



VFD-E

PARAMETER MANUAL

201101-21



5012601701-PPE1

Summary of Parameter Settings



↗: The parameter can be set during operation.

- 1) After settings are done, users can record parameters in the "Note" blank.
- 2) For more parameter setting, please refer to user manual.

Group 0 User Parameters

Parameters	Functions	Settings	Factory Setting	Note
00.00	Identity Code of the AC motor drive	Read-only	##	
00.01	Rated Current Display of the AC motor drive	Read-only	##	
00.02	Parameter Reset	0: Parameter can be read/written 1: All parameters are read only 6: Clear PLC program (NOT for VFD*E*C models) 9: All parameters are reset to factory settings (50Hz, 230V/400V or 220V/380V depends on Pr.00.12) 10: All parameters are reset to factory settings (60Hz, 220V/440V)	0	
↗00.03	Start-up Display Selection	0: Display the frequency command value (Fxxx) 1: Display the actual output frequency (Hxxx) 2: Display the content of user-defined unit (Uxxx) 3: Multifunction display, see Pr.00.04 4: FWD/REV command 5: PLCx (PLC selections: PLC0/PLC1/PLC2) (NOT for VFD*E*C models)	0	
↗00.04	Content of Multi-function Display	0: Display the content of user-defined unit (Uxxx) 1: Display the counter value (c) 2: Display PLC D1043 value (C) (NOT for VFD*E*C models) 3: Display DC-BUS voltage (u) 4: Display output voltage (E) 5: Display PID analog feedback signal value (b) (%) 6: Output power factor angle (n) 7: Display output power (P) 8: Display the estimated value of torque as it relates to current (t) 9: Display AV1 (I) (V) 10: Display AC1 / AV12 (i) (mA/V) 11: Display the temperature of IGBT (h) (°C) 12: Display AV13/AC12 level (l.) 13: Display AV14/AC13 level (i.) 14: Display PG speed in RPM (G) 15: Display motor number (M)	0	
↗00.05	User-Defined Coefficient K	0. 1 to 160.0	1.0	
00.06	Power Board Software Version	Read-only	###	
00.07	Control Board	Read-only	###	

Parameters	Functions	Settings	Factory Setting	Note
	Software Version			
00.08	Password Input	0 to 9999	0	
00.09	Password Set	0 to 9999	0	
00.10	Control Method	0: V/f Control	0	
00.11	Reserved			
00.12	50Hz Base Voltage Selection	0: 230V/400V 1: 220V/380V	0	

Group 1 Basic Parameters

Parameters	Functions	Settings	Factory Setting	Note
01.00	Maximum Output Frequency (Fmax)	50.00 to 600.0 Hz	60.00	
01.01	Maximum Voltage Frequency (Fbase) (Motor 0)	0.10 to 600.0 Hz	60.00	
01.02	Maximum Output Voltage (Vmax) (Motor 0)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	220.0 440.0	
01.03	Mid-Point Frequency (Fmid) (Motor 0)	0.10 to 600.0 Hz	1.50	
01.04	Mid-Point Voltage (Vmid) (Motor 0)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.05	Minimum Output Frequency (Fmin) (Motor 0)	0.10 to 600.0 Hz	1.50	
01.06	Minimum Output Voltage (Vmin) (Motor 0)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.07	Output Frequency Upper Limit	0.1 to 120.0%	110.0	
01.08	Output Frequency Lower Limit	0.0 to 100.0 %	0.0	
✓01.09	Accel Time 1	0.1 to 600.0 / 0.01 to 600.0 sec	10.0	
✓01.10	Decel Time 1	0.1 to 600.0 / 0.01 to 600.0 sec	10.0	
✓01.11	Accel Time 2	0.1 to 600.0 / 0.01 to 600.0 sec	10.0	
✓01.12	Decel Time 2	0.1 to 600.0 / 0.01 to 600.0 sec	10.0	
✓01.13	Jog Acceleration Time	0.1 to 600.0 / 0.01 to 600.0 sec	1.0	
✓01.14	Jog Deceleration Time	0.1 to 600.0 / 0.01 to 600.0 sec	1.0	
✓01.15	Jog Frequency	0.10 Hz to Fmax (Pr.01.00) Hz	6.00	
01.16	Auto acceleration / deceleration (refer to Accel/Decel time setting)	0: Linear Accel/Decel 1: Auto Accel, Linear Decel 2: Linear Accel, Auto Decel 3: Auto Accel/Decel (Set by load) 4: Auto Accel/Decel (set by Accel/Decel Time setting) 5: Linear Accel. controlled by current, linear Decel. 6: Linear Accel. controlled by current, auto Decel.	0	
01.17	Acceleration S-Curve	0.0 to 10.0 / 0.00 to 10.00 sec	0.0	
01.18	Deceleration S-Curve	0.0 to 10.0 / 0.00 to 10.00 sec	0.0	
01.19	Accel/Decel Time Unit	0: Unit: 0.1 sec 1: Unit: 0.01 sec	0	
01.20	Delay Time at 0Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.21	Delay Time at 10Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.22	Delay Time at 20Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.23	Delay Time at 30Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.24	Delay Time at 40Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.25	Delay Time at 50Hz for Simple Position	0.00 to 600.00 sec	0.00	
01.26	Maximum Voltage Frequency (Fbase)	0.10 to 600.0 Hz	60.00	

