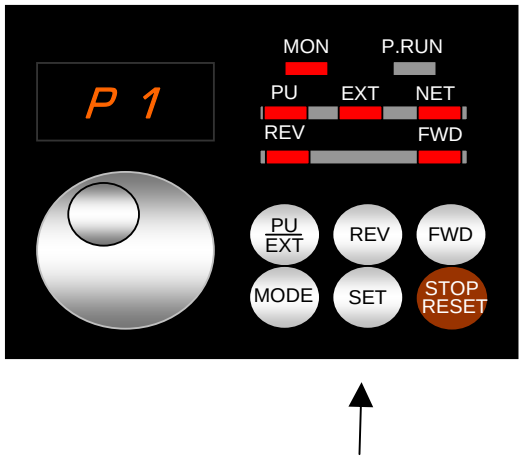
4 Push the SET Button. The number you see now is the value stored in that Parameter.



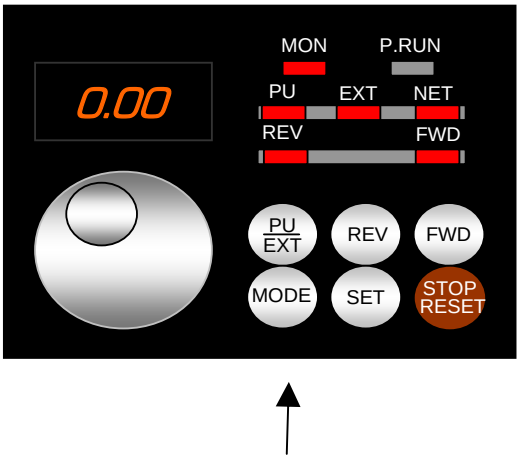
5 With Dial scroll UP or DOWN to change to the value you want.



6 Push the SET Button. This stores the change you have just made.

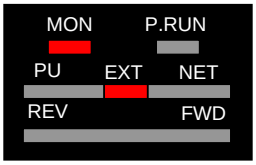


7 Push the MODE Button until you get back to the Frequency Screen. It will probably say "0.00".



8 If you are want to Start & Stop and control Speed thru the keypad, leave the PU Light lit.

9 If you are Starting and Stopping from a Relay or a Pushbutton or something else.
Push the PU/EXT Button until the EXT Light is lit.



YOU ARE NOW READY TO RUN THE DRIVE.

MITSUBISHI F700 PARAMETER LIST

Typical Paramter List

Parameters	Name	Setting Range	Minimum Setting Increments	Intial Value	Refer to Page	Customer Setting
1	Maximum frequency	0 to 120Hz	0.01Hz	120 Hz	62	60
2	Minimum frequency	0 to 120Hz	0.01Hz	0Hz	62	20
7	Acceleration time	0 to 3600/360s	0.1/0.01s	5s/15s	74	30
8	Deceleration time	0 to 3600/360s	0.1/0.01s	10s/30s	74	30
9	Electronic thermal O/L relay	0 to 500A	0.01A	Rated inverter output	78	FLA
14	Load pattern selection	0,1	1	1	61	0
67	Number of retries at alarm occurrence	0 to 10, 101 to 110	1	0	113	5
73	Analog input selection	0 to 7, 10 to 17	1	1	126	?

Set P73 = "6" for 4-20mA Speed Reference

77	Parameter write selection	0, 1, 2	1	0	135	2
882	Regeneration avoidance operation selection	0, 1	1	0	193	1
ALLC	All parameter clear	0, 1	1	0	206	

Resets all Parameters back to default. Change to "1" and push "SET".

Er.CL	Alarm history clear	0, 1	1	0	209	

Resets Alarm History. Change to "1" and push "SET".

PCPY	Parameter copy	0, 1, 2, 3	1	0	207	

Copy VFD Program to Keypad. Change to "1" and push "SET". Reads from VFD.

Copy Keypad Program to VFD. Change to "2" and push "SET". Writes to VFD.

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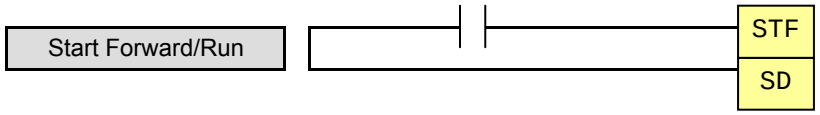
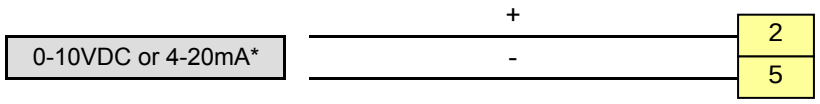
MITSUBISHI Model F700 VFD Terminals

