CHAPTER 8 SUMMARY OF PARAMETER SETTINGS

◈: The parameter can be set during operation, *: Twice the value for 460V class.

Group 0 User Parameters

Parameters	Explanation	Settings	Factory Setting
0-00	Identity Code of AC Drive	Read-only	d #
0-01	Rated Current Display	Read-only	d##.#
0-02	Parameter Reset	d10: Reset Parameter to Factory Setting	d0
0-03	Start-up Display Selection ◈	d0: F (setting frequency) d1: H (actual frequency) d2: (user-defined unit) d3: A (output current)	d0
0-04	User-Defined Unit ◈	d0: Display User-Defined Unit (u) d1: Display Counter Value (C) d2: Display Process Operation (1= tt) d3: Display DC-BUS Voltage (U) d4: Display output voltage (E) d5: Display frequency commands of PID (P) d6: Display PID feedback (after multiplying by Gain) (b)	d0
0-05	User-Defined Coefficient K ◈	d0.1 to d160	d1.0
0-06	Software Version	Read-only	d#.#
0-07	Password Input	d0 to d999	d0
0-08	Password Decode	d0 to d999	d0

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Group 1 Basic Parameters

Parameters	Explanation	Settings	Factory Setting
1-00	Maximum Output Freq.	d50.0 to d400 Hz	d60.0
1-01	Maximum Voltage Frequency (Base Freq)	d10.0 to d400 Hz	d60.0
1-02	Maximum Output Voltage	d2.0V to d255V*	d230*
1-03	Mid-Point Frequency	d1.0 to d400 Hz	d1.0
1-04	Mid-Point Voltage	d2.0V to d255V*	d12*
1-05	Minimum Output Frequency	d1.0 to d60.0 Hz	d1.0
1-06	Minimum Output Voltage	d2.0V to d255V*	d12*
1-07	Upper Bound of freq.	d1 to d110%	d100
1-08	Lower Bound of freq.	d0 to d100%	d0
1-09	Acceleration Time 1 (Tacc1) ◈	d0.1 to d600 Sec	d10.0
1-10	Deceleration Time 1 (Tdec1) ◈	d0.1 to d600 Sec	d10.0
1-11	Acceleration Time 2 ◈	d0.1 to d600 Sec	d10.0
1-12	Deceleration Time 2 ◈	d0.1 to d600 Sec	d10.0
1-13	Jog Acceleration / Deceleration Time ◈	d0.1 to d600 Sec	d10.0
1-14	Jog Frequency ◈	d1.0 Hz to d400 Hz	d6.0
1-15	Auto Acceleration / Deceleration	d0: Linear Acceleration/Deceleration d1: Auto Acceleration, Linear Deceleration d2: Linear Acceleration, Auto Deceleration d3: Auto Acceleration/Deceleration d4: Linear Acceleration; Auto Deceleration, Stall Prevention during Deceleration d5: Auto Deceleration; Auto Acceleration, Stall Prevention during Deceleration	d0
1-16	S-Curve in Acceleration	d0 to d7	d0
1-17	S-Curve in Deceleration	d0 to d7	d0
1-18	Jog Decelerating Time	d 0.0 Jog Decelerating Time Determined by Pr.1-13 d 0.1 to d600	d0.0

Group 2 Operation Method Parameters

Parameters	Explanation	Settings	Factory Setting
2-00	Source of Frequency Command	d0: Master Frequency input determined by digital keypad. (record the frequency of power loss and it can do analog overlap plus) d1: Master Frequency determined by analog signal DC 0V-10V (external terminal AVI). (won't record the frequency of power loss and it can't do analog overlap plus) d2: Master Frequency determined by analog signal DC 4mA - 20mA (external terminal AVI). (won't record the frequency of power loss and it can't do analog overlap plus) d3: Master Frequency determined by Potentiometer on the digital keypad. (won't record the frequency of power loss and it can do analog overlap plus) d4: Master Frequency operated by RS-485 serial communication interface and record frequency of power loss. (record the frequency of power loss and it can do analog overlap plus) d5: Master Frequency operated by RS-485 serial communication interface and won't record frequency before power loss. (won't record the frequency of power loss and it can do analog overlap plus)	d0