Parameters	Functions	Settings	Factory Setting	Note
	(Motor 1)			
01.27	Maximum Output Voltage (Vmax) (Motor 1)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	220.0 440.0	
01.28	Mid-Point Frequency (Fmid) (Motor 1)	0.10 to 600.0 Hz	1.50	
01.29	Mid-Point Voltage (Vmid) (Motor 1)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.30	Minimum Output Frequency (Fmin) (Motor 1)	0.10 to 600.0 Hz	1.50	
01.31	Minimum Output Voltage (Vmin) (Motor 1)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.32	Maximum Voltage Frequency (Fbase) (Motor 2)	0.10 to 600.0 Hz	60.00	
01.33	Maximum Output Voltage (Vmax) (Motor 2)	115V/230V series: 0.1V to 255.0V	220.0	
01.34	Mid-Point Frequency (Fmid) (Motor 2)	0.10 to 600.0 Hz	1.50	
01.35	Mid-Point Voltage (Vmid) (Motor 2)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.36	Minimum Output Frequency (Fmin) (Motor 2)	0.10 to 600.0 Hz	1.50	
01.37	Minimum Output Voltage (Vmin) (Motor 2)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.38	Maximum Voltage Frequency (Fbase) (Motor 3)	0.10 to 600.0 Hz	60.00	
01.39	Maximum Output Voltage (Vmax) (Motor 3)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	220.0 440.0	
01.40	Mid-Point Frequency (Fmid) (Motor 3)	0.10 to 600.0 Hz	1.50	
01.41	Mid-Point Voltage (Vmid) (Motor 3)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	
01.42	Minimum Output Frequency (Fmin) (Motor 3)	0.10 to 600.0 Hz	1.50	
01.43	Minimum Output Voltage (Vmin) (Motor 3)	115V/230V series: 0.1V to 255.0V 460V series: 0.1V to 510.0V	10.0 20.0	

Group 2 Operation Method Parameters

Parameters	Functions	Settings	Factory Setting	Note
↗02.00	Source of First Master Frequency Command	0: Digital keypad UP/DOWN keys or Multi-function Inputs UP/DOWN. Last used frequency saved. 1: 0 to +10V from AVI 2: 4 to 20mA from ACI or 0 to +10V from AVI2 3: RS-485 (RJ-45)/USB communication 4: Digital keypad potentiometer 5: CANopen communication	1	
↗02.01	Source of First Operation Command	0: Digital keypad 1: External terminals. Keypad STOP/RESET enabled. 2: External terminals. Keypad STOP/RESET disabled. 3: RS-485 (RJ-45)/USB communication. Keypad STOP/RESET enabled. 4: RS-485 (RJ-45)/USB communication. Keypad STOP/RESET disabled. 5: CANopen communication. Keypad STOP/RESET disabled.	1	
02.02	Stop Method	0: STOP: ramp to stop; E.F.: coast to stop 1: STOP: coast to stop; E.F.: coast to stop 2: STOP: ramp to stop; E.F.: ramp to stop 3: STOP: coast to stop; E.F.: ramp to stop	0	
02.03	PWM Carrier Frequency Selections	1 to 15kHz	8	
02.04	Motor Direction Control	0: Enable forward/reverse operation 1: Disable reverse operation 2: Disabled forward operation	0	
02.05	Line Start Lockout	0: Disable. Operation status is not changed even if operation command source Pr.02.01 is changed. 1: Enable. Operation status is not changed even if operation command source Pr.02.01 is changed. 2: Disable. Operation status will change if operation command source Pr.02.01 is changed. 3: Enable. Operation status will change if operation command source Pr.02.01 is changed.	1	
02.06	Loss of ACI Signal (4-20mA)	0: Decelerate to 0 Hz 1: Coast to stop and display "AErr" 2: Continue operation by last frequency command	1	
02.07	Up/Down Mode	0: by UP/DOWN Key 1: Based on accel/decel time 2: Constant speed (Pr.02.08) 3: Pulse input unit (Pr.02.08)	0	
02.08	Accel/Decel Rate of	0.01~10.00 Hz	0.01	

Parameters	Functions	Settings	Factory Setting	Note
	Change of UP/DOWN Operation with Constant Speed			
↗02.09	Source of Second Frequency Command	0: Digital keypad UP/DOWN keys or Multi-function Inputs UP/DOWN. Last used frequency saved. 1: 0 to +10V from AVI 2: 4 to 20mA from AC1 or 0 to +10V from AVI2 3: RS-485 (RJ-45)/USB communication 4: Digital keypad potentiometer 5: CANopen communication	0	
↗02.10	Combination of the First and Second Master Frequency Command	0: First Master Frequency Command 1: First Master Frequency Command+ Second Master Frequency Command 2: First Master Frequency Command - Second Master Frequency Command	0	
↗02.11	Keypad Frequency Command	0.00 to 600.0Hz	60.00	
↗02.12	Communication Frequency Command	0.00 to 600.0Hz	60.00	
02.13	The Selections for Saving Keypad or Communication Frequency Command	0: Save Keypad & Communication Frequency 1: Save Keypad Frequency only 2: Save Communication Frequency only	0	
02.14	Initial Frequency Selection (for keypad & RS485/USB)	0: by Current Freq Command 1: by Zero Freq Command 2: by Frequency Display at Stop	0	
02.15	Initial Frequency Setpoint (for keypad & RS485/USB)	0.00 ~ 600.0Hz	60.00	
02.16	Display the Master Freq Command Source	Read Only Bit0=1: by First Freq Source (Pr.02.00) Bit1=1: by Second Freq Source (Pr.02.09) Bit2=1: by Multi-input function Bit3=1: by PLC Freq command (NOT for VFD*E*C models)	##	
02.17	Display the Operation Command Source	Read Only Bit0=1: by Digital Keypad Bit1=1: by RS485 communication Bit2=1: by External Terminal 2/3 wire mode Bit3=1: by Multi-input function Bit4=1: by PLC Operation Command (NOT for VFD*E*C models) Bit5=1: by CANopen communication	##	
02.18	Selection of Carrier Modulation	0: by carrier modulation of load current and temperature 1: by carrier modulation of load current	0	