INPUTS

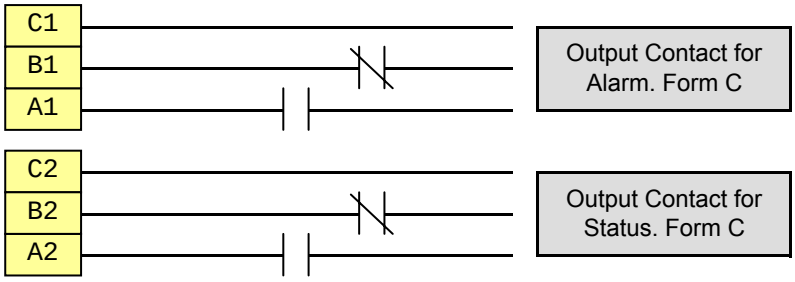


ANALOG INPUTS



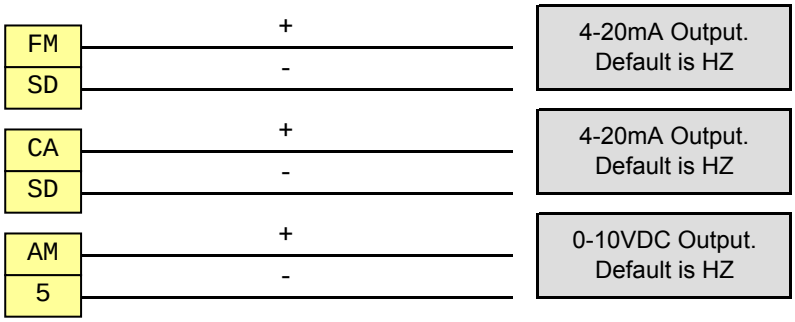
*Default is 0-10VDC, for 4-20mA set parameter 73 = 6.

OUTPUTS



Contact capacity: 230VAC 0.3A, 30VDC 0.3A

ANALOG OUTPUTS



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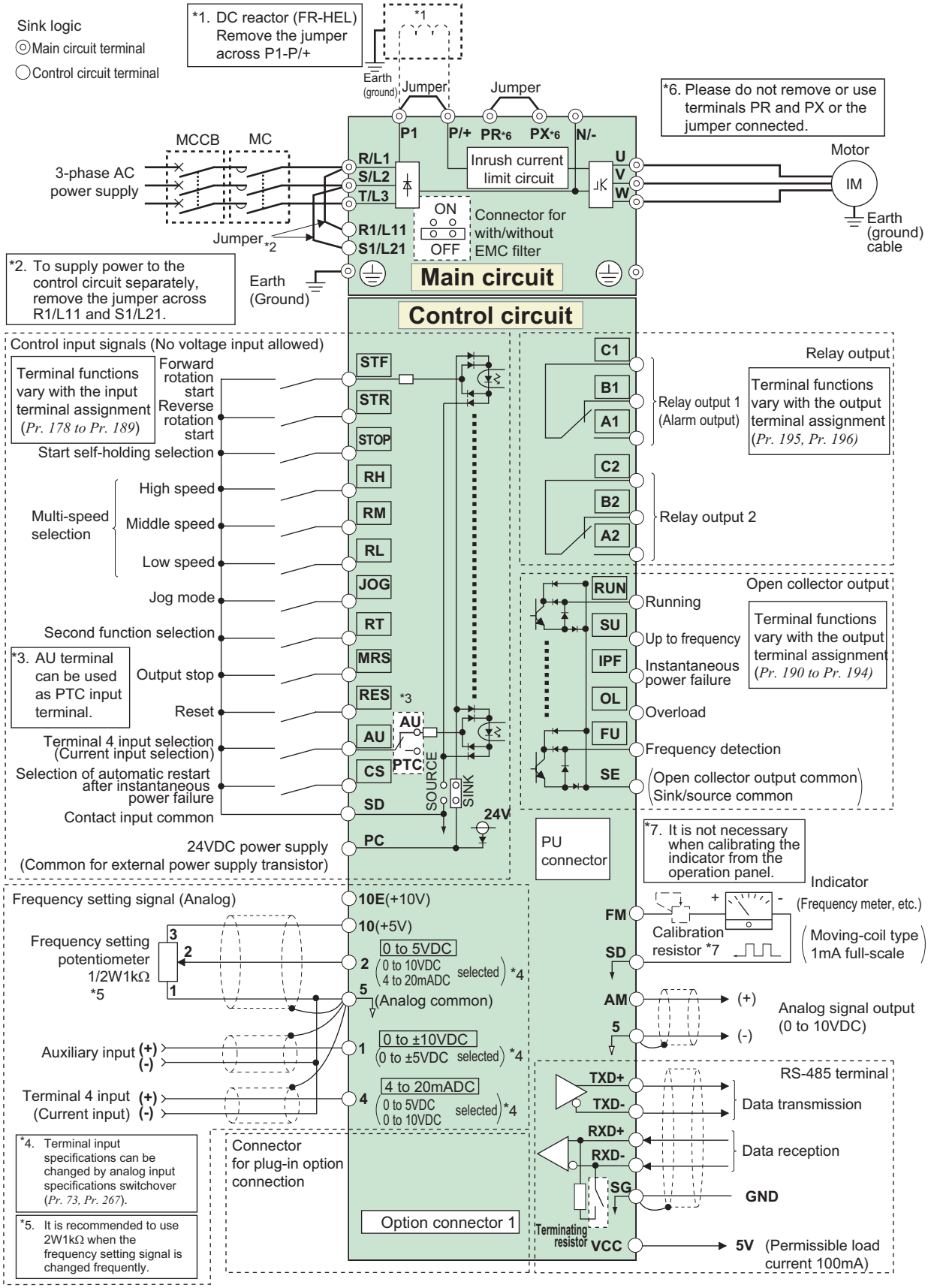
1.2 Wiring

1.2.1 Terminal connection diagram



CAUTION

- To prevent a malfunction due to noise, keep the signal cables more than 10cm away from the power cables.
- After wiring, wire offcuts must not be left in the inverter.
  Wire offcuts can cause an alarm, failure or malfunction. Always keep the inverter clean.
  When drilling mounting holes in a control box etc., take care not to allow chips and other foreign matter to enter the inverter.

