Chapter 5　Function & Parameter Table

The functional parameters of BD600 series AC drives are grouping by function, total 15 groups from F00~F15. Each functional group includes several function codes. Function codes adopt three-level menu, for example, "F05. 08" means 8th function code of the functions in group F05.

For convenience of setting function codes, while operating with operation panel, function group number corresponding first-level menu, function code number corresponding second-level menu, and function cade parameters corresponding third-level menu.

1. Contents note of function table is described as below:

First column "function code": Functional parameter set and parametric number;

Second column "name": Full name of functional parameters;

Third column "setting range": Valid set value range of functional parameters;

Fourth column "factory default": Original factory default of functional parameters;

Fifth column "modify": Alteration property of functional parameters（whether or not it is permitted to modify and modification conditions）and the explanations are described as below：

　　"※" ：it means the setting value of this parameter can be modified when AC drive is in stop or running state;

　　"●" ：it means the setting value of this parameter cannot be modified when AC drive is in running state;

　　"**" ：it means the numerical value of this parameter is practical detection record value, and cannot be modified;

　　"##" ：it means the numerical value of this parameter is "factory parameter", and is limited to be set by manufacturers. Users are prohibited about such operation.

Sixth column "No. "：Serial number of this function code in the whole function codes, as well as the store address in communication.

（AC drives have already made automatic inspection constraint about the modification property of all parameters, which can help users to avoid faults in modification. ）

2. "Factory default" refers to the numerical value after function code parameters are renovated when you take factory reset operation; but the actually detective parameter values or recorded values won't be renovated.

3. To make more effective parameter protection, AC drives provide password protection for function codes. After users set password（the parameter of user password, F07. 00 set to non-0）, and press PRGM/ESC to enter into user parameter editing state, the system will enter into user password authorization state, and display "0. 0. 0. 0. 0. ". The manipulator must input user password correctly, or he cannot get access to it. In the unlocked state of password protection, user assword can be altered at any time, and user password will be confirmed as the last input numerical value. When F07. 00 is set to 0, user password can be canceled; while power on, F07. 00 set to non-0, then parameters are protected by password.

4. While function code parameters are altered with serial communications, any functions of user password still keep to above regulations.

Function & Parameter Table

Function code	Name	Description(setting range)	Factory Default	Change
Group F00: Standard Function Parameters				
F00.00	Speed control mode	0：non-PG vector control (SVC） 1：PG vector control（FVC） 2：V/F control	0	●
F00.01	Command source selection	0:keypad control 1:terminal control 2:RS 485 communication control	0	※
F00.02	Run command source of communication	0：Modbus communication card	0	※
F00.03	Max.output frequency	50.00Hz～600.00Hz	50.00Hz	●
F00.04	Run frequency upper limit	F00.05～F00.03（max.frequency)	50.00Hz	※
F00.05	Run frequency lower limit	0.00Hz～F00.04　（run frequency upper limit)	00.00Hz	※
F00.06	Frequency A command selection	0:keypad, no retentive upon power failure 1:keypad, retentive upon power failure 2:analog AI1 3:analog AI2 4:analog AI3 5:pulse (HDI) 6:multi-speed running 7:simple PLC 8:PID control 9:RS485 Communication 10:potentiometer	0	●
F00.07	Frequency B command selection	same as F00.06	0	●
F00.08	Range of frequency B command selection	0：relative to maximum frequency 1：relative to frequency A command	0	※

Function code	Name	Description(setting range)	Factory Default	Change
F00.09	Frequency source combination mode	0: frequency A command 1: frequency B command 2: switchover between frequency A command and frequency B command 3: A+B 4: A-B 5: MAX (A and B) 6: MIN (Aand B)	0	※
F00.10	Keypad setting frequency	0.00Hz～F00.03（max. frequency）	50.00Hz	※
F00.11	Frequency reference resolution	1:0.1Hz 2:0.01Hz	2	●
F00.12	Acceleration time 1	0.00s～6500.0s	Model dependent	※
F00.13	Deceleration time 1	0.00s～6500.0s	Model dependent	※
F00.14	Acceleration/Deceleration time unit	0:1s 1 : 0.1s 2 : 0.01s	1	●
F00.15	Acceleration/Deceleration time base frequency	0:max.frequency（F00.03） 1:setting frequency 2:100Hz	0	●
F00.16	Rotation direction	0: same direction 1: reverse direction	0	※
F00.17	Carrier frequency	0.5kHz～16.0kHz	Model dependent	※
F00.18	Carrier frequency adjustment with temperature	0: No 1 : Yes	1	※
F00.19	Source of frequency upper limit	0: set by F00.04 1: analog AI1 2:analog AI2 3:analog AI3 4:pulse（HDI） 5:RS485 comminication	0	●
F00.20	Frequency upper limit offset	0.00Hz～max.frequency（F00.03）	00.00Hz	※
F00.21	Base frequency for UP/DOWN modification during running	0: running frequency 1: set frequency	0	●

Function code	Name	Description(setting range)	Factory Default	Change
F00.22	Binding command source to frequency source	Unit digit:（Binding keypad command to frequency source） 0: no binding 1 : keypad setting 2: analog AI1 3: analog AI2 4: analog AI3 5:pulse setting (HDI) 6 : multi－speed run setting 7 : Simple PLC 8 : PID control 9 : RS485 communication Ten's digit（Binding terminal command to frequency source） Hundred's digit（Binding communication command to frequency source） Thousands digit：（Binding auto-operation command to frequency source）	0000	※
F00.23	Range of frequency B source during superposition	0%～150%	100%	※
F00.25	Frequency offset of frequency B source during superposition	0.00Hz～max.frequency F00.03	00.00Hz	※
F00.26	Retentive of keypad setting frequency upon power failure	0: no retentive 1: retentive	0	※
F00.27	Motor model selection	1: G type（constant torque load） 2: P type（variable torque load）	Model dependent	**
F00.28	Function parameter restore	0:no operation 1 : restore factory defaults,not include motor parameter 2: clear fault file	0	●
F00.29	Reserved	－		
F00.30	Reserved	－		

Function code	Name	Description(setting range)	Factory Default	Change
Group F01: Start-stop Control Parameters				
F01.00	Start mode	0: direct start 1: rotational speed tracking restart 2: pre-excited start	0	※
F01.01	Startup frequency	0.00Hz～10.00Hz	0.00Hz	※
F01.02	Startup frequency holding time	0.0s～100.0s	0.0s	●
F01.03	Startup DC braking current/ Pre-excited current	0%～100%	0%	●
F01.04	Startup DC braking time/ Pre-excited time	0.0s～100.0s	0.0s	●
F01.05	Acceleration/ deceleration mode	0: line Acc/Dec time 1: S curve Acc/Dec A 2: S curve Acc/Dec B	0	●
F01.06	Time proportion of S-curve start segment	0.0%～（100.0%-F01.07）	30.0%	●
F01.07	Time proportion of S-curve end segment	0.0%～（100.0%-F01.06）	30.0%	●
F01.08	Stop mode	0: deceleration to stop 1:stop freely	0	※
F01.09	Initial frequency of stop DC braking	0.00Hz～F00.03（max. frequency）	0.00Hz	※
F01.10	Waiting time of stop DC braking	0.0s～100.0s	0.0s	※
F01.11	Stop DC braking current	0%～100%	0%	※
F01.12	Stop DC braking time	0.0s～100.0s	0.0s	※
F01.13	Rotational speed tracking mode	0: start from frequency at stop 1: start from zero speed 2: start from max. frequency	0	●
F01.14	Rotational speed tracking speed	1～100	20	※
F01.15	Brake usage rate	0%～100%	100%	※