Parameters	Explanation	Settings	Factory Setting
2-01	Source of Operation Command	d0: by Digital Keypad d1: by external terminals, keypad STOP enabled d2: by external terminals, keypad STOP disabled d3: by RS-485 communication interface, keypad STOP enabled d4: by RS-485 communication interface, keypad STOP disabled	d0
2-02	Stop Method	d0: Ramp Stop d1: Coast Stop	d0
2-03	PWM Carrier Frequency	d3: 3KHz d4: 4KHz d5: 5KHz d6: 6KHz d7: 7KHz d8: 8KHz d9: 9KHz d10: 10KHz	d10
2-04	Reverse Operation	d0: Enable REV d1: Disable REV	d0
2-05	Loss of ACI Signal	d0: 0 Hz, continue running d1: Stop the frequency output d2: Last ACI input command	d0
2-06	Analog Auxiliary Frequency Operation	d0: Disable d1: Enable + AVI d2: Enable + ACI	d0

Group 3 Output Function Parameters

Parameters	Explanation	Settings	Factory Setting
3-00	Analog Output Signal	d0: analog frequency d1: analog current	d0
3-01	Analog Output Gain ◈	d1 to d200%	d100
3-02	Desired Freq. Attained	d1.0 to d400 Hz	d1.0
3-03	Terminal Count Value	d0 to d999	d0
3-04	Preliminary Count Value	d0 to d999	d0
3-05	Multi-Function Output1 (Photocoupler Output)	d0: Not Used	d1
3-06	Multi-Function Output2 (Relay Output)	d1: AC Drive Operational d2: Max. Output Freq. Attained d3: Zero Speed d4: Over Torque d5: Base-Block (B.B.) d6: Low Voltage Detection d7: AC Drive Operation Mode d8: Fault Indication d9: Desired Freq. Attained d10: PLC Program Running d11: PLC Program Step Complete d12: PLC Program Complete d13: PLC Program Operation Pause d14: Terminal Count Value Attained d15: Preliminary Count Value Attained d16: Ready State Indicator d17: FWD command indication d18: REV command indication	d8

Group 4 Input Function Parameters

Parameters	Explanation	Settings	Factory Setting
4-00	Potentiometer Bias Frequency ◈	d 0.0 to d 100.0%	d0.0
4-01	Potentiometer Bias Polarity ◈	d0: Positive Bias d1: Negative Bias	d0
4-02	Potentiometer Frequency Gain ◈	d1 to d200 %	d100
4-03	Potentiometer Reverse Motion Enable	d0: Forward Motion Only d1: Reverse Motion enabled	d0
4-04	Multi-Function Input Terminal 1 (M0, M1)	d0: Parameter Disable d1: FWD/STOP, REV/STOP d2: FWD/REV, RUN/STOP d3: 3-wire Operation Control Mode d4: E.F. External Fault Input (N.O.) d5: E.F. External Fault Input (N.C.) d6: Reset d7: Multi-Step Speed Command 1 d8: Multi-Step Speed Command 2 d9: Multi-Step Speed Command 3 d10: Jog Operation d11: Acceleration/deceleration Speed Inhibit d12: First or Second Acceleration/deceleration Time Selection d13: Base-Block (B.B.) (N.O.) d14: Base-Block (B.B.) (N.C.) d15: Increase Master Frequency d16: Decrease Master Frequency d17: Run PLC Program d18: Pause PLC d19: Counter Trigger Signal d20: Counter Reset d21: Select ACI / Deselect AVI d22: Disable PID function d23: JOG FWD d24: JOG REV d25: The source of master frequency is AVI. d26: The source of master frequency is ACI.	d1
4-05	Multi-Function Input Terminal 2 (M2)		d6
4-06	Multi-Function Input Terminal 3 (M3)		d7
4-07	Multi-Function Input Terminal 4 (M4)		d8
4-08	Multi-Function Input Terminal 5(M5)		d9