Function	Parameters	Instruction Code			Name	Setting Range	Minimum Setting Increments	Intial Value	Refer to Page	Customer Setting
		read	write	extended						
Basic Functions	● 0	00	80	0	Torque Boost	0 to 30%	0.01%	6/4/3/2/1.5%	54	
	● 1	01	81	0	Maximum frequency	0 to 120Hz	0.01Hz	120 Hz	62	60
	● 2	02	82	0	Minimum frequency	0 to 120Hz	0.01Hz	0Hz	62	20
	● 3	03	83	0	Base frequency	0 to 400Hz	0.01Hz	60Hz	64	
	● 4	04	84	0	Multi-speed setting (high speed)	0 to 400Hz	0.01Hz	60Hz	67	
	● 5	05	85	0	Multi-speed setting (middle speed)	0 to 400Hz	0.01Hz	30Hz	67	
	● 6	06	86	0	Multi-speed setting (low speed)	0 to 400Hz	0.1/0.01s	10Hz	67	
	● 7	07	87	0	Acceleration time	0 to 3600/360s	0.1/0.01s	5s/15s	74	30
	● 8	08	88	0	Deceleration time	0 to 3600/360s	0.1/0.01s	10s/30s	74	30
	● 9	09	89	0	Electronic thermal O/L relay	0 to 500A	0.01A	inverter output current	78	FLA
DC injection brake	10	0A	8A	0	DC injection brake operation time	0 to 120Hz, 9999	0.01Hz	3Hz	81	
	11	0B	8B	0	DC injection brake operation voltage	0 to 10s	0.1s	0.5s	81	
	12	0C	8C	0	DC injection brake operation voltage	0 to 30%	0.1%	4/2%	81	
-	13	0D	8D	0	Starting frequency	0 to 60Hz	0.01Hz	0.5Hz	76	
-	14	0E	8E	0	Load pattern selection	0,1	1	1	61	0
Jog operation	15	0F	8F	0	Jog Frequency	0 to 400Hz	0.01Hz	5Hz	69	
	16	10	90	0	Jog Acceleration/deceleration time	0 to 3600/360s	0.1/0.01s	0.5s	69	
-	17	11	91	0	MRS input selection	0,2	1	0	86	
-	18	12	92	0	High speed maximum frequency	120 to 400Hz	0.01Hz	120Hz	62	
-	19	13	93	0	Base frequency voltage	0 to 1000V, 8888, 9	0.1V	9999	64	
Acceleration/ deceleration times	20	14	94	0	Acceleration/deceleration reference frequency	1 to 400Hz	0.1Hz	60Hz	74	
	21	15	95	0	Acceleration/deceleration time increments	0,1	1	0	74	
stall prevention	22	16	96	0	Stall prevention operation level	0 to 150%, 9999	0.1%	120%	57	
	23	17	97	0	Stall Prevention operation level compensation factor at double speed	0 to 200%, 9999	0.1%	9999	57	
Multi-speed setting	24 to 27	18 to B	98 to B	0	Multi-speed setting 4 speed to 7 speed	0 to 400Hz	0.01Hz	9999	67	
-	28	1C	9C	0	Multi-speed input compensation selection	0,1	1	0	71	
-	29	1D	9D	0	Acceleration/deceleration pattern selection	0,1,2,3	1	0	77	
-	30	IE	9E	0	Regenerative function selection	0, 2	1	0	82	
Frequency Jump	31	1F	9F	0	Frequency jump 1A	0 to 400 Hz, 9999	0.01Hz	9999	63	
	32	20	A0	0	Frequency jump 1B	0 to 400Hz, 9999	0.01Hz	9999	63	
	33	21	A1	0	Frequency jump 2A	0 to 400 Hz, 9999	0.01Hz	9999	63	
	34	22	A2	0	Frequency jump 2B	0 to 400Hz, 9999	0.01Hz	9999	63	
	35	23	A3	0	Frequency jump 3A	0 to 400 Hz, 9999	0.01Hz	9999	63	
	36	24	A4	0	Acceleration/deceleration pattern selection	0 to 400Hz, 9999	0.01Hz	9999	63	
-	37	25	A5	0	Speed display	0,1 to 9998	1	0	98	
Frequency detection	41	29	A9	0	Up-to-frequency sensitivity	0 to 100%	0.1%	0.1	94	
	42	2A	AA	0	Output frequency detection	0 to 400Hz	0.01Hz	6Hz	94	
	43	2B	AB	0	Output frequency detection for reverse rotation	0 to 400Hz, 9999	0.01Hz	9999	94	