Function code	Name	Description(setting range)	Factory Default	Change
Group F02: Motor 1 Parameters				
F02.00	Motor type selection	0:common asynchronous motor 1:variable frequency asynchronous motor	0	●
F02.01	Rated power of asynchronous motor 1	0.1kW～1000.0kW	Model dependent	●
F02.02	Rated frequency of asynchronous motor 1	0.01Hz～F00.03（max. frequency）	Model dependent	●
F02.03	Rated speed of asynchronous motor 1	1rpm～65535rpm	Model dependent	●
F02.04	Rated voltage of asynchronous motor 1	1V～2000V	Model dependent	●
F02.05	Rated current of asynchronous motor 1	0.01A～655.35A （AC drive power<=55kW） 0.1A～6553.5A （AC drive power>55kW）	Model dependent	●
F02.06	Stator resistance of asynchronous motor 1	0.001Ω～65.535Ω （inverter power<=55kW） 0.0001Ω～6.5535Ω （AC drive power>55kW）	Model dependent	●
F02.07	Rotor resistance of asynchronous motor 1	0.001Ω～65.535Ω （AC drive power<=55kW） 0.0001Ω～6.5535Ω （AC drive power>55kW）	Model dependent	●
F02.08	Leakage inductive reactance of asynchronous motor 1	0.01mH～655.35mH （AC drive power<=55kW） 0.001mH～65.535mH （AC drive power>55kW）	Model dependent	●
F02.09	Mutual inductive reactance of asynchronous motor 1	0.1mH～6553.5mH （inverter power<=55kW） 0.01mH～655.35mH （AC drive power>55kW）	Model dependent	●
F02.10	No-load current of asynchronous motor 1	0.01A～F02.05 （inverter power<=55kW） 0.1A～F02.05 （AC drive power>55kW）	Model dependent	●

Function code	Name	Description(setting range)	Factory Default	Change
F02.27	Encoder type	0:ABZ incremental encoder 1:UVW incremental encoder	0	●
F02.28	Selection of PG card	0:QEP1	0	●
F02.29	Encoder pulses per revolution	1~65535	2500	●
F02.30	AB phase sequence of ABZ incremental encoder	0: forward 1: reverse	0	●
F02.31	Encoder installation angle	0.0~359.9°	0.0°	●
F02.32	UVW phase sequence of UVW encoder	0: forward 1: reverse	0	●
F02.33	UVW encoder angle offset	0.0~359.9°	0.0°	●
F02.36	Encoder wire-break fault detection time	0.0s: No action 0.1−10.0s	0.0	●
F02.37	Self-learning of motor parameter	0: no self-learning 1: dynamic self−learning of asynchronous motor 2: static self−learning of asynchronous motor	0	●

Function code	Name	Description(setting range)	Factory Default	Change
Group F03: Vector Control Parameters				
F03.00	Proportional gain 1 of speed loop	1~100	30	※
F03.01	Integral time 1 of speed loop	0.01s~10.00s	0.50s	※
F03.02	Switchover low point frequency	0.00Hz~F03.05	5.00Hz	※
F03.03	Proportional gain 2 of speed loop	1~100	20	※
F03.04	Integral time 2 of speed loop	0.01s~10.00s	1.00s	※
F03.05	Switchover high point frequency	F03.02~F00.03（max. frequency）	10.00Hz	※
F03.06	Vector control slip gain	50%~200%	100%	※
F03.07	Speed loop output filter	0.000s~0.100s	0.000s	※
F03.08	Vector control over excitation gain	0~200	64	※
F03.09	Torque upper limit source in speed control mode	0:F03.10 1:analog AI1 2:analog AI2 3:analog AI3 4:Pulse（HDI） 5:RS485 Communication 6:MIN(AI1,AI2) 7:MAX(AI1,AI2) （corresponding to F03.10 digital setting)	0	※
F03.10	Digital setting of torque upper limit in speed control mode	0.0%~200.0%	150.0%	※
F03.13	Excitation adjustment proportional gain	0~60000	2000	※
F03.14	Excitation adjustment integral gain	0~60000	1300	※
F03.15	Torque adjustment proportion gain	0~60000	2000	※
F03.16	Torque adjustment integral gain	0~60000	1300	※
F03.17	Speed loop integral property	Units' digit: integral separation 0: invalid 1: valid	0	※

Function code	Name	Description(setting range)	Factory Default	Change
F03.21	Field weakening automatic adjustment gain	10%～500%	100%	※
F03.22	Field weakening integral multiple	2～10	2	※
F03.23	Speed/torque control mode selection	0: speed control 1: torque control	0	●
F03.24	Torque setting mode selection	0: digital setting (F03.26) 1:analog AI1 2:analog AI2 3:analog AI3 4:PULSE（HDI） 5:RS485 Communication 6:MIN(AI1,AI2) 7:MAX(AI1,AI2) （corresponding to F03.26 digital setting)	0	●
F03.26	Torque setting by keypad	-200.0%～200.0%	150.0%	※
F03.28	Upper frequency limit of forward when torque control	0.00Hz～F00. 03(max. frequency)	50.00Hz	※
F03.29	Upper frequency limit of reverse when torque control	0.00Hz～F00. 03（max. frequency)	50.00Hz	※
F03.30	Torque control acceleration time	0.00s～650.00s	0.00s	※
F03.31	Torque control deceleration time	0.00s～650.00s	0.00s	※
Group F04: V/F Control Parameters				
F04.00	Motor1 V/F curve setting	0: linear V/F 1: multi-point V/F 2: square V/F 3: V/F complete seperation 4: V/F half seperation 5: 1. 2 square V/F 6: 1. 4 square V/F 7: 1. 6 square V/F 8: 1. 8 square V/F	0	●

Function code	Name	Description(setting range)	Factory Default	Change
F04.01	Motor 1 torque boost	0.0%:（auto torque boost) 0.1%～30.0%	Model dependent	※
F04.02	Cut-off frequency of motor 1 torque boost	0.00Hz～F00.03（max. frequency)	50.00Hz	●
F04.03	Motor1 V/F frequency point 1	0.00Hz～F04.05	0.00Hz	●
F04.04	Motor1 V/F voltage point 1	0.0%～100.0%	0.0%	●
F04.05	Motor1 V/F frequency point 2	F04.03～F04.07	0.00Hz	●
F04.06	Motor1 V/F voltage point 2	0.0%～100.0%	0.0%	●
F04.07	Motor1 V/F frequency point 3	F04.05～F02.02（motor rated frequency)	0.00Hz	●
F04.08	Motor1 V/F voltage point 3	0.0%～100.0%	0.0%	●
F04.09	Motor1 V/F slip compensation gain	0.0%～200.0%	0.0%	※
F04.10	V/F over-excitation gain	0～200	64	※
F04.11	V/F oscillation suppression gain	0～100	Model dependent	※
F04.13	Voltage source for V/F separation	0: digital setting (F04.14) 1: analog AI1 2: analog AI2 3: analog AI3 4: pulse (HDI) 5: multi-speed operation 6: simple PLC 7: PID control 8: RS485 Communication （corresponding F02.04 digital setting)	0	※
F04.14	Digital setting V/F separation of voltage	0V～F02.04(motor rated voltage)	0V	※
F04.15	Voltage digital setting for V/F separation	0.0s～1000.0s note: time from 0V to motor rated voltage (F02.04)	0.0s	※