Parameters	Explanation	Settings	Factory Setting
4-09	Line Start Lockout	d0: Disable d1: Enable	d0
4-10	Up/down frequency command mode	d0: Up/down frequency by acceleration/deceleration time d1: Up frequency according to constant speed, down frequency according to deceleration time d2: Up frequency according to acceleration time, down frequenc according to constant speed d3: Up/down frequency by constant speed	d3
4-11	Acceleration /Deceleration speed of constant up/down frequency	d0 to d1000 Hz/sec	d1

Group 5 Multi-Step Speed and PLC Parameters

Parameters	Explanation	Settings	Factory Setting
5-00	1st Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-01	2nd Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-02	3rd Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-03	4th Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-04	5th Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-05	6th Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-06	7th Step Speed Freq.	d0.0 to d400 Hz	d0.0
5-07	PLC Mode	d0: Disable PLC Operation d1: Execute one program cycle d2: Continuously execute program cycles d3: Execute one program cycle step by step d4: Continuously execute one program cycle step by step d5: Disable PLC operation, but can set direction of 1st speed to 7th speed	d0
5-08	PLC Forward/ Reverse Motion	d0 to d255 (0: FWD 1: REV)	d0
5-09	Time Duration Step 0	d0 to d65500 Sec	d0
5-10	Time Duration Step 1	d0 to d65500 Sec	d0
5-11	Time Duration Step 2	d0 to d65500 Sec	d0
5-12	Time Duration Step 3	d0 to d65500 Sec	d0
5-13	Time Duration Step 4	d0 to d65500 Sec	d0
5-14	Time Duration Step 5	d0 to d65500 Sec	d0
5-15	Time Duration Step 6	d0 to d65500 Sec	d0
5-16	Time Duration Step 7	d0 to d65500 Sec	d0

Group 6 Protection Parameters

Parameters	Explanation	Settings	Factory Setting
6-00	Over-Voltage Stall Prevention	d0: Disable d1: Enable	d1
6-01	Over-Voltage Prevention Level	230V series: d350 to d410V	d390
		460V series: d700 to d820V	d780
6-02	Over-Current Stall Prevention Level	d20 to d150%	d130
6-03	Over-Torque Detection Mode	d0: Disabled d1: Enabled during constant speed operation and continue to run to OL1 or OL. d2: Enabled during Constant Speed Operation and halted after detection d3: Enabled during running and continues before Continuous Output Time Limit (Pr.6-05) is reached d4: Enabled during running and halted after Over-Torque detection	d0
6-04	Over-Torque Detection Level	d30 to d200%	d150
6-05	Time setting for Over-torque Detection	d0.1 to d10.0 Sec	d0.1
6-06	Electronic Thermal Overload Relay Selection	d0 to d2	d2
6-07	Electronic Thermal Characteristic ◈	d30 to d600 Sec	d60
6-08	Present Fault Record	d0: No Fault occurred d1: Over Current (oc) d2: Over Voltage (ov) d3: Over Heat (oH) d4: Over Load (oL) d5: Over Load (oL1) d6: External Fault (EF) d7: Not used d8: Not used d9: Current exceed during Acceleration (ocA) d10: Current exceed during Deceleration (ocd) d11: Current exceed during Steady State (ocn) d12: Ground Fault (GF)	d0
6-09	Second Most Recent Fault Record		
6-10	Third Most Recent Fault Record		

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Group 7 Motor Parameters

Parameters	Explanation	Settings	Factory Setting
7-00	Motor Rated Current ◈	d30 to d120%	d85
7-01	Motor No-Load Current ◈	d0 to d90%	d50
7-02	Torque Compensation ◈	d0 to d10	d01
7-03	Slip Compensation ◈	d0.0 to d10.0	d0.0