Second Functions	**44**	2C	AC	0	Second acceleration/deceleration time	0 to 3600/360s	0.1/0.01s	5s	74	
	45	2D	AD	0	Second deceleration time	0 to 3600/360s, 9999	0.1/0.01s	9999	74	
	46	2E	AE	0	Second torque boost	0 to 30%, 9999	0.1%	9999	54	
	47	2F	AF	0	Second V/F (base frequency)	0 to 400 Hz, 9999	0.01Hz	9999	64	
	48	30	B0	0	Second stall prevention operation current	0 to 150%	0.1%	120%	57	
	49	31	B1	0	Second stall prevention operation frequency	0 to 400Hz, 9999	0.01Hz	0Hz	57	
	50	32	B2	0	Second output frequency detection	0 to 400Hz	0.01Hz	30Hz	94	
	51	33	B3	0	Second electronic thermal O/L relay	0 to 500A, 9999	0.01A	9999	78	
Monitor Functions	**52**	34	B4	0	DU/PU main display data selection	0, 5, 6, 8, 10 to 14, 17, 20 , 23 to 25, 50 to 57, 100	1	0	99	
	54	36	B6	0	FM terminal function selection	1 to 3, 5, 6, 8, 10 to 14, 17, 21, 24, 50, 52, 53	1	1	103	
	55	37	B7	0	Frequency monitoring reference	0 to 400Hz	0.01Hz	60Hz	103	
	56	38	B8	0	Current monitoring reference	0 to 500A	0.01A	Rated inverter output current	103	
Automatic restart functions	**57**	39	B9	0	Restart coasting time	0, 0.1 to 5s, 9999	0.1s	9999	108	
	58	3A	BA	0	Restart cushion time	0 to 60s	0.1s	1s	108	
-	**59**	3B	BB	0	Remote function selection	0, 1, 2, 3	1	0	72	
-	**● 60**	3C	BC	0	Energy saving control selection	0, 4, 9	1	0	117	
-	**65**	42	C1	0	Retry selection	0 to5	1	0	113	
-	**66**	42	C2	0	Stall prevention operation reduction starting frequency	0 to 400Hz	0.01 Hz	60Hz	57	
Retry	**67**	43	C3	0	Number of retries at alarm occurrence	0 to 10, 101 to 110	1	0	113	5
	68	44	C4	0	Retry waiting time	0 to 10s	0.1s	1s	113	
	69	45	C5	0	Retry count display erase	0	1	0	113	
-	**71**	47	C7	0	Applied motor	0, 1, 2, 20	1	0	80	
-	**72**	48	C8	0	PWM frequency selection	0 to 15	1	2	123	
-	**73**	49	C9	0	Analog input selection	0 to 7, 10 to 17	1	1	126	
-	**74**	4A	CA	0	Input filter time constant	0 to 8	1	1	127	
-	**75**	4B	CB	0	Reset selection/disconnected PU detection/PU stop selection	0 to 3, 14 to 17	1	14	133	
-	**76**	4C	CC	0	Alarm code output selection	0, 1, 2	1	0	115	
-	**77**	4D	CD	0	Parameter write selection	0, 1, 2	1	0	135	2
-	**78**	4E	CE	0	Reverse rotation prevention selection	0, 1, 2	1	0	136	
-	**● 79**	4F	CF	0	Operation mode selection	0, 1, 2, 3, 4, 6, 7	1	0	138	
Simple magnetic flux vector control	**80**	50	D0	0	Motor capacity (simple magnetic flux vector control)	0.4 to 55kW, 9999	0.01kW	9999	55	
	90	5A	DA	0	Motor constant (R1)	0 to 50Ω, 9999	0.001Ω	9999	55	
Adjustable e5 points V/F	**100**	00	80	1	V/F1 (first frequency)	0 to 400Hz, 9999	0.01Hz	9999	66	
	101	01	81	1	V/F1 (first frequency voltage)	0 to 1000V	0.1V	0V	66	
	102	02	82	1	V/F2 (second frequency)	0 to 400Hz, 9999	0.01Hz	9999	66	
	103	03	83	1	V/F1 (second frequency)	0 to 1000V	0.1V	0V	66	
	104	04	84	1	V/F3 (third frequency)	0 to 400Hz, 9999	0.01Hz	9999	66	
	105	05	85	1	V/F3 (third frequency voltage)	0 to 1000V	0.1V	0V	66	
	106	06	86	1	V/F4 (fourth frequency)	0 to 400Hz, 9999	0.01Hz	9999	66	
	107	07	87	1	V/F4 (fourth frequency voltage)	0 to 1000V	0.1V	0V	66	
	108	08	88	1	V/F5 (fifth frequency)	0 to 400Hz, 9999	0.01Hz	9999	66	
	109	09	89	1	V/F5 (fifth frequency voltage)	0 to 1000V	0.1V	0V	66	