Function code	Name	Description(setting range)	Factory Default	Change
		Group F05: Input Terminals		
F05.00	S1 terminal function selection	0 : no function	1	●
F05.01	S2 terminal function selection	1 : forward run	4	●
F05.02	S3 terminal function selection	2 : reverse run	9	●
F05.03	S4 terminal function selection	3 : 3-wire operation control	12	●
F05.04	S5 terminal function selection	4 : forward jog	13	●
F05.05	S6 terminal function selection	5 : reverse jog	2	●
F05.06	S7 terminal function selection	6 : coast to stop	0	●
F05.07	S8 terminal function selection	7 : fault reset	0	●
F05.08	S9 terminal function selection	8 : external fault normal open input	0	●
F05.09	HDI terminal function selection	9 : UP command	0	●
		10 : DOWN command		
		11 : clear UP/DOWN（terminal、keypad）		
		12 : multi-speed terminal 1		
		13 : multi-speed terminal 2		
		14 : multi-speed terminal 3		
		15 : multi-speed terminal 4		
		16 : Pause operation		
		17 : Acc/Dec time selection 1		
		18 : Acc/Dec time selection 2		
		19 : frequency source switchover		
		20 : run command switchover terminal		
		21 : Acceleration/Deceleration prohibited		
		22 : PID pause		
		23 : PLC status reset		
		24 : swing pause		

Function code	Name	Description(setting range)	Factory Default	Change
		25 : terminal count		
		26 : counter reset		
		27 : length count input		
		28 : length reset		
		29 : torque control prohibited		
		30 : pulse input (enabled only for HDI)		
		31 : reserved		
		32 : immediate DC braking		
		33 : Normally closed (NC) input of external fault		
		34 : frequency modification forbidden		
		35 : reverse PID action direction		
		36 : external STOP terminal 1		
		37 : command source switchover terminal 2		
		38 : PID integral pause		
		39 : reserved		
		40 : reserved		
		41 : motor selection terminal 1		
		42 : reserved		
		43 : PID parameter switchover		
		44 : reserved		
		45 : reserved		
		46 : speed / torque control switchover		
		47 : emergency stop		
		48 : external stop terminal 2		
		49 : deceleration DC braking		
		50 : clear the current running time		

Function code	Name	Description(setting range)	Factory Default	Change
F05.10	Input terminal valid mode selection 1	0: valid on high level 1: valid on low level units' digit: S1 tens' digit: S2 hundreds' digit: S3 thousands' digit: S4 ten thousands' digit: S5	00000	●
F05.11	Input terminal polarity selection 2	0: valid on high level 1: valid on low level units' digit: S6 tens' digit: S7 hundreds' digit: S8 thousands' digit: S9 ten thousands' digit: HDI	00000	●
F05.12	Filtering time of switch	0.000s~1.000s	0.010s	※
F05.13	Terminal control operation mode	0: 2-wire control 1 1: 2-wire control 2 2: 3-wire control1 3: 3-wire control 2	0	●
F05.14	Terminal UP/DOWN rate	0.001Hz/s~65.535Hz/s	1.00Hz/s	※
F05.15	S1 delay time	0.0s~3600.0s	0.0s	●
F05.16	S2 delay time	0.0s~3600.0s	0.0s	●
F05.17	S3 delay time	0.0s~3600.0s	0.0s	●
F05.18	AI1 lower limit	0.00V~F05.20	0.00V	※
F05.19	Corresponding setting of AI1 lower limit	−100.0%~+100.0%	0.0%	※
F05.20	Ai1 upper limit	F05.18~+10.00V	10.00V	※
F05.21	Corresponding setting of AI1 upper limit	−100.0%~+100.0%	100.0%	※
F05.22	AI1 input filter time	0.00s~10.00s	0.10s	※
F05.23	AI2 low limit	0.00V~F05.25	0.00V	※

Function code	Name	Description(setting range)	Factory Default	Change
F05.24	Corresponding setting of AI2 lower limit	−100.0%~+100.0%	0.0%	※
F05.25	AI2 upper limit	F05.23~+10.00V	10.00V	※
F05.26	Corresponding setting of AI2 upper limit	−100.0%~+100.0%	100.0%	※
F05.27	AI2 input filter time	0.00s~10.00s	0.10s	※
F05.28	AI3 lower limit	-10.00V~F05.30	0.10V	※
F05.29	Corresponding setting of AI3 lower limit	−100.0%~+100.0%	0	※
F05.30	AI3 upper limit	F05.28~+10.00V	4.00V	※
F05.31	Corresponding setting of AI3 upper limit	−100.0%~+100.0%	100.0%	※
F05.32	AI3 input filter time	0.00s~10.00s	0.10s	※
F05.33	HDI lower limit	0.00kHz~F05.35	0.00kHz	※
F05.34	Corresponding setting of HDI lower limit	−100.0%~+100.0%	0.0%	※
F05.35	HDI upper limit	F05.33~+100.00kHz	50.00kHz	※
F05.36	Corresponding setting of HDI upper limit	−100.0%~+100.0%	100.0%	※
F05.37	HDI frequency input filter time	0.00s~10.00s	0.10s	※
F05.38	AI curve selection	units' digit: AI curve selection 1: curve 1 (2 point, see F05.18~F05.21) 2: curve 2 (2 point, see F05.23~F05.26) 3: curve 3 (2 point, see F05.28~F05.31) 4: curve 4 (4 point, see F05.40~F05.47) 5: curve 5 (4 point, see F05.48~F05.55) tens' digit: : AI2 curve selection hundreds' digit: AI3 curve selection	H.321	※
F05.39	Setting for AI less than minimum input	units' digit: (setting for AI1 less than minimum input) 0: corresponding to the minimum input set 1: 0.0% tens' digit: (setting for AI2 less than minimum input) setting selection hundreds' digit: (setting for AI3 less than minimum input)	H.000	※

