

Chapter 5

FUNCTION CODES

This chapter explains the table of function codes used in FRENIC-Ace, index per purpose, and the detail of each function code.

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5.1 Function Codes Overview







Function codes are used for selecting various functions of FRENIC-Ace. Function codes comprise 3 digits or 4 digits of alphanumeric character. The first digit categorizes the group of function code alphabetically and the subsequent 2 or 3 digits identify each code within the group by number. Function code comprises 11 groups: Basic function (F code), Terminal function (E code), Control code (C code), Motor 1 parameter (P code), High-level function (H code) (H1 code), Motor 2 parameter (A code), Application function 1 (J code) (J1 code), Application function 2 (d code), Customizable logic (U code) (U1 code), Link function (y code), Keypad functions (K code), and Option function (o code). The function of each function code is determined according to the data to be set. The following descriptions are for supplementary explanation of function code table. Refer to instruction manual of each option to find the details of the option function (o code).

5.2 Function Codes Table

5.2.1 Supplementary note

■ Change, reflect, and save function code data during operation

Function codes are categorized into those which data change is enabled during operation of the inverter and those which such change is disabled. The meaning of the code in the “Change during operation” column of the function code table is described in the following table.

Code	Change during operation	Reflect and save data
Y*	Allowed	At the point when data is changed by  key, the changed data is immediately reflected on the operation of inverter. However, at this stage, the changed value is not saved to the inverter. In order to save it to the inverter, press  key. Without saving by  key and leaving the state of when the change was made by the  key, the data before the change is reflected on the operation of inverter.
Y	Allowed	Even if data is changed by the  key, the changed data will not be reflected on the operation of the inverter as is; by pressing the  key, the changed value is reflected on the operation of the inverter and is also saved to the inverter.
N	Not allowed	—

■ Copying data

Function code data can be copied collectively by using the optional keypad “TP-E1U” (program mode menu number 7 “Data copy”). By using this function, it is possible to read out all function code data and write the same data to a different inverter.

However, if the specification of inverter at the copy source and copy destination is not identical, some function codes may not be copied due to security reason. According to necessity, configure the settings individually for the function codes that are not copied. The behaviour of the function codes regarding data copy is indicated in the “data copy” column in the function code table in the next page and following.

- Y: to be copied.
- Y1: When inverter capacity is different, copying will not be performed.
- Y2: When voltage group is different, copying will not be performed.
- N: not to be copied.

■ Negative logic setting of data

Digital input terminal and transistor/contact output terminal can become a signal for which negative logic is specified by function code data setting. Negative logic is a function to reverse ON and OFF state of input or output, and switch Active ON (function enabled with ON: positive logic) and Active OFF (function enabled with OFF: negative logic). However, negative logic may not be enabled depending on the function of the signal.

Negative logic signal can be switched by setting the data with 1000 added to the function code data of the function to be set. For example, the following example shows when coast to a stop command “BX” is selected by function code E01.

Function code data	Action
7	“BX” is ON and coast to a stop (Active ON)
1007	“BX” is OFF and coast to a stop (Active OFF)

■ Drive control

The FRENIC-Ace runs under any of the following drive controls. Some function codes apply exclusively to the specific drive control, which is indicated by letters Y (Applicable) and N (Not applicable) in the “Drive control” column in the function code tables given on the following pages.

Abbreviation in “Drive control” column in function code tables	Control target (H18)	Drive control (F42)
V/f	Speed (Frequency for V/f and PG V/f)	0,2: V/f control 1: Dynamic torque vector control
PG V/f		3: V/f control with speed sensor 4: V/f control with speed sensor and auto torque boost
w/ PG		6: Vector control with speed sensor
Torque control	Torque	6: Vector control with speed sensor
PM	Speed	15: Vector control without speed sensor nor pole position sensor

For details about the drive control, refer to the description of F42 “Drive control selection 1.”



The FRENIC-Ace is a general-purpose inverter whose operation is customized by frequency-basis function codes, like conventional inverters. Under the speed-basis drive control, however, the control target is a motor speed, not a frequency, so convert the frequency to the motor speed according to the following expression.

$$\text{Motor speed (r/min)} = 120 \times \text{Frequency (Hz)} \div \text{Number of poles}$$

5.2.2 Function codes table

The table of function codes to be used in FRENIC-Ace is shown below.

■ F codes: Fundamental Functions (Basic function)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control				Related page	
						V/f	PG V/f	w/PG	Torque control		PM
F00	Data protection	0: No data protection, no digital setting protection 1: With data protection, no digital setting protection 2: No data protection, with digital setting protection 3: With data protection, with digital setting protection	Y	Y	0	Y	Y	Y	Y	Y	5-45
F01	Frequency setting 1	0: Keypad key operation (⏏/⏏key) 1: Analog voltage input (Terminal [12]) (from 0 to ±10 VDC) 2: Analog current input (Terminal [C1] (C1 function)) (4 to 20mA DC, 0 to 20mA DC) 3: Analog voltage input (Terminal [12]) + Analog current input (Terminal [C1] (C1 function)) 5: Analog voltage input (Terminal [C1] (V2 function)) (0 to 10 VDC) 7: UP/DOWN control 8: Keypad key operation (⏏/⏏key) (With balanceless bumpless) 10: Pattern operation 11: Digital input/output interface card (option) *5 12: Pulse train input	N	Y	0	Y	Y	Y	N	Y	5-46
F02	Operation method	0: Keypad operation (rotation direction input: terminal block) 1: External signal (digital input) 2: Keypad operation (forward rotation) 3: Keypad operation (Reverse rotation)	N	Y	2	Y	Y	Y	Y	Y	5-57
F03	Maximum output frequency 1	25.0 to 500.0 Hz	N	Y	200V class AJKU:60.0 400V class ACE:50.0 JKU:60.0	Y	Y	Y	Y	Y	5-58
F04	Base frequency 1	25.0 to 500.0Hz	N	Y	200V class J:50.0 AUK:60.0 400V class ACEJ:50.0 UK:60.0	Y	Y	Y	Y	Y	5-59
F05	Rated voltage at base frequency 1	0: AVR disable (output voltage proportional to power voltage) 80 to 240 V : AVR operation