PU connector communication	**117**	11	91	1	PU communication station	0 to 31	1	0	157	
	118	12	92	1	PU communication speed	48, 96, 192, 384	1	192	157	
	119	13	93	1	PU communication stop bit length	0, 1, 10, 11	1	1	157	
	120	14	94	1	PU communication parity check	0, 1, 2	1	2	157	
	121	15	95	1	Number of PU communication retries	0 to 10, 9999	1	1	157	
	122	16	96	1	PU communication check time interval	0, 0.1 to 999.8s, 9999	0.1s	9999	157	
	123	17	97	1	PU communication waiting time setting	0 to 150ms, 9999	1	9999	157	
	124	18	98	1	PU communication CR/LF presence/absence selection	0, 1, 2	1	1	157	
-	**● 125**	19	99	1	Terminal 2 frequency setting gain frequency	0 to 400Hz	0.01Hz	60Hz	128	
-	**● 126**	1A	9A	1	Terminal 4 frequency setting gain frequency	0 to 400Hz	0.01Hz	60Hz	128	
PID operation	**127**	1B	9B	1	PID control automatic switchover frequency	0 to 400Hz, 9999	0.01Hz	9999	180	
	128	1C	9C	1	PID action selection	10, 11, 20, 21, 50, 51, 60, 61	1	100%	180	
	129	1D	9D	1	PID proportional band	0.1 to 1000%, 9999	0.1%	1	180	
	130	1E	9E	1	PID integral time	0.1 to 3600s, 9999	0.1s	1s	180	
	131	1F	9F	1	PID upper limit	0 to 100%, 9999	0.1%	9999	180	
	132	20	A0	1	PID lower limit	0 to 100%, 9999	0.1%	9999	180	
	133	21	A1	1	PID action set point	0 to 100%, 9999	0.01%	9999	180	
	134	22	A2	1	PID differential time	0.01 to 10.00s, 9999	0.01s	9999	180	
Commercial power supply-inverter switch-over	**135**	23	A3	1	Power-supply switchover sequence output terminal selection	0, 1	1	0	188	
	136	24	A4	1	MC switchover interlock time	0 to 100s	0.1s	1s	188	
	137	25	A5	1	Waiting time at a start	0 to 100s	0.1s	0.5s	188	
	138	26	A6	1	Commercial power-supply operation switchover selection at an alarm	0, 1	1	0	188	
	139	27	A7	1	Automatic switchover frequency between inverter and commercial power-supply operation	0 to 60Hz, 9999	0.01Hz	9999	188	
backlash measures	**140**	28	A8	1	Backlash acceleration stopping frequency	0 to 400Hz	0.01Hz	1Hz	77	
-	**141**	29	A9	1	Backlash acceleration stopping time	0 to 360s	0.1s	0.5s	77	
-	**142**	2A	AA	1	Backlash deceleration stopping frequency	0 to 400Hz	0.01Hz	1Hz	77	
-	**143**	2B	AB	1	Backlash deceleration stopping time	0 to 360S	0.1s	0.5s	77	
-	**144**	2C	AC	1	Speed setting switchover	0,2 ,4 6, 8, 10, 102, 104, 106, 108, 110	1	4	98	
PU	**145**	2D	AD	1	PU display language selection	0 to 7	1	0	202	
Current detection	**148**	30	B0	1	Stall prevention level at 0V input	0 to 150%	0.1%	120%	57	
-	**149**	31	B1	1	Stall prevention level at 10V input	0 to 150%	0.1%	150%	57	
-	**150**	32	B2	1	Output current detection level	0 to 150%	0.1%	120%	95	
-	**151**	33	B3	1	Output current detection signal delay time	0 to 10s	0.1s	0s	95	
-	**152**	34	B4	1	Zero current detection level	0 to 150%	0.1%	5%	95	
-	**153**	35	B5	1	Zero current detection time	0 to 1s	0.01s	0.5s	95	
-	**154**	36	B6	1	Voltage reduction selection during stall prevention operation	0,1	1	0.01	57	
-	**155**	37	B7	1	RT signal reflection time selection	0, 10	1	0	87	
-	**156**	38	B8	1	stall prevention operation selection	0 to 31, 100, 101	1	0	57	
-	**157**	39	B9	1	OL signal output timer	0 to 25s, 9999	0.1s	0s	57	
-	**158**	3A	BA	1	AM terminal function selection	1 to 3, 5, 6, 8, 10 to 14, 17, 21, 24, 50, 52, 53	1	0.01	103	