Function code	Name	Description(setting range)	Factory Default	Change
F05.40	AI curve 4 lower limit	−10.00V～F05.42	0.00V	※
F05.41	AI curve 4 lower limit setting	−100.0%～+100.0%	0.0%	※
F05.42	AI curve 4 inflection point 1 input	F05.40～F05.44	3.00V	※
F05.43	AI curve 4 inflection point 1 input setting	−100.0%～+100.0%	30.0%	※
F05.44	AI curve 4 inflection point 2 input	F05.42～F05.46	6.00V	※
F05.45	AI curve 4 inflection point 2 input setting	−100.0%～+100.0%	60.0%	※
F05.46	AI curve 4 upper limit	F05.44～ +10.00V	10.00V	※
F05.47	AI curve 4 upper limit setting	−100.0%～+100.0%	100.0%	※
F05.48	AI curve 5 lower limit	−10.00V～F05.50	−10.00V	※
F05.49	AI curve 5 lower limit setting	−100.0%～+100.0%	−100.0%	※
F05.50	AI curve 5 inflection point 1 input	F05.48～F05.52	−3.00V	※
F05.51	AI curve 5 inflection point 1 setting	−100.0%～+100.0%	−30.0%	※
F05.52	AI curve 5 inflection point 2 input	F05.50～F05.54	3.00V	※
F05.53	AI curve 5 inflection point 2 setting	−100.0%～+100.0%	30.0%	※
F05.54	AI curve 5 upper limit	F05.52～ +10.00V	10.00V	※
F05.55	AI curve 5 upper limit setting	−100.0%～+100.0%	100.0%	※
F05.64	AI1 jump point setting	−100.0%～100.0%	0.0%	※
F05.65	AI1 jump point range setting	0.0%～100.0%	0.5%	※
F05.66	AI2 jump point setting	−100.0%～100.0%	0.0%	※
F05.67	AI2 jump point range setting	0.0%～100.0%	0.5%	※
F05.68	AI3 jump point setting	−100.0%～100.0%	0.0%	※
F05.69	AI3 jump point range setting	0.0%～100.0%	0.5%	※

Function code	Name	Description(setting range)	Factory Default	Change
		Group F06: Output Terminals		
F06.00	HDO terminal output mode	0: Pulse output (HDOP) 1: Switch signal output (HDOR)	0	※
F06.01	HDOR output selection	0: no output	0	※
F06.02	Relay TA output selection （TA∗TB∗TC）	1: freuency reached	2	※
		2: frequency-level detection FDT1 output		
F06.03	Relay RA output selection （RA∗RB∗RC）	3: fault output (stop)	0	※
F06.04	MO1 output selection	4: motor overload pre-warning	1	※
		5: AC drive overload pre-warning		
		6: zero-speed running (no output at stop)		
		7: zero-speed running 2 (no output at stop)		
		8: frequency upper limit reached		
		9: frequency lower limit reached (no output at stop)		
		10: set count value reached		
		11: designated count value reached		
		12: length reached		
		13: PLC cycle complete		
		14: accumulative running time reached		
		15: frequency limited		
		16: torque limited		
		17: ready for RUN		
		18: AC drive running		
		19: AI1＞AI2		
		20: undervoltage state output		
		22: reserved		
		23: reserved		
		24: accumulative power-on time reached		
		25: Frequency level detection FDT2 output		

Function code	Name	Description(setting range)	Factory Default	Change
		26 : frequency 1 reached		
		27 : frequency 2 reached		
		28 : current 1 reached		
		29 : current 2 reached		
		30 : timing reached		
		31 : AI1 input limit exceeded		
		32 : load becoming 0		
		33 : reverse running		
		34 : zero current state		
		35 : module temperature reached		
		36 : output current limit exceeded		
		37 : Frequency lower limit reached (having output at stop)		
		38 : Alarm output (keep running)		
		39 : motor overheat warning		
		40 : current running time reached		
F06.06	Output terminal valid mode selection	0: Positive logic 1: Negative logic Unit's digit : HDO Ten's digit:TA Hundred's digit : RA Thousand's digit : MO1	0000	※
F06.07	HDO delay time	0.0s～3600.0s	0.0s	※
F06.08	TA delay time	0.0s～3600.0s	0.0s	※
F06.09	RA delay time	0.0s～3600.0s	0.0s	※
F06.10	MO1 output delay time	0.0s～3600.0s	0.0s	※

Function code	Name	Description(setting range)	Factory Default	Change
F06.12	HDOP output selection	0 : setting frequency	0	※
F06.13	AO1 output selection	1 : running frequency	0	※
F06.14	AO2 output selection	2 : output current 3 : output voltage 4 : output speed 5 : output torque 6 : output power 7 : Pulse input （100% corresponding to 100.0kHz） 8 : AI1 9 : AI2 10 : AI3 11 : lenth 12 : count value 13 : RS485 communication 14 : output current （100.0% corresponding to 1000.0A） 15 : output voltage （100.0% corresponding to 1000.0V） 16 : reserved	1	※
F06.15	AO1 offset coefficient	-100.0%～100.0%	0.0%	※
F06.16	AO1 gain	-10.00～+10.00	1.00	※
F06.17	AO2 offset coefficient	-100.0%～100.0%	0.0%	※
F06.18	AO2 gain	-10.00～+10.00	1.00	※
F06.19	AO1 output filter time	0～10.00	0	※
F06.20	AO2 output filter time	0～10.00	0	※
F06.21	HDO output filter time	0～10.00	0	※
F06.22	HDO output max.frequency	0.01kHz～100.00kHz	50.00kHz	※

Function code	Name	Description(setting range)	Factory Default	Change
Group F07: Keypad And Display				
F07.00	User password	0~65535	0	※
F07.02	STOP key function selection	0: STOP/RST key enabled only in keypad control 1: STOP/RST key enabled in any operation mode	1	※
F07.03	LED display running parameters 1	0000–FFFF Bit00: running frequency 1 (Hz) Bit01: set frequency (Hz) Bit02: output current (A) Bit03: output voltage (V) Bit04: load speed display Bit05: output power (kW) Bit06: output torque (%) Bit07: bus voltage (V) Bit08: PID setting Bit09: PID feedback value Bit10: input terminal status Bit11: output terminal status Bit12: AI1 voltage (V) Bit13: AI2 voltage (V) Bit14: AI3 voltage (V) Bit15: count value	H.008F	※

Function code	Name	Description(setting range)	Factory Default	Change
F07.04	LED display running parameters 2	0000–FFFF Bit00: length value Bit01: PLC stage Bit02: pulse setting frequency(kHz) Bit03: running frequency 2（Hz） Bit04: remaining running time Bit05: AI1 voltage before correction (V) Bit06: AI2 voltage before correction (V) Bit07: AI3 voltage before correction (V) Bit08: linear speed Bit09: current power-on time(Hour) Bit10: current running time (Min) Bit11: pulse setting frequency(Hz) Bit12: Rs485 communication setting value Bit13: encoder feedback speed(Hz) Bit14: main frequency A display(Hz) Bit15: auxiliary frequency B display (Hz)	H.0000	※
F07.05	LED display stop parameters	0000–FFFF Bit00: set frequency (Hz) Bit01: bus voltage (V) Bit02: input terminal status Bit03: output terminal status Bit04: PID setting Bit05: AI1 voltage (V) Bit06: AI2 voltage (V) Bit07: AI3 voltage (V) Bit08: Count value Bit09: Length value Bit10: PLC stage Bit11: Load speed Bit12: Pulse setting frequency (kHz)	H.0063	※