Group 3 Output Function Parameters

Parameters	Functions	Settings	Factory Setting	Note
03.00	Multi-function Output Relay (RA1, RB1, RC1)	0: No function	8	
03.01	Multi-function Output Terminal MO1	1: AC drive operational	1	
		2: Master frequency attained		
		3: Zero speed		
		4: Over torque detection		
		5: Base-Block (B.B.) indication		
		6: Low-voltage indication		
		7: Operation mode indication		
		8: Fault indication		
		9: Desired frequency 1 attained		
		10: Terminal count value attained		
		11: Preliminary count value attained		
		12: Over Voltage Stall supervision		
		13: Over Current Stall supervision		
		14: Heat sink overheat warning		
		15: Over Voltage supervision		
		16: PID supervision		
		17: Forward command		
		18: Reverse command		
		19: Zero speed output signal		
		20: Warning(FbE,Cexx, AoL2, AUE, SAve)		
		21: Brake control (Desired frequency attained)		
		22: Drive ready		
		23: Desired frequency 2 attained		
03.02	Desired Frequency 1 Attained	0.00 to 600.0Hz	0.00	
✓03.03	Analog Output Signal Selection (AFM)	0: Analog frequency meter 1: Analog current meter	0	
✓03.04	Analog Output Gain	1 to 200%	100	
03.05	Terminal Count Value	0 to 9999	0	
03.06	Preliminary Count Value	0 to 9999	0	
03.07	EF Active When Terminal Count Value Attained	0: Terminal count value attained, no EF display 1: Terminal count value attained, EF active	0	
03.08	Fan Control	0: Fan always ON 1: 1 minute after AC motor drive stops, fan will be OFF 2: Fan ON when AC motor drive runs, fan OFF when AC motor drive stops 3: Fan ON when preliminary heatsink temperature attained	0	
03.09	The Digital Output Used by PLC (NOT for VFD*E*C	Read only Bit0=1:RLY used by PLC Bit1=1:MO1 used by PLC	##	

Parameters	Functions	Settings	Factory Setting	Note
	models)	Bit2=1:MO2/RA2 used by PLC Bit3=1:MO3/RA3 used by PLC Bit4=1:MO4/RA4 used by PLC Bit5=1:MO5/RA5 used by PLC Bit6=1:MO6/RA6 used by PLC Bit7=1:MO7/RA7 used by PLC		
03.10	The Analog Output Used by PLC (NOT for VFD*E*C models)	Read only Bit0=1:AFM used by PLC Bit1=1: AO1 used by PLC Bit2=1: AO2 used by PLC	##	
03.11	Brake Release Frequency	0.00 to 20.00Hz	0.00	
03.12	Brake Engage Frequency	0.00 to 20.00Hz	0.00	
03.13	Display the Status of Multi-function Output Terminals	Read only Bit0: RLY Status Bit1: MO1 Status Bit2: MO2/RA2 Status Bit3: MO3/RA3 Status Bit4: MO4/RA4 Status Bit5: MO5/RA5 Status Bit6: MO6/RA6 Status Bit7: MO7/RA7 Status	##	
03.14	Desired Frequency 2 Attained	0.00 to 600.0Hz	0.00	

Group 4 Input Function Parameters

Parameters	Functions	Settings	Factory Setting	Note
✓04.00	Keypad Potentiometer Bias	0.0 to 200.0 %	0.0	
✓04.01	Keypad Potentiometer Bias Polarity	0: Positive bias 1: Negative bias	00	
✓04.02	Keypad Potentiometer Gain	0.1 to 200.0 %	100.0	
04.03	Keypad Potentiometer Negative Bias, Reverse Motion Enable/Disable	0: No negative bias command 1: Negative bias: REV motion enabled	0	
04.04	2-wire/3-wire Operation Control Modes	0: 2-wire: FWD/STOP, REV/STOP 1: 2-wire: FWD/REV, RUN/STOP 2: 3-wire operation	0	
04.05	Multi-function Input Terminal (MI3)	0: No function	1	
04.06	Multi-function Input Terminal (MI4)	1: Multi-Step speed command 1	2	
04.07	Multi-function Input Terminal (MI5)	2: Multi-Step speed command 2	3	
04.08	Multi-function Input Terminal (MI6)	3: Multi-Step speed command 3	4	
		4: Multi-Step speed command 4		
		5: External reset		
		6: Accel/Decel inhibit		
		7: Accel/Decel time selection command		
		8: Jog Operation		
		9: External base block		
		10: Up: Increment master frequency		
		11: Down: Decrement master frequency		
		12: Counter Trigger Signal		
		13: Counter reset		
		14: E.F. External Fault Input		
		15: PID function disabled		
		16: Output shutoff stop		
		17: Parameter lock enable		
		18: Operation command selection (external terminals)		
		19: Operation command selection(keypad)		
		20: Operation command selection (communication)		
		21: FWD/REV command		
		22: Source of second frequency command		
		23: Run/Stop PLC Program (PLC1) (NOT for VFD*E*C models) 23: Quick Stop (Only for VFD*E*C models)		