-	**159**	3B	BB	1	Automatic switchover ON range between commercial power-supply and inverter operation	0 to 10Hz, 9999	0.01Hz	9999	188	
-	**• 160**	00	80	2	User group read selection	0, 1, 9999	1	9999	136	
-	**161**	01	81	2	Frequency setting/key lock operation selection	0, 1, 10, 11	1	0	202	
Automatic restart functions	**162**	02	82	2	Automatic restart after instantaneous power failure selection	0, 1, 10, 11	1	0	108	
	163	03	83	2	First cushion time for restart	0 to 20s	0.1s	0s	108	
	164	04	84	2	First cushion voltage for restart	0 to 100%	0.1%	0	108	
	165	05	85	2	Stall prevention operation level for restart	0 to 150%	0.1%	120%	108	
Current detection	**166**	06	86	2	Output current detection signal retention time	0 to 10s, 9999	0.1s	0.1s	95	
	167	07	87	2	output current detection operation selection	0, 1	1	0	95	
-	**168**									
-	**169**	Parameter for manufacturer setting. Do not make setting								
Cumulative monitor clear	**170**	0A	8A	2	Cumulative power meter clear	0, 10, 9999	1	9999	99	
	171	0B	8B	2	Operation hour meter clear	0, 9999	1	9999	99	
User group	**172**	0C	8C	2	User group registered display/batch clear	9999, (0 to 16)	1	0	136	
	173	0D	8D	2	User group registration	0 to 999, 9999	1	9999	136	
	174	0E	8E	2	User group clear	0 to 999, 9999	1	9999	136	
Input terminal function assignment	**178**	12	92	2	STF terminal function selection	0 to 8, 10 to 12, 14, 16, 24, 25, 60, 62, 64 to 67, 9999	1	60	84	
	179	13	93	2	STR terminal function selection	0 to 8, 10 to 12, 14, 16, 24, 25, 61, 62, 64 to 67, 9999	1	61	84	
	180	14	94	2	RL terminal function selection	0 to 8 10 to 12, 14, 16, 24, 25, 61, 62, 64 to 67, 9999	1	0	84	
	181	15	95	2	RM terminal function selection		1	1	84	
	182	16	96	2	RH terminal function selection		1	2	84	
	183	17	97	2	RT terminal function selection		1	3	84	
	184	18	98	2	AU terminal function selection	0 to 8, 10 to 12, 14, 16, 24, 25, 62 to 67, 9999	1	4	84	
	185	19	99	2	JOG terminal function selection	0 to 8, 10 to 12, 14, 16, 24, 25, 62, 64 to 67, 9999	1	5	84	
	186	1A	9A	2	CS terminal function selection		1	6	84	
	187	1B	9B	2	MRS terminal function selection		1	24	84	
	188	1C	9C	2	STOP terminal function selection		1	25	84	
	189	1D	9D	2	RES terminal function selection		1	62	84	
Output terminal function assignment	**190**	1E	9E	2	RUN terminal function selection	0 to 5, 8, 10 to 19, 25, 26, 45 to 47, 64, 70, 90 to 96, 98, 99, 100 to 105, 108, 110 to 116, 125, 126, 145 to 147, 164, 170, 1990 to 196, 198, 199, 9999	1	0	90	
	191	1F	9F	2	SU terminal function selection		1	1	90	
	192	20	A0	2	IPF terminal function selection		1	2	90	
	193	21	A1	2	OL terminal function selection		1	3	90	
	194	22	A2	2	FU terminal function selection		1	4	90	
	195	23	A3	2	ABC1 terminal function selection	0 to 5, 8, 10 to 19, 25, 26, 45 to 47, 64, 70, 90, 91, 94 to 96, 98, 99, 100 to 105, 108, 110 to 116, 125, 126, 145 to 147, 164, 170, 190, 191, 194 to 196, 198, 199, 9999	1	99	90	
	196	24	A4	2	ABC2 terminal function selection		1	9999	90	
Multi-speed setting	**232 to 239**	28 to 2F	A8 to AF	2	Multi-speed setting (speeds 8 to 15)	0 to 400Hz, 9999	0.01Hz	9999	90	

-	**240**	20	B0	2	Soft-PWM operation selection	0, 1	1	1	67	
-	**241**	31	B1	2	Analog input display unit switchover	0, 1	1	0	123	
-	**242**	32	B2	2	Terminal 1 added compensation amount (terminal 2)	0 to 100%	0.1%	100%	128	
-	**243**	33	B3	2	Terminal 1 added compensation amount (terminal 4)	0 to 100%	0.1%	75%	126	
-	**244**	34	B4	2	Cooling fan operation selection	0, 1	1	1	126	
Slip compensation	**245**	35	B5	2	Rated slip	0 to 50%, 9999	0.01%	9999	195	
	246	36	B6	2	Slip compensation time constant	0.01 to 10s	0.01s	0.5s	56	
	247	37	B7	2	Constant-output region slip compensation selection	0, 9999	1	9999	56	
-	**250**	3A	BA	2	Stop selection	0 to 100s, 1000 to 1100s, 8888, 9999	0.1s	9999	56	
-	**251**	3B	BB	2	Output phase failure protection selection	0, 1	1	1	83	
Frequency compensation function	**252**	3C	BC	2	Override bias	0 to 200%	0.1%	50%	116	
	253	3D	BD	2	Override gain	0 to 200%	0.1%	150%	126	
Life check	**255**	3F	BF	2	Life alarm status display	(0 to 15)	1	0	196	
	256	40	C0	2	Inrush current suppression circuit life display	(0 to 100%)	0.1%	100%	196	
	257	41	C1	2	Control circuit capacitor life display	(0 to 100%)	0.1%	100%	196	
	258	42	C2	2	Main circuit capacitor life display	(0 to 100%)	0.1%	100%	196	
	259	43	C3	2	Main circuit capacitor life measuring	0.1	1	0	196	
-	**260**	44	C4	2	PWM frequency automatic switchover	0.1	1	1	123	
Power Failure stop	**261**	45	C5	2	Power failure stop selection	0, 1, 2	1	0	111	
	262	46	C6	2	Subtracted frequency at deceleration start	0 to 20 Hz	0.01Hz	3Hz	111	
	263	47	C7	2	Subtraction starting frequency	0 to 120Hz, 9999	0.01Hz	60Hz	111	
	264	48	C8	2	Power-failure deceleration time 1	0 to 3600/ 360s	0.1/0.01s	5s	111	
	265	49	C9	2	Power-failure deceleration time 2	0 to 3600/360s, 9999	0.1/0.01s	9999	111	
	266	4A	CA	2	Power failure deceleration time switchover frequency	0 to 400Hz	0.01Hz	60Hz	111	
-	**267**	4B	CB	2	Terminal 4 input selection	0, 1, 2	1	0	124	
-	**268**	4C	CC	2	Monitor decimal digits selection	0, 1, 9999	1	9999	99	
-	**269**	Parameter for manufacturer setting. Do not make setting								
Digital input	**300**	00	80	3	BCD input bias	Parameter for digital input option (FR-A7AX)				
	301	01	81	3	BCD input gain					
	302	02	82	3	BIN input bias					
	303	03	83	3	BIN input gain					
	304	04	84	3	Digital input and analog input compensation enable/disable selection					
	305	05	85	3	Read timing operation selection					
Analog output	**306**	06	86	3	Analog output signal selection	Extension analog output/digital output option Parameter for (FR-A7AY)				
	307	07	87	3	Setting for zero analog output					
	308	08	88	3	Setting for maximum analog output					
	309	09	89	3	Analog output signal voltage/current switchover					
	310	0A	8A	3	Analog meter voltage output selection					
	311	0B	8B	3	Setting for zero analog meter voltage output					
	312	0C	8C	3	setting for maximum analog meter voltage output					