Function code	Name	Description(setting range)	Factory Default	Change
F07.06	Load speed display coefficient	0.0001～6.5000	1.0000	※
F07.07	Heatsink temperature of rectifier bridge	0.0℃～100.0℃	-	**
F07.08	Heatsink temperature of inverter module	0.0℃～100.0℃	-	**
F07.09	Software version	–	-	**
F07.10	Accumulative running time	0h～65535h	-	**
F07.11	Product number	–	-	**
F07.12	Number of decimal places for load speed display	0: 0 decimal place 1: 1 decimal place 2: 2 decimal places 3: 3 decimal places	1	※
F07.13	Accumulative power-on time	0h～65535h	-	**
F07.14	Accumulative power consumption	0–65535 kWh	-	**
Group F08: Auxiliary Functions				
F08.00	Acceleration time 2	0.0s～6500.0s	Model dependent	※
F08.01	Deceleration time 2	0.0s～6500.0s	Model dependent	※
F08.02	Acceleration time 3	0.0s～6500.0s	Model dependent	※
F08.03	Deceleration time 3	0.0s～6500.0s	Model dependent	※
F08.04	Acceleration time 4	0.0s～6500.0s	Model dependent	※
F08.05	Deceleration time 4	0.0s～6500.0s	Model dependent	※
F08.06	JOG running frequency	0.00Hz～F00.03（max. frequency)	2.00Hz	※
F08.07	JOG acceleration time	0.0s～6500.0s	20.0s	※
F08.08	JOG deceleration time	0.0s～6500.0s	20.0s	※
F08.09	Jump frequency 1	0.00Hz～F00.03（max. frequency)	0.00Hz	※
F08.10	Jump frequency 2	0.00Hz～F00.03（max. frequency)	0.00Hz	※
F08.11	Frequency jump amplitude	0.00Hz～F00.03（max. frequency)	0.00Hz	※
F08.12	Forward/Reverse rotation dead-zone time	0.0s～3000.0s	0.0s	※
F08.13	Reverse control	0: enabled 1: disabled	0	※
F08.14	Running mode when set frequency lower than frequency lower limit	0:run at frequency lower limit 1: stop 2: run at zero speed	0	※

Function code	Name	Description(setting range)	Factory Default	Change
F08.15	Accumulative power-on time threshold	0h～65000h	0h	※
F08.16	Accumulative running time threshold	0h～65000h	0h	※
F08.17	Startup protection	0: No 1: Yes	0	※
F08.18	Droop control	0.00Hz～10.00Hz	0.00Hz	※
F08.19	Motor switchover	0:Motor 1 1：Motor 2	0	●
F08.20	Frequency detection value（FDT1）	0.00Hz～F00.03（max. frequency)	50.00Hz	※
F08.21	Frequency detection hysteresis (FDT hysteresis 1)	0.0%～100.0%（FDT1 level)	5.0%	※
F08.22	Frequency detection value（FDT2）	0.00Hz～F00.03（max. frequency)	50.00Hz	※
F08.23	Frequency detection hysteresis (FDT hysteresis 2)	0.0%～100.0%（FDT2 level)	5.0%	※
F08.24	Detection range of frequency reached	0.0%～100.0%（F00.03（max. frequency)	0.0%	※
F08.25	Jump frequency during acceleration/deceleration	0: disabled 1: enabled	0	※
F08.28	Frequency switchover point between acceleration time 1 and acceleration time 2	0.00Hz～F00.03（max. frequency)	0.00Hz	※
F08.29	Frequency switchover point between deceleration time 1 and deceleration time 2	0.00Hz～F00.03（max. frequency)	0.00Hz	※
F08.30	Terminal JOG preferred	0: disabled 1: enabled	0	※
F08.31	Any frequency reaching detection value 1	0.00Hz～F00.03（max. frequency)	50.00Hz	※
F08.32	Any frequency reaching detection amplitude 1	0.0%～100.0%（F00.03（max. frequency)）	0.0%	※
F08.33	Any frequency reaching detection value 2	0.00Hz～F00.03（max. frequency)	50.00Hz	※
F08.34	Any frequency reaching detection amplitude 2	0.0%～100.0%（F00.03（max. frequency)	0.0%	※
F08.35	Zero current detection level	0.0%～300.0%（rated motor current)	5.0%	※
F08.36	Zero current detection delay time	0.01s～600.00s	0.10s	※
F08.37	Output overcurrent threshold	0.0% (no detection) 0.1%–300.0%（rated motor current)	200.0%	※
F08.38	Output overcurrent detection delay time	0.00s～600.00s	0.00s	※
F08.39	Any current reaching 1	0.0%～300.0%（（rated motor current）	100.0%	※

Function code	Name	Description(setting range)	Factory Default	Change
F08.40	Any current reaching 1 amplitude	0.0%～300.0%（rated motor current）	0.0%	※
F08.41	Any current reaching 2	0.0%～300.0%（rated motor current）	100.0%	※
F08.42	Any current reaching 2 amplitude	0.0%～300.0%（rated motor current）	0.0%	※
F08.43	Timing function	0: Disabled 1: Enabled	0	※
F08.44	Timing duration source	0: F08.45 1: analog AI1 2: analog AI2 3: analog AI3 (100% of analog input corresponds to the value of F8.45)	0	※
F08.45	Timing duration	0.0Min～6500.0Min	0.0Min	※
F08.46	AI1 input voltage lower limit	0.00V～F08.47	3.10V	※
F08.47	AI1 input voltage upper limit	F08.46～10.00V	6.80V	※
F08.48	Module temperature threshold	0℃～100℃	75℃	※
F08.49	Cooling fan control	0: Fan working during running 1: Fan working continuously	0	※
F08.50	Wakeup frequency	Dormant frequency (F8.52) to maximum frequency (F00.03)	0.00Hz	※
F08.51	Wakeup delay time	0.0s～6500.0s	0.0s	※
F08.52	Dormant frequency	0.00 Hz to wakeup frequency（F08.50）	0.00Hz	※
F08.53	Dormant delay time	0.0s～6500.0s	0.0s	※
F08.54	Current running time reached	0.0Min～6500.0Min	0.0Min	※
F08.55	DPWM switchover running frequency upper limit	0.00Hz～15.00Hz	12.00Hz	※
F08.56	PWM modulation system	0: asynchronous modulation 1: synchronous modulation	0	※
F08.57	Dead zone compensation mode selection	0: no compensation 1: compensation mode 1 2: compensation mode 2	1	※
F08.58	Depth of PWM random	0: PWM random disabled 1～10: PWM carrier frequency random depth	0	※
F08.59	Rapid current limit	0: Disabled 1: Enabled	1	※

Function code	Name	Description(setting range)	Factory Default	Change
F08.60	Current detection compensation	0～100	5	※
F08.61	Under-voltage point	60.0%～140.0%	100.0%	※
F08.62	SVC optimize mode selection	0: no optimize 1: optimize mode 1 2: optimize mode 2	1	※
F08.63	Dead-zone time adjustment	100%～200%	150%	※
F08.64	Over-voltage point	200.0V～2500.0V	Model dependent	※
Group F09: Fault and Protection				
F09.00	Input phase loss protection	0: disabled 1: enabled	1	※
F09.01	Output phase loss protection	0: disabled 1: enabled	1	※
F09.02	Action selection at instantaneous power failure	0: Invalid 1: Decelerate 2: Decelerate to stop	0	※
F09.03	Voltage rally judging time at instantaneous power failure	0.00s～100.00s	0.50s	※
F09.04	Action judging voltage at instantaneous power failure	60.0%～100.0%(standard bus voltage)	80.0%	※
F09.05	Overvoltage stall gain	0～100	0	※
F09.06	Overvoltage stall protective voltage	120%～150%	130%	※
F09.07	Overcurrent stall gain	0～100	20	※
F09.08	Overcurrent stall protective current	100%～200%	150%	※
F09.09	Motor overload warning selection	0: disabled 1: enabled	1	※
F09.10	Motor overload pre-alarm warning detection levels	0.20～10.00	1.00	※
F09.11	Motor overload pre-alarm warning detection time	50%～100%	80%	※
F09.12	Protection upon load becoming 0	0: disabled 1: enabled	0	※
F09.13	Detection level of load becoming 0	0.0～100.0% (rated motor current)	10.0%	※
F09.14	Detection time of load becoming 0	0.0～60.0s	1.0s	※
F09.15	Over-speed detection value	0.0%～50.0%（F00.03（max. frequency））	20.0%	※