Parameters	Functions	Settings	Factory Setting	Note
		24: Download/execute/monitor PLC Program (PLC2) (NOT for VFD*E*C models) 25: Simple position function 26: OOB (Out of Balance Detection) 27: Motor selection (bit 0) 28: Motor selection (bit 1)		
04.09	Multi-function Input Contact Selection	Bit0:MI1 Bit1:MI2 Bit2:MI3 Bit3:MI4 Bit4:MI5 Bit5:MI6 Bit6:MI7 Bit7:MI8 Bit8:MI9 Bit9:MI10 Bit10:MI11 Bit11:MI12 0:N.O., 1:N.C. P.S.:MI1 to MI3 will be invalid when it is 3-wire control.	0	
04.10	Digital Terminal Input Debouncing Time	1 to 20 (*2ms)	1	
04.11	Min AVI Voltage	0.0 to 10.0V	0.0	
04.12	Min AVI Frequency	0.0 to 100.0%	0.0	
04.13	Max AVI Voltage	0.0 to 10.0V	10.0	
04.14	Max AVI Frequency	0.0 to 100.0%	100.0	
04.15	Min ACI Current	0.0 to 20.0mA	4.0	
04.16	Min ACI Frequency	0.0 to 100.0%	0.0	
04.17	Max ACI Current	0.0 to 20.0mA	20.0	
04.18	Max ACI Frequency	0.0 to 100.0%	100.0	
04.19	ACI/AVI2 Selection	0: ACI 1: AVI2	0	
04.20	Min AVI2 Voltage	0.0 to 10.0V	0.0	
04.21	Min AVI2 Frequency	0.0 to 100.0%	0.0	
04.22	Max AVI2 Voltage	0.0 to 10.0V	10.0	
04.23	Max AVI2 Frequency	0.0 to 100.0%	100.0	
04.24	The Digital Input Used by PLC (NOT for VFD*E*C models)	Read only Bit0=1:MI1 used by PLC Bit1=1:MI2 used by PLC Bit2=1:MI3 used by PLC Bit3=1:MI4 used by PLC Bit4=1:MI5 used by PLC Bit5=1:MI6 used by PLC Bit6=1: MI7 used by PLC Bit7=1: MI8 used by PLC Bit8=1: MI9 used by PLC Bit9=1: MI10 used by PLC Bit10=1: MI11 used by PLC	##	

Parameters	Functions	Settings	Factory Setting	Note
		Bit11=1: MI12 used by PLC		
04.25	The Analog Input Used by PLC (NOT for VFD*E*C models)	Read only Bit0=1:AVI used by PLC Bit1=1:ACI/AVI2 used by PLC Bit2=1: AI1 used by PLC Bit3=1: AI2 used by PLC	##	
04.26	Display the Status of Multi-function Input Terminal	Read only Bit0: MI1 Status Bit1: MI2 Status Bit2: MI3 Status Bit3: MI4 Status Bit4: MI5 Status Bit5: MI6 Status Bit6: MI7 Status Bit7: MI8 Status Bit8: MI9 Status Bit9: MI10 Status Bit10: MI11 Status Bit11: MI12 Status	##	
04.27	Internal/External Multi-function Input Terminals Selection	0~4095	0	
✓04.28	Internal Terminal Status	0~4095	0	

Group 5 Multi-Step Speeds Parameters

Parameters	Functions	Settings	Factory Setting	Note
↗05.00	1st Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.01	2nd Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.02	3rd Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.03	4th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.04	5th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.05	6th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.06	7th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.07	8th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.08	9th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.09	10th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.10	11th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.11	12th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.12	13th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.13	14th Step Speed Frequency	0.00 to 600.0 Hz	0.00	
↗05.14	15th Step Speed Frequency	0.00 to 600.0 Hz	0.00	

Group 6 Protection Parameters

Parameters	Functions	Settings	Factory Setting	Note
06.00	Over-Voltage Stall Prevention	115/230V series: 330.0V to 410.0V 460V series: 660.0V to 820.0V 0.0: Disable over-voltage stall prevention	390.0V 780.0V	
06.01	Over-Current Stall Prevention during Accel	0:Disable 20 to 250%	170	
06.02	Over-Current Stall Prevention during Operation	0:Disable 20 to 250%	170	
06.03	Over-Torque Detection Mode (OL2)	0: Disabled 1: Enabled during constant speed operation. After the over-torque is detected, keep running until OL1 or OL occurs. 2: Enabled during constant speed operation. After the over-torque is detected, stop running. 3: Enabled during accel. After the over-torque is detected, keep running until OL1 or OL occurs. 4: Enabled during accel. After the over-torque is detected, stop running.	0	
↗06.04	Over-Torque Detection Level	10 to 200%	150	
06.05	Over-Torque Detection Time	0.1 to 60.0 sec	0.1	
06.06	Electronic Thermal Overload Relay Selection	0: Standard motor (self cooled by fan) 1: Special motor (forced external cooling) 2: Disabled	2	
06.07	Electronic Thermal Characteristic	30 to 600 sec	60	
06.08	Present Fault Record	0: No fault	0	
06.09	Second Most Recent Fault Record	1: Over current (oc)		
06.10	Third Most Recent Fault Record	2: Over voltage (ov)		
06.11	Fourth Most Recent Fault Record	3: IGBT Overheat (oH1)		
06.12	Fifth Most Recent Fault Record	4: Power Board Overheat (oH2)		
		5: Overload (oL)		
		6: Overload1 (oL1)		
		7: Motor over load (oL2)		
		8: External fault (EF)		
		9: Current exceeds 2 times rated current during accel.(ocA)		
		10: Current exceeds 2 times rated current during decel.(ocd)		
		11: Current exceeds 2 times rated current during steady state operation (ocn)		
		12: Ground fault (GFF)		