Digital output	**313**	0D	8D	3	DO0 output selection	Extension analog output/digital output option Parameter for (FR-A7AY)				
	314	0E	8E	3	DO1 output selection					
	315	0F	8F	3	DO2 output selection					
	316	10	90	3	DO3 output selection					
	317	11	91	3	DO4 output selection					
	318	12	92	3	DO5 output selection					
	319	13	93	3	DO6 output selection					
Relay output	**320**	14	94	3	RA1 output selection	Parameter for relay output option (FR-A7AR)				
	321	15	95	3	RA2 output selection					
	322	16	96	3	RA3 output selection					
Analog output	**323**	17	97	3	AM0 0V adjustment	Extension analog output/digital output option Parameter for (FR-A7AY)				
	324	18	98	3	AM1 OmA adjustment					
-	**329**	1D	9D	3	Digital input unit selection	Parameter for digital input option (FR-A7AX)				
RS-485 communication	**331**	1F	9F	3	RS-485 communication station	0 to 31(0 to 247)	1	0	157	
	332	20	A0	3	RS-485 communication speed	3, 6, 12, 24, 48, 96, 192, 384	1	96	157	
	333	21	A1	3	RS-485 communication stop bit length	0, 1, 10, 11	1	1	157	
	334	22	A2	3	RS-485 communication parity check selection	0, 1, 2	1	2	157	
	335	23	A3	3	RS-485 communication number of retries	0 to 10, 9999	1	1	157	
	336	24	A4	3	RS-485 communication waiting time setting	0 to 999.9s, 9999	0.1s	0s	157	
	337	25	A5	3	Communication operation command source	0 to 150ms, 9999	1	9999	157	
	338	26	A6	3	Communication speed command source	0, 1	1	0	147	
	339	27	A7	3	Communication startup ode selection	0, 1, 2	1	0	147	
	340	28	A8	3	RS-485 communication CR/LF selection	0, 1, 2, 10, 12	1	0	146	
	341	29	A9	3	Communication EEPROM write selection	0, 1, 2	1	1	157	
	342	2A	AA	3	Communication error count	0, 1	1	0	158	
CC-LINK	**349**	31	B1	3	Communication reset selection	Parameter for CC-Link communication option (FR-A7NC)				
LONWORKS	**387**	57	D7	3	initial communication delay time	Parameter for LONWORKS communicationi option (FR-A7NL)				
	388	58	D8	3	Send time interval at hart beat					
	389	59	D9	3	minimum sending time at hart beat					
	390	5A	DA	3	% setting reference frequency					
	391	5B	DB	3	Receive time interval at hart beat					
	392	5C	DC	3	Event driven detection width					
Remote output	**495**	5F	DF	4	Remote output selection	0, 1	1	0	97	
	496	60	E0	4	Remote output data 1	0 to 4095	1	0	97	
	497	61	E1	4	Remote output data 2	0 to 4095	1	0	97	
Communication error	**500**	00	E0	5	Communication error execution waiting time	Parameter for LONWORKS communicationi option (FR-A7NL)				
	501	01	81	5	Communication error occurrence count display					
	502	02	82	5	Stop mode selection at communication error					
Maintenance	**503**	03	83	5	Maintenance timer	0 (1 to 9998)	1	0	198	
	504	04	84	5	Maintenance timer alarm output set time	0 to 9998, 9999	1	9999	198	
CC-LINK	**542**	2A	AA	5	Communication station number (CC-Link)	Parameter for CC-Link communication option (FR-A7NC)				
	543	2B	AB	5	Baud rate (CC-Link)					
	544	2C	AC	5	CC-Link extended setting					