Group 8 Special Parameters

Parameters	Explanation	Settings	Factory Setting
8-00	DC Braking Voltage Level	d0 to d30%	d0
8-01	DC Braking Time during Start-Up	d0.0 to d60.0 Sec	d0.0
8-02	DC Braking time during Stopping	d0.0 to d60.0 Sec	d0.0
8-03	Start-Point for DC Braking	d0.0 to d400 Hz	d0.0
8-04	Momentary Power Loss Operation Selection	d0: Stop Operation after Momentary Power Loss d1: Continues after Momentary Power Loss, speed search starts with Master Frequency d2: Continues after Momentary Power Loss, speed search starts with Minimum Output Frequency	d0
8-05	Maximum Allowable Power Loss Time	d0.3 to d5.0 Sec	d2.0
8-06	B.B. Time for Speed Search	d0.3 to d5.0 Sec	d0.5
8-07	Maximum Speed Search Current Level	d30 to d200%	d150
8-08	Skip Frequency 1 Upper Bound	d0.0 to d400 Hz	d0.0
8-09	Skip Frequency 1 Lower Bound	d0.0 to d400 Hz	d0.0
8-10	Skip Frequency 2 Upper Bound	d0.0 to d400 Hz	d0.0
8-11	Skip Frequency 2 Lower bound	d0.0 to d400 Hz	d0.0
8-12	Skip Frequency 3 Upper bound	d0.0 to d400 Hz	d0.0
8-13	Skip Frequency 3 Lower Bound	d0.0 to d400 Hz	d0.0
8-14	Auto Restart After Fault	d0 to d10	d0
8-15	AVR Function	d0: AVR Function Enable d1: AVR Function Disable d2: AVR Function Disable when Deceleration	d2
8-16	Dynamic Braking Voltage	d350 to d450V*	d380*
8-17	DC Braking Lower Bound Limit	d0.0 to d400 Hz	d0.0

Group 9: Communication Parameters

Parameters	Explanation	Settings	Factory Setting
9-00	Communication Address ◈	d1 to d254	d1
9-01	Transmission Speed ◈	d0: Baud Rate 4800 bps d1: Baud Rate 9600 bps d2: Baud Rate 19200 bps d3: Baud Rate 38400 bps	d1
9-02	Transmission Fault Treatment ◈	d0: Warn and Keep Operating d1: Warn and Ramp to Stop d2: Warn and Coast to Stop d3: Keep Operating without Warning	d0
9-03	Modbus Communication Watchdog Timer ◈	d0: Disable d1 to d20: time setting (1 sec increment)	d0
9-04	Communication Protocol ◈	d0: 7,N,2 (Modbus, ASCII) d1: 7,E,1 (Modbus, ASCII) d2: 7,O,1 (Modbus, ASCII) d3: 8,N,2 (Modbus, ASCII) d4: 8,E,1 (Modbus, ASCII) d5: 8,O,1 (Modbus, ASCII) d6: 8,N,2 (Modbus, RTU) d7: 8,E,1 (Modbus, RTU) d8: 8,O,1 (Modbus, RTU)	d0

Group A: Communication Parameters

Parameters	Explanation	Settings	Factory Setting
A-00	PID Feedback Terminal Selection	d0: Disable PID function d1: Negative feedback 0~10V AVI d2: Negative feedback 4~20mA ACI d3: Positive feedback 0~10V AVI d4: Positive feedback 4~20mA ACI	d0
A-01	Feedback Signal Gain	d0 to d999	d100
A-02	Proportional Gain (P)	d0 to d999	d100
A-03	Integral Time (I)	d0 to d999	d100
A-04	Differential Time (D)	d0 to d100	d0
A-05	Integration's Upper Bound Frequency	d0 to d100%	d100
A-06	One-Time Delay	d0 to d999	d0
A-07	PID Frequency Output Command Limit	d0 to d110%	d100
A-08	Detection Time of the Feedback Error	d0.0 to d650 seconds	d0.0
A-09	Feedback Signal Fault Treatment	d0: warn and RAMP to stop d1: warn and COAST to stop	d0
A-10	Dwell (sleep) Frequency	d0.0 to d400Hz	d0.0
A-11	Revival Frequency	d0.0 to d400Hz	d0.0
A-12	Dwell (sleep) Period	d0.0 to d650 seconds	d0.0
A-13	PID User Defined	d0.0 to d400	d0.0