Parameters	Functions	Settings	Factory Setting	Note
		13: Reserved		
		14: Phase-Loss (PHL)		
		15: Reserved		
		16: Auto Acel/Decel failure (CFA)		
		17: SW/Password protection (codE)		
		18: Power Board CPU WRITE failure (cF1.0)		
		19: Power Board CPU READ failure (cF2.0)		
		20: CC, OC Hardware protection failure (HPF1)		
		21: OV Hardware protection failure (HPF2)		
		22: GFF Hardware protection failure (HPF3)		
		23: OC Hardware protection failure (HPF4)		
		24: U-phase error (cF3.0)		
		25: V-phase error (cF3.1)		
		26: W-phase error (cF3.2)		
		27: DCBUS error (cF3.3)		
		28: IGBT Overheat (cF3.4)		
		29: Power Board Overheat (cF3.5)		
		30: Control Board CPU WRITE failure (cF1.1)		
		31: Control Board CPU WRITE failure (cF2.1)		
		32: ACI signal error (AErr)		
		33: Reserved		
		34: Motor PTC overheat protection (PtC1)		
		35: PG feedback signal error (PGEr)		
		36-39: Reserved		
		40: Communication time-out error of control board and power board (CP10)		
		41: dEb error		
		42: ACL (Abnormal Communication Loop)		

Group 7 Motor Parameters

Parameters	Functions	Settings	Factory Setting	Note
07.00	Motor Rated Current (Motor 0)	30 %FLA to 120% FLA	FLA	
07.01	Motor No-Load Current (Motor 0)	0%FLA to 99% FLA	0.4*FLA	
↗07.02	Torque Compensation (Motor 0)	0.0 to 10.0	0.0	
↗07.03	Slip Compensation (Used without PG) (Motor 0)	0.00 to 10.00	0.00	
07.04	Motor Parameters Auto Tuning	0: Disable 1: Auto tuning R1 2: Auto tuning R1 + no-load test	0	
07.05	Motor Line-to-line Resistance R1 (Motor 0)	0~65535 mΩ	0	
07.06	Motor Rated Slip (Motor 0)	0.00 to 20.00 Hz	3.00	
07.07	Slip Compensation Limit	0 to 250%	200	
07.08	Torque Compensation Time Constant	0.01 ~10.00 Sec	0.30	
07.09	Slip Compensation Time Constant	0.05 ~10.00 sec	0.20	
07.10	Accumulative Motor Operation Time (Min.)	0 to 1439 Min.	0	
07.11	Accumulative Motor Operation Time (Day)	0 to 65535 Day	0	
07.12	Motor PTC Overheat Protection	0: Disable 1: Enable	0	
07.13	Input Debouncing Time of the PTC Protection	0~9999(*2ms)	100	
07.14	Motor PTC Overheat Protection Level	0.1~10.0V	2.4	
07.15	Motor PTC Overheat Warning Level	0.1~10.0V	1.2	
07.16	Motor PTC Overheat Reset Delta Level	0.1~5.0V	0.6	
07.17	Treatment of the Motor PTC Overheat	0: Warn and RAMP to stop 1: Warn and COAST to stop 2: Warn and keep running	0	
07.18	Motor Rated Current (Motor 1)	30 %FLA to 120% FLA	FLA	
07.19	Motor No-Load Current (Motor 1)	0%FLA to 99% FLA	0.4*FLA	
↗07.20	Torque Compensation (Motor 1)	0.0 to 10.0	0.0	
↗07.21	Slip Compensation (Used without PG) (Motor 1)	0.00 to 10.00	0.00	
07.22	Motor Line-to-line Resistance R1 (Motor 1)	0~65535 mΩ	0	
07.23	Motor Rated Slip	0.00 to 20.00 Hz	3.00	

Parameters	Functions	Settings	Factory Setting	Note
	(Motor 1)			
07.24	Motor Pole Number (Motor 1)	2 to 10	4	
07.25	Motor Rated Current (Motor 2)	30 %FLA to 120% FLA	FLA	
07.26	Motor No-Load Current (Motor 2)	0%FLA to 99% FLA	0.4*FLA	
↗07.27	Torque Compensation (Motor 2)	0.0 to 10.0	0.0	
↗07.28	Slip Compensation (Used without PG) (Motor 2)	0.00 to 10.00	0.00	
07.29	Motor Line-to-line Resistance R1 (Motor 2)	0~65535 mΩ	0	
07.30	Motor Rated Slip (Motor 2)	0.00 to 20.00 Hz	3.00	
07.31	Motor Pole Number (Motor 3)	2 to 10	4	
07.32	Motor Rated Current (Motor 3)	30 %FLA to 120% FLA	FLA	
07.33	Motor No-Load Current (Motor 3)	0%FLA to 99% FLA	0.4*FLA	
↗07.34	Torque Compensation (Motor 3)	0.0 to 10.0	0.0	
↗07.35	Slip Compensation (Used without PG) (Motor 3)	0.00 to 10.00	0.00	
07.36	Motor Line-to-line Resistance R1 (Motor 3)	0~65535 mΩ	0	
07.37	Motor Rated Slip (Motor 3)	0.00 to 20.00 Hz	3.00	
07.38	Motor Pole Number (Motor 3)	2 to 10	4	