Communication	**549**	31	B1	5	Protocol selection	0, 1	1	0	169	
	550	32	B2	5	NET mode operation command source selection	0, 1, 9999	1	9999	147	
	551	33	B3	5	PU mode operation command source selection	1, 2	1	2	147	
Current average monitor	**555**	37	B7	5	Current average time	0.1 to 1.0s	0.1s	1s	199	
	556	38	B8	5	Data output mask time	0.0 to 20.0s	0.1s	0s	199	
	557	39	B9	5	Current average value monitor signal output reference current	0 to 500A	0.01A	Rated inverter current	199	
-	**563**	3F	BF	5	Energization time carrying over times	(0 to 65535)	1	0	99	
-	**564**	40	C0	5	Operating time carrying-over times	(0 to 65535)	1	0	99	
-	**571**	47	C7	5	Holding time at a start	0.0 to 10.0s, 9999	0.1s	9999	76	
PID control	**575**	4B	CB	5	Output interruption detection time	0 to 3600s, 9999	0.1s	1s	180	
	576	4C	CC	5	Output interruption detection level	0 to 400Hz	0.01Hz	0Hz	180	
	577	4D	CD	5	Output interruption release level	900 to 1100%	0.1%	1000%	180	
-	**611**	0B	8B	5	Acceleration time at a restart	0 to 3600s, 9999	0.1s	5s	108	
-	**867**	43	C3	8	AM output filter	0 to 5s	0.01s	0.01s	103	
-	**872**	48	C8	8	Input phase failure protection selection	0, 1	1	0	116	
Regeneration avoidance function	**882**	52	D2	8	Regeneration avoidance operation selection	0, 1	1	0	193	1
	883	53	D3	8	Regeneration avoidance operation level	300 to 800V	0.1V	760VDC	193	
	884	54	D4	8	Regeneration avoidance at acceleration detection sensitivity	0 to 5	1	0	193	
	885	55	D5	8	Regeneration avoidance compensation frequency limit value	0 to 10Hz, 9999	0.01Hz	6Hz	193	
	886	56	D6	8	Regeneration avoidance voltage gain	0 to 200%	0.1%	100%	193	
Free Parameter	**888**	58	D8	8	Free parameter 1	0 to 9999	1	9999	201	
	889	59	D9	8	Free parameter 2	0 to 9999	1	9999	201	
Energy Saving Monitor	**891**	5B	DB	8	Cumulative power monitor digit shifted times	0 to 4, 9999	1	9999	118	
	892	5C	DC	8	Load factor	30 to 150%	0.1%	100%	118	
	893	5D	DD	8	Energy saving monitor reference (motor capacity)	0.1 to 55kW	0.01kW	erterrated capa	118	
	894	5E	DE	8	Control selection during commercial power-supply operation	0, 1, 2, 3	1	0	118	
	895	5F	DF	8	Power saving rate reference value	0, 1, 9999	1	9999	118	
	896	60	E0	8	Power unit cost	0 to 500, 9999	0.01	9999	118	
	897	61	E1	8	Power saving monitor average time	0,1 to 1000h, 9999	1	9999	118	
	898	62	E2	8	Power saving cumulative monitor clear	0, 1, 10, 9999	1	9999	118	
	899	63	E3	8	Operation time rate (estimated value)	0 to 100%, 9999	0.1%	9999	118	
Calibration Parameters	**C0 (900)**	5C	DC	1	FM terminal calibration	-	-	-	105	
	C1 (901)	5D	DD	1	AM terminal calibration	-	-	-	105	
	C2 (902)	5E	DE	1	Terminal 2 frequency setting bias frequency	0 to 400 Hz	0.01Hz	0Hz	128	
	C3 (902)	5E	DE	1	Terminal 2 frequency setting bias	0 to 300%	0.1%	0%	128	
	125 (903)	5F	DF	1	Terminal 2 frequency setting gain frequency	0 to 400Hz	0.01Hz	60Hz	128	
	C4 (903)	5F	DF	1	Terminal 2 frequency setting gain	0 to 300%	0.1%	100%	128	
	C5 (904)	60	E0	1	Terminal 4 frequency setting bias frequency	0 to 400Hz	0.01Hz	0Hz	128	
	C6 (904)	60	E0		Terminal 4 frequency setting bias	0 to 300%	0.1%	20%	128	
	126 (905)	61	E1	1	Terminal 4 frequency setting gain frequency	0 to 400Hz	0.01Hz	60Hz	128	
	C7 (905)	61	E1	1	Terminal 4 frequency setting gain	0 to 300%	0.1%	100%	128	
-	**989**	59	D9	9	Parameter copy alarm release	10	1	10	-	
PU	**990**	5A	DA	9	PU buzzer control	0.1	1	1	204	
	• 991	5B	DB	9	PU contrast adjustment	0 to 63	1	58	204	
Clear parameter	**pr.CL**	-	-	-	Parameter clear	0, 1	1	0	205	
	ALLC	-	-	-	All parameter clear	0, 1	1	0	206	
	Er.CL	-	-	-	Alarm history clear	0, 1	1	0	209	
	PCPY	-	-	-	Parameter copy	0, 1, 2, 3	1	0	207	