Function code	Name	Description(setting range)	Factory Default	Change
F09.16	Over-speed detection time	0.0～60.0s	1.0s	※
F09.17	Detection value of too large speed deviation	0.0%～50.0%（F00.03（max. frequency））	20.0%	※
F09.18	Detection time of too large speed deviation	0.0s～60.0s	5.0s	※
F09.19	Fault auto reset times	0～20	0	※
F09.20	Time interval of fault auto reset	0.1s～100.0s	1.0s	※
F09.21	Fault protection action selection 1	Unit's digit:motor overload（E007） 0:coast to stop 1:stop according to the stop mode 2:continue to run Ten's digit :power input phase loss (E012) Hundred's digit:power output phase loss (E013) Thousand's digit:external equipment fault(E00d) Ten thousand's digit:communication fault(E018)	00000	※
F09.22	Fault protection action selection 2	Unit's digit:encoder/PG card fault(E026) 0:coast to stop Ten's digit:EEPROM read-write fault(E021) 0:coast to stop 1:stop according to the stop mode Hundred's digit: reserved Thousand's digit: motor overheat(E036) Ten thousand's digit (Accumulative running time reached)(E020)	00000	※
F09.23	Fault protection action selection 3	Unit's digit：reserved Ten's digit: reserved Hundred's digit (Accumulative power-on time reached（E029） 0: coast to stop 1: stop according to the stop mode 2: continue to run Thousand's digit: off load（E030） 0: coast to stop 1: decelerate to stop 2 : continue to run at 7% of rated motor frequency and resume to the set frequency if the load recovers	00000	※

Function code	Name	Description(setting range)	Factory Default	Change
		Ten thousand's digit :PID feedback lost during running （E02E） 0:coast to stop 1:stop according to the stop mode 2:continue to run		
F09.24	Fault protection action selection 4	Unit's digit :too large speed deviation （E034） 0:coast to stop 1:stop according to the stop mode 2:continue to run Ten's digit :motor over-speed（E035） Hundred's digit :initial position fault（E037）	000	※
F09.26	Frequency selection for continuing to run upon fault	0: Current running frequency 1: Set frequency 2: Frequency upper limit 3: Frequency lower limit 4: Backup frequency upon abnormality	0	※
F09.27	Current fault type	0: No fault 1: Overcurrent during acceleration (E004) 2: Overcurrent during deceleration (E005) 3: Overcurrent at constant speed 4: Overvoltage during acceleration (E002) 5: Overvoltage during deceleration (E00A) 6: Overvoltage at constant speed (E003) 7: Undervoltage (E001) 8: Motor overload (E007) 9: AC drive overload (E008) 10:Power input phase loss (E012) 11: Power output phase loss (E013) 12: Module overheat (E00E) 13:Buffer resistance overload (E014)	–	●
F09.28	2nd fault type		–	●
F09.29	1st fault type		–	●

Function code	Name	Description(setting range)	Factory Default	Change
		14: Contactor fault (E017) 15: External equipment fault (E00d) 16: Communication fault(E018) 17: Current detection fault (E015) 18: Motor auto-tuning fault (E016) 19: Running time reached (E020) 20: EEPROM read-write fault (E00F) 21: Short circuit to ground (E023) 22: PID feedback lost during running (E02E) 23: Encoder/PG card fault(E026) 24: AC drive hardware fault (E033) 25: Power-on time reached (E029) 26: Load becoming 0 (E030) 27: With-wave current limit fault (E032) 28: Too large speed deviation (E034) 29: Motor switchover fault during running (E038) 30: Motor over-speed (E035) 31: Motor overheat (E036) 32: Initial position fault (E037)		
F09.30	Frequency upon current fault	–	–	●
F09.31	Output current upon current fault	–	–	●
F09.32	Bus voltage upon current fault	–	–	●
F09.33	Input terminal status upon current fault	–	–	●
F09.34	Output terminal status upon current fault	–	–	●
F09.35	AC drive status upon current fault	–	–	●
F09.36	Power-on time status upon current fault	–	–	●
F09.37	Running time status upon current fault	–	–	●
F09.38	Frequency upon 2nd fault	–	–	●
F09.39	Output current upon 2nd fault	–	–	●

Function code	Name	Description(setting range)	Factory Default	Change
F09.40	Bus voltage upon 2nd fault	–	–	●
F09.41	Input terminal status upon 2nd fault	–	–	●
F09.42	Output terminal status upon 2nd fault	–	–	●
F09.43	AC drive status upon 2nd fault	–	–	●
F09.44	Power-on time upon 2nd fault	–	–	●
F09.45	Running time upon 2nd fault	–	–	●
F09.46	Frequency upon 1st fault	–	–	●
F09.47	Output current upon 1st fault	–	–	●
F09.48	Bus voltage upon 1st fault	–	–	●
F09.49	Input terminal status upon 1st fault	–	–	●
F09.50	Output terminal status upon 1st fault	–	–	●
F09.51	AC drive status upon 1st fault	–	–	●
F09.52	Power-on time upon 1st fault	–	–	●
F09.53	Running time upon 1st fault	–	–	●
F09.54	Short-circuit to ground upon power-on	0: Disabled 1: Enabled	1	※
F09.55	Output terminal action during fault auto reset	0: Not act 1: Act	0	※
F09.56	Backup frequency upon abnormality	0.0%～100.0% (100.0% corresponding to maximum frequency)F00.03	100.0%	※
F09.57	Type of motor temperature sensor	0: No temperature sensor 1: PT100 2: PT1000	0	※
F09.58	Motor overheat protection threshold	0℃～200℃	110℃	※
F09.59	Motor overheat warning threshold	0℃～200℃	90℃	※
F09.60	Action pause judging voltage at instantaneous power failure	F09.04～100.0%	90.0%	※

Function code	Name	Description(setting range)	Factory Default	Change
Group F10: Process Control PID Function				
F10.00	PID setting source	0: Keypad (F10.01) 1: Analog AI1 2: Analog AI2 3: Analog AI3 4: Pulse setting (HDI) 5: Rs485 communication setting 6: Multi-speed command	0	※
F10.01	PID digital setting	0.0～100.0%	50.0%	※
F10.02	PID feedback source	0: AI1 1: AI2 2: AI3 3: AI1 − AI2 4: Pulse setting (HDI) 5: Rs485 communication setting 6: AI1 + AI2 7: MAX (|AI1|, |AI2|) 8: MIN (|AI1|, |AI2|)	0	※
F10.03	PID action direction	0: Forward action 1: Reverse action	0	※
F10.04	PID setting feedback range	0～65535	1000	※
F10.05	Proportional gain Kp1	0.0～100.0	20.0	※
F10.06	Integral time Ti1	0.01s～10.00s	2.00s	※
F10.07	Differential time Td1	0.000s～10.000s	0.000s	※
F10.08	Cut-off frequency of PID reverse rotation	0.00～F00.03（maximum frequency）	2.00Hz	※
F10.09	PID deviation limit	0.0%～100.0%	0.0%	※
F10.10	PID differential limit	0.00%～100.00%	0.10%	※
F10.11	PID setting change time	0.00～650.00s	0.00s	※
F10.12	PID feedback filter time	0.00～60.00s	0.00s	※
F10.13	PID output filter time	0.00～60.00s	0.00s	※
F10.15	Proportional gain Kp2	0.0～100.0	20.0	※