Group 8 Special Parameters

Parameters	Functions	Settings	Factory Setting	Note
08.00	DC Brake Current Level	0 to 100%	0	
08.01	DC Brake Time during Start-Up	0.0 to 60.0 sec	0.0	
08.02	DC Brake Time during Stopping	0.0 to 60.0 sec	0.0	
08.03	Start-Point for DC Brake	0.00 to 600.0Hz	0.00	
08.04	Momentary Power Loss Operation Selection	0: Operation stops after momentary power loss 1: Operation continues after momentary power loss, speed search starts with the Last Frequency 2: Operation continues after momentary power loss, speed search starts with the minimum frequency	0	
08.05	Maximum Allowable Power Loss Time	0.1 to 20.0 sec	2.0	
08.06	Base-block Speed Search	0: Disable speed search 1: Speed search starts with last frequency 2: Starts with minimum output frequency	1	
08.07	B.B. Time for Speed Search	0.1 to 5.0 sec	0.5	
08.08	Current Limit for Speed Search	30 to 200%	150	
08.09	Skip Frequency 1 Upper Limit	0.00 to 600.0 Hz	0.00	
08.10	Skip Frequency 1 Lower Limit	0.00 to 600.0 Hz	0.00	
08.11	Skip Frequency 2 Upper Limit	0.00 to 600.0 Hz	0.00	
08.12	Skip Frequency 2 Lower Limit	0.00 to 600.0 Hz	0.00	
08.13	Skip Frequency 3 Upper Limit	0.00 to 600.0 Hz	0.00	
08.14	Skip Frequency 3 Lower Limit	0.00 to 600.0 Hz	0.00	
08.15	Auto Restart After Fault	0 to 10 (0=disable)	0	
08.16	Auto Reset Time at Restart after Fault	0.1 to 6000 sec	60.0	
08.17	Auto Energy Saving	0: Disable 1: Enable	0	
08.18	AVR Function	0: AVR function enable 1: AVR function disable 2: AVR function disable for decel. 3: AVR function disable for stop	0	
08.19	Software Brake Level	115V / 230V series: 370.0to 430.0V 460V series: 740.0 to 860.0V	380.0 760.0	
✗08.20	Compensation Coefficient for Motor Instability	0.0-5.0	0.0	
08.21	OOB Sampling Time	0.1 to 120.0 sec	1.0	
08.22	Number of OOB Sampling Times	00 to 32	20	
08.23	OOB Average	Read only	##	

Parameters	Functions	Settings	Factory Setting	Note
	Sampling Angle			
08.24	DEB Function	0: Disable 1: Enable	0	
08.25	DEB Return Time	0 to 250 sec	0	
08.26	Speed Search during Start-up	0: Disable 1: Enable	0	
08.27	Speed Search Frequency during Start-up	0: By setting frequency 1: By max. operation frequency (Pr.01.00)	0	

Group 9 Communication Parameters

Parameters	Functions	Settings	Factory Setting	Note
↗09.00	Communication Address	1 to 254	1	
↗09.01	Transmission Speed	0: Baud rate 4800bps 1: Baud rate 9600bps 2: Baud rate 19200bps 3: Baud rate 38400bps	1	
↗09.02	Transmission Fault Treatment	0: Warn and keep operating 1: Warn and ramp to stop 2: Warn and coast to stop 3: No warning and keep operating	3	
↗09.03	Time-out Detection	0.1 ~ 120.0 seconds 0.0: Disable	0.0	
↗09.04	Communication Protocol	0: 7,N,2 (Modbus, ASCII) 1: 7,E,1 (Modbus, ASCII) 2: 7,O,1 (Modbus, ASCII) 3: 8,N,2 (Modbus, RTU) 4: 8,E,1 (Modbus, RTU) 5: 8,O,1 (Modbus, RTU) 6: 8,N,1 (Modbus, RTU) 7: 8,E,2 (Modbus, RTU) 8: 8,O,2 (Modbus, RTU) 9: 7,N,1 (Modbus, ASCII) 10: 7,E,2 (Modbus, ASCII) 11: 7,O,2 (Modbus, ASCII)	0	
09.05	Reserved			
09.06	Reserved			
↗09.07	Response Delay Time	0 ~ 200 (unit: 2ms)	1	
↗09.08	Transmission Speed for USB Card	0: Baud rate 4800 bps 1: Baud rate 9600 bps 2: Baud rate 19200 bps 3: Baud rate 38400 bps 4: Baud rate 57600 bps	2	
↗09.09	Communication Protocol for USB Card	0: 7,N,2 for ASCII 1: 7,E,1 for ASCII 2: 7,O,1 for ASCII 3: 8,N,2 for RTU 4: 8,E,1 for RTU 5: 8,O,1 for RTU	1	
↗09.09	Communication Protocol for USB Card	6: 8,N,1 (Modbus, RTU) 7: 8,E,2 (Modbus, RTU) 8: 8,O,2 (Modbus, RTU) 9: 7,N,1 (Modbus, ASCII) 10: 7,E,2 (Modbus, ASCII) 11: 7,O,2 (Modbus, ASCII)		
↗09.10	Transmission Fault Treatment for USB Card	0: Warn and keep operating 1: Warn and ramp to stop 2: Warn and coast to stop 3: No warning and keep operating	0	
↗09.11	Time-out Detection for USB Card	0.1 ~ 120.0 seconds 0.0: Disable	0.0	
09.12	COM port for PLC Communication (NOT for VFD*E*C models)	0: RS485 1: USB card	0	