Function code	Name	Description(setting range)	Factory Default	Change
F10.16	Integral time Ti2	0.01s～10.00s	2.00s	※
F10.17	Differential time Td2	0.000s～10.000s	0.000s	※
F10.18	PID parameter switchover condition	0: No switchover 1: Switchover via input terminal 2: Automatic switchover based on deviation	0	※
F10.19	PID parameter switchover deviation 1	0.0%～F10.20	20.0%	※
F10.20	PID parameter switchover deviation 2	F10.19～100.0%	80.0%	※
F10.21	PID initial value	0.0%～100.0%	0.0%	※
F10.22	PID initial value holding time	0.00～650.00s	0.00s	※
F10.23	Maximum deviation between two PID outputs in forward direction	0.00%～100.00%	1.00%	※
F10.24	Maximum deviation between two PID outputs in reverse direction	0.00%～100.00%	1.00%	※
F10.25	PID integral property	Unit's digit :Integral separated 0: Invalid 1: Valid Ten's digit :Whether to stop integral operation when the output reaches the limit 0: Continue integral operation 1: Stop integral operation	00	※
F10.26	Detection value of PID feedback loss	0.0%: Not judging feedback loss 0.1%–100.0%	0.0%	※
F10.27	Detection time of PID feedback loss	0.0s～20.0s	0.0s	※
F10.28	PID operation at stop	0: No PID operation at stop 1: PID operation at stop	0	※

Function code	Name	Description(setting range)	Factory Default	Change
Group F11: Swing Frequency, Fixed Length and Count				
F11.00	Swing frequency setting mode	0: Relative to the central frequency 1: Relative to the maximum frequency	0	※
F11.01	Swing frequency amplitude	0.0%～100.0%	0.0%	※
F11.02	Jump frequency amplitude	0.0%～50.0%	0.0%	※
F11.03	Swing frequency cycle	0.1s～3000.0s	10.0s	※
F11.04	Triangular wave rising time coefficient	0.1%～100.0%	50.0%	※
F11.05	Set length	0m～65535m	1000m	※
F11.06	Actual length	0m～65535m	0m	※
F11.07	Number of pulses per meter	0.1～6553.5	100.0	※
F11.08	Set count value	1～65535	1000	※
F11.09	Designated count value	1～65535	1000	※
Group F12: Simple PLC Function And Multi-speed control				
F12.00	Simple PLC running mode	0: Stop after the AC drive runs one cycle 1: Keep final values after the AC drive runs one cycle 2: Repeat after the AC drive runs one cycle	0	※
F12.01	Simple PLC retentive selection	Unit's digit :Retentive upon power failure 0: No 1: Yes Ten's digit :Retentive upon stop 0: No 1: Yes	00	※
F12.02	Multi-speed 0	−100.0%～100.0%	0.0%	※
F12.03	Multi-speed 1	−100.0%～100.0%	0.0%	※
F12.04	Multi-speed 2	−100.0%～100.0%	0.0%	※
F12.05	Multi-speed 3	−100.0%～100.0%	0.0%	※
F12.06	Multi-speed 4	−100.0%～100.0%	0.0%	※
F12.07	Multi-speed 5	−100.0%～100.0%	0.0%	※
F12.08	Multi-speed 6	−100.0%～100.0%	0.0%	※
F12.09	Multi-speed 7	−100.0%～100.0%	0.0%	※

Function code	Name	Description(setting range)	Factory Default	Change
F12.10	Multi-speed 8	−100.0%～100.0%	0.0%	※
F12.11	Multi-speed 9	−100.0%～100.0%	0.0%	※
F12.12	Multi-speed 10	−100.0%～100.0%	0.0%	※
F12.13	Multi-speed 11	−100.0%～100.0%	0.0%	※
F12.14	Multi-speed 12	−100.0%～100.0%	0.0%	※
F12.15	Multi-speed 13	−100.0%～100.0%	0.0%	※
F12.16	Multi-speed 14	−100.0%～100.0%	0.0%	※
F12.17	Multi-speed 15	−100.0%～100.0%	0.0%	※
F12.18	Running time of simple PLC multi-speed 0	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.19	Acceleration/deceleration time of simple PLC multi-speed 0	0～3	0	※
F12.20	Running time of simple PLC multi-speed 1	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.21	Acceleration/deceleration time of simple PLC multi-speed 1	0～3	0	※
F12.22	Running time of simple PLC multi-speed 2	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.23	Acceleration/deceleration time of simple PLC multi-speed 2	0～3	0	※
F12.24	Running time of simple PLC multi-speed 3	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.25	Acceleration/deceleration time of simple PLC multi-speed 3	0～3	0	※
F12.26	Running time of simple PLC multi-speed 4	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.27	Acceleration/deceleration time of simple PLC multi-speed 4	0～3	0	※
F12.28	Running time of simple PLC multi-speed 5	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.29	Acceleration/deceleration time of simple PLC multi-speed 5	0～3	0	※
F12.30	Running time of simple PLC multi-speed 6	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.31	Acceleration/deceleration time of simple PLC multi-speed 6	0～3	0	※
F12.32	Running time of simple PLC multi-speed 7	0.0s(h)～6500.0s(h)	0.0s(h)	※

Function code	Name	Description(setting range)	Factory Default	Change
F12.33	Acceleration/deceleration time of simple PLC multi-speed 7	0～3	0	※
F12.34	Running time of simple PLC multi-speed 8	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.35	Acceleration/deceleration time of simple PLC multi-speed 8	0～3	0	※
F12.36	Running time of simple PLC multi-speed 9	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.37	Acceleration/deceleration time of simple PLC multi-speed 9	0～3	0	※
F12.38	Running time of simple PLC multi-speed 10	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.39	Acceleration/deceleration time of simple PLC multi-speed 10	0～3	0	※
F12.40	Running time of simple PLC multi-speed 11	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.41	Acceleration/deceleration time of simple PLC multi-speed 11	0～3	0	※
F12.42	Running time of simple PLC multi-speed 12	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.43	Acceleration/deceleration time of simple PLC multi-speed 12	0～3	0	※
F12.44	Running time of simple PLC multi-speed 13	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.45	Acceleration/deceleration time of simple PLC multi-speed 13	0～3	0	※
F12.46	Running time of simple PLC multi-speed 14	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.47	Acceleration/deceleration time of simple PLC multi-speed 14	0～3	0	※
F12.48	Running time of simple PLC multi-speed 15	0.0s(h)～6500.0s(h)	0.0s(h)	※
F12.49	Acceleration/deceleration time of simple PLC multi-speed 15	0～3	0	※
F12.50	Time unit of multi-speed	0: s (second) 1:h (hour)	0	※