Group 10 PID Control Parameters

Parameters	Functions	Settings	Factory Setting	Note
10.00	PID Set Point Selection	0: Disable PID operation 1: Keypad (based on Pr.02.00) 2: 0 to +10V from AVI 3: 4 to 20mA from ACI or 0 to +10V from AVI2 4: PID set point (Pr.10.11)	0	
10.01	Input Terminal for PID Feedback	0: Positive PID feedback from external terminal AVI (0 ~ +10VDC) 1: Negative PID feedback from external terminal AVI (0 ~ +10VDC) 2: Positive PID feedback from external terminal ACI (4 ~ 20mA)/ AVI2 (0 ~ +10VDC). 3: Negative PID feedback from external terminal ACI (4 ~ 20mA)/ AVI2 (0 ~ +10VDC).	0	
✓ 10.02	Proportional Gain (P)	0.0 to 10.0	1.0	
✓ 10.03	Integral Time (I)	0.00 to 100.0 sec (0.00=disable)	1.00	
✓ 10.04	Derivative Control (D)	0.00 to 1.00 sec	0.00	
10.05	Upper Bound for Integral Control	0 to 100%	100	
10.06	Primary Delay Filter Time	0.0 to 2.5 sec	0.0	
10.07	PID Output Freq Limit	0 to 110%	100	
10.08	PID Feedback Signal Detection Time	0.0 to 3600 sec (0.0 disable)	60.0	
10.09	Treatment of the Erroneous PID Feedback Signals	0: Warn and RAMP to stop 1: Warn and COAST to stop 2: Warn and keep operation	0	
10.10	Gain Over the PID Detection Value	0.0 to 10.0	1.0	
✓ 10.11	Source of PID Set point	0.00 to 600.0Hz	0.00	
10.12	PID Offset Level	1.0 to 50.0%	10.0	
10.13	Detection Time of PID Offset	0.1 to 300.0 sec	5.0	
10.14	Sleep/Wake Up Detection Time	0.0 to 6550 sec	0.0	
10.15	Sleep Frequency	0.00 to 600.0 Hz	0.00	
10.16	Wakeup Frequency	0.00 to 600.0 Hz	0.00	
10.17	Minimum PID Output Frequency Selection	0: By PID control	0	

Group 11 Parameters for Extension Card

Parameters	Functions	Settings	Factory Setting	Note
11.00	Multi-function Output Terminal MO2/RA2	0: No function	0	
11.01	Multi-function Output Terminal MO3/RA3	1: AC drive operational	0	
11.02	Multi-function Output Terminal MO4/RA4	2: Master frequency attained	0	
11.03	Multi-function Output Terminal MO5/RA5	3: Zero speed	0	
11.04	Multi-function Output Terminal MO6/RA6	4: Over torque detection	0	
11.05	Multi-function Output Terminal MO7/RA7	5: Base-Block (B.B.) indication	0	
		6: Low-voltage indication		
		7: Operation mode indication		
		8: Fault indication		
		9: Desired frequency 1 attained		
		10: Terminal count value attained		
		11: Preliminary count value attained		
		12: Over Voltage Stall supervision		
		13: Over Current Stall supervision		
		14: Heat sink overheat warning		
		15: Over Voltage supervision		
		16: PID supervision		
		17: Forward command		
		18: Reverse command		
		19: Zero speed output signal		
		20: Warning(FbE,Cexx, AoL2, AUE, SAvE)		
		21: Brake control (Desired frequency attained)		
		22: Drive ready		
		23: Desired frequency 2 attained		
11.06	Multi-function Input Terminal (MI7)	0: No function	0	
11.07	Multi-function Input Terminal (MI8)	1: Multi-Step speed command 1	0	
11.08	Multi-function Input Terminal (MI9)	2: Multi-Step speed command 2	0	
11.09	Multi-function Input Terminal (MI10)	3: Multi-Step speed command 3	0	
11.10	Multi-function Input Terminal (MI11)	4: Multi-Step speed command 4	0	
11.11	Multi-function Input Terminal (MI12)	5: External reset	0	
		6: Accel/Decel inhibit		
		7: Accel/Decel time selection command		
		8: Jog Operation		

Parameters	Functions	Settings	Factory Setting	Note
		9: External base block		
		10: Up: Increment master frequency		
		11: Down: Decrement master frequency		
		12: Counter Trigger Signal		
		13: Counter reset		
		14: E.F. External Fault Input		
		15: PID function disabled		
		16: Output shutoff stop		
		17: Parameter lock enable		
		18: Operation command selection (external terminals)		
		19: Operation command selection (keypad)		
		20: Operation command selection (communication)		
		21: FWD/REV command		
		22: Source of second frequency command		
		23: Run/Stop PLC Program (PLC1) (NOT for VFD*E*C models)		
		23: Quick Stop (Only for VFD*E*C models)		
		24: Download/execute/monitor PLC Program (PLC2) (NOT for VFD*E*C models)		
		25: Simple position function		
		26: OOB (Out of Balance Detection)		
		27: Motor selection (bit 0)		
		28: Motor selection (bit 1)		

Group 12 Analog Input/Output Parameters for Extension Card

Parameters	Functions	Settings	Factory Setting	Note
12.00	AI1 Function Selection	0: Disabled 1: Source of the 1st frequency 2: Source of the 2nd frequency 3: PID Set Point (PID enable) 4: Positive PID feedback 5: Negative PID feedback	0	
12.01	AI1 Analog Signal Mode	0: ACI2 analog current (0.0 ~ 20.0mA) 1: AVI3 analog voltage (0.0 ~ 10.0V)	1	
12.02	Min. AVI3 Input Voltage	0.0 to 10.0V	0.0	
12.03	Min. AVI3 Scale Percentage	0.0 to 100.0%	0.0	
12.04	Max. AVI3 Input Voltage	0.0 to 10.0V	10.0	
12.05	Max. AVI3 Scale Percentage	0.0 to 100.0%	100.0	
12.06	Min. ACI2 Input Current	0.0 to 20.0mA	4.0	
12.07	Min. ACI2 Scale Percentage	0.0 to 100.0%	0.0	
12.08	Max. ACI2 Input Current	0.0 to 20.0mA	20.0	
12.09	Max. ACI2 Scale Percentage	0.0 to 100.0%	100.0	
12.10	AI2 Function Selection	0: Disabled 1: Source of the 1st frequency 2: Source of the 2nd frequency 3: PID Set Point (PID enable) 4: Positive PID feedback 5: Negative PID feedback	0	
12.11	AI2 Analog Signal Mode	0: ACI3 analog current (0.0 ~ 20.0mA) 1: AVI4 analog voltage (0.0 ~ 10.0V)	1	
12.12	Min. AVI4 Input Voltage	0.0 to 10.0V	0.0	
12.13	Min. AVI4 Scale Percentage	0.0 to 100.0%	0.0	
12.14	Max. AVI4 Input Voltage	0.0 to 10.0V	10.0	
12.15	Max. AVI4 Scale Percentage	0.0 to 100.0%	100.0	
12.16	Min. ACI3 Input Current	0.0 to 20.0mA	4.0	
12.17	Min. ACI3 Scale Percentage	0.0 to 100.0%	0.0	
12.18	Max. ACI3 Input Current	0.0 to 20.0mA	20.0	
12.19	Max. ACI3 Scale Percentage	0.0 to 100.0%	100.0	
12.20	AO1 Terminal Analog Signal Mode	0: AVO1 1: ACO1 (analog current 0.0 to 20.0mA) 2: ACO1 (analog current 4.0 to 20.0mA)	0	
12.21	AO1 Analog Output Signal	0: Analog Frequency 1: Analog Current (0 to 250% rated current)	0	
12.22	AO1 Analog Output Gain	1 to 200%	100	
12.23	AO2 Terminal Analog Signal	0: AVO2 1: ACO2 (analog current 0.0 to	0	

Parameters	Functions	Settings	Factory Setting	Note
	Mode	20.0mA) 2: ACO2 (analog current 4.0 to 20.0mA)		
12.24	AO2 Analog Output Signal	0: Analog Frequency 1: Analog Current (0 to 250% rated current)	0	
12.25	AO2 Analog Output Gain	1 to 200%	100	
12.26	AUI Analog Input Selection	0: No function 1: Source of the 1st frequency 2: Source of the 2nd frequency	0	
✓ 12.27	AUI Analog Input Bias	0.00~200.00%	0.00	
12.28	AUI Bias Polarity	0: Positive bias 1: Negative bias	0	
✓ 12.29	AUI Analog Gain	1~200%	100	
12.30	AUI Negative Bias, Reverse Motion Enable/Disable	0: No AUI Negative Bias Command 1: Negative Bias: REV Motion Enabled 2: Negative Bias: REV Motion Disabled	0	
12.31	AUI Analog Input Delay	0~9999	50	

Group 13 PG function Parameters for Extension Card

Parameters	Functions	Settings	Factory Setting	Note
13.00	PG Input	0: Disabled 1: Single phase 2: Forward/Counterclockwise rotation 3: Reverse/Clockwise rotation	0	
13.01	PG Pulse Range	1 to 20000	600	
13.02	Motor Pole Number (Motor 0)	2 to 10	4	
↯ 13.03	Proportional Gain (P)	0.0 to 10.0	1.0	
↯ 13.04	Integral Gain (I)	0.00 to 100.00 sec	1.00	
↯ 13.05	Speed Control Output Frequency Limit	0.00 to 100.00Hz	10.00	
↯ 13.06	Speed Feedback Display Filter	0 to 9999 (*2ms)	500	
↯ 13.07	Detection Time for Feedback Signal Fault	0.0: disabled 0.1 to 10.0 sec	1	
↯ 13.08	Treatment of the Feedback Signal Fault	0: Warn and RAMP to stop 1: Warn and COAST to stop 2: Warn and keep operation	1	
↯ 13.09	Speed Feedback Filter	0 to 9999 (*2ms)	16	
13.10	Source of the High-speed Counter	0: PG card	Read Only	