Function code	Name	Description(setting range)	Factory Default	Change
F12.51	Multi-speed 0 source	0: Set by F12.02 1: AI1 2: AI2 3: AI3 4: Pulse setting 5: PID 6: Set frequency via keypad (F00.10), modified UP/DOWN	0	※
Group F13: Communication Parameters				
F13.00	Local address	1～9, 0 is broadcast address	1	※
F13.01	Baud rate	0: 300BPS 1: 600BPS 2: 1200BPS 3: 2400BPS 4: 4800BPS 5: 9600BPS 6: 19200BPS 7: 38400BPS 8: 57600BPS 9: 115200BPS	5	※
F13.02	Data format	0: No check, data format <8,N,2> 1: Even parity check, data format <8,E,1> 2: Odd Parity check, data format <8,O,1> 3: Data format <8,N,1>	0	※
F13.03	Response delay	0ms～20ms	2	※
F13.04	Communication timeout	0.0（invalid）, 0.1s～60.0s	0.0	※
F13.05	Modbus protocol selection	0: Non-standard Modbus protocol 1: Standard Modbus protocol	0	※
F13.06	Communication reading current resolution	0: 0.01A 1: 0.1A	0	※

Function code	Name	Description(setting range)	Factory Default	Change
Group F15: Motor 2 Parameters				
F15.00	Motor type selection	0: Common asynchronous motor 1: Variable frequency asynchronous motor	0	●
F15.01	Rated motor power	0.1kW～1000.0kW	Model dependent	●
F15.02	Rated motor frequency	0.01Hz～F00.03(maximum frequency)	Model dependent	●
F15.03	Rated motor rotational speed	1rpm～65535rpm	Model dependent	●
F15.04	Rated motor voltage	1V～2000V	Model dependent	●
F15.05	Rated motor current	0.01A～655.35A （AC drive power≤ 55kW） 0.1A～6553.5A （AC drive power＞55kW）	Model dependent	●
F15.06	Stator resistance	0.001Ω～65.535Ω （AC drive power≤ 55kW） 0.0001Ω～6.5535Ω （AC drive power＞55kW）	Model dependent	●
F15.07	Rotor resistance	0.001Ω～65.535Ω （AC drive power≤ 55kW） 0.0001Ω～6.5535Ω （AC drive power＞55kW）	Model dependent	●
F15.08	Leakage inductive reactance	0.01mH～655.35mH （AC drive power≤ 55kW） 0.001mH～65.535mH （AC drive power＞55kW）	Model dependent	●
F15.09	Mutual inductive reactance	0.1mH～6553.5mH （AC drive power≤ 55kW） 0.01mH～655.35mH （AC drive power＞55kW）	Model dependent	●
F15.10	No-load current	0.01A～F15.05 （AC drive power≤ 55kW） 0.1A～F15.05 （AC drive power＞55kW）	Model dependent	●

Function code	Name	Description(setting range)	Factory Default	Change
F15.27	Encoder type	0: ABZ incremental encoder 1: UVW incremental encoder	0	●
F15.28	PG card selection	0: QEP1	0	●
F15.29	Encoder pulses per revolution	1～65535	2500	●
F15.30	A, B phase sequence of ABZ incremental encoder	0: Forward 1: Reverse	0	●
F15.31	Encoder installation angle	0.0～359.9°	0.0°	●
F15.32	U, V, W phase sequence of UVW encoder	0: Forward 1: Reverse	0	●
F15.33	UVW encoder angle offset	0.0～359.9°	0.0°	●
F15.36	Encoder wire-break fault detection time	0.0: no action 0.1s～10.0s	0.0	●
F15.37	Self-learning selection	0: No self-learning 1: Asynchronous motor static self-learning 2: Asynchronous motor dynamic self-learning	0	●
F15.38	Speed loop proportional gain 1	1～100	30	※
F15.39	Speed loop integral time 1	0.01s～10.00s	0.50s	※
F15.40	Switchover frequency 1	0.00～F15.43	5.00Hz	※
F15.41	Speed loop proportional gain 2	1～100	20	※
F15.42	Speed loop integral time 2	0.01s～10.00s	1.00s	※
F15.43	Switchover frequency 2	F15.40～F00.03(maximum frequency)	10.00Hz	※
F15.44	Vector control slip gain	50%～200%	100%	※
F15.45	Time constant of speed loop filter	0.000s～0.100s	0.000s	※
F15.46	Vector control overexcitation gain	0～200	64	※

Function code	Name	Description(setting range)	Factory Default	Change
F15.47	Torque upper limit source in speed control mode	0: F15.48 1: AI1 2: AI2 3: AI3 4: Pulse setting (HDI) 5: Rs485 communication 6: MIN(AI1,AI2) 7: MIN(AI1,AI2)	0	※
F15.48	Digital setting of torque upper limit in speed control mode	0.0%～200.0%	150.0%	※
F15.51	Excitation adjustment proportional gain	0～60000	2000	※
F15.52	Excitation adjustment integral gain	0～60000	1300	※
F15.53	Torque adjustment proportional gain	0～60000	2000	※
F15.54	Torque adjustment integral gain	0～60000	1300	※
F15.55	Speed loop integral property	Unit's digit: Integral separated 0: Disabled 1: Enabled	0	※
F15.61	Motor 2 control mode	0: non-PG vector control 1: PG vector control 2: V/F control	0	●
F15.62	Motor 2 acceleration/deceleration time	0: Same as motor 1 1: Acceleration/Deceleration time 1 2: Acceleration/Deceleration time 2 3: Acceleration/Deceleration time 3 4: Acceleration/Deceleration time 4	0	※
F15.63	Motor 2 torque boost	0.0%: Automatic torque boost 0.1%–30.0%	Model dependent	※
F15.65	Motor 2 oscillation suppression gain	0～100	Model dependent	※

Chapter 6 Description of Function Codes

Group F00: Standard Function Parameters

Function Code	Parameter Name	Setting Range	Default
F00.00	Speed control mode	0：non-PG vector control（SVC） 1：PG vector control（FVC） 2：V/F control	0

0: : non-PG vector control（SVC）

It indicates open-loop vector control, and is applicable to high-performance control applications without encoder such as machine tool, centrifuge, wire drawing machine and injection moulding machine. One AC drive can operate only one motor.

1: PG vector control（FVC）

It is applicable to high-accuracy speed control or torque control applications such as high-speed paper making machine, crane and elevator. One AC drive can operate only one motor. An encoder must be installed at the motor side, and a PG card matching the encoder must be installed at the AC drive side.

2: V/F control

It is applicable to applications with low load requirements or applications where one AC drive operates multiple motors, such as fan and pump.

Note:If vector control is used, motor self-learning must be performed because the advantages of vector control can only be utilized after correct motor parameters are obtained. Better performance can be achieved by adjusting speed regulator parameters in group F03 (or groups F15 for motor 2)

Function Code	Parameter Name	Setting Range	Default
F00.01	Command source selection	0:keypad control 1:terminal control 2:RS 485 communication control	0

It is used to determine the input channel of the AC drive control commands, such as run, stop, forward rotation, reverse rotation and jog operation. You can input the commands in the following three channels:

0:keypad control
Commands are given by pressing keys RUN,STOP/RES on the keypad

1:terminal control
Commands are given by means of multifunctional input terminals with functions such as FWD, REV, forward JOG, and reverse JOG

2:RS 485 communication control
Commands are given from host computer. Refer to Group F13: Communication Parameters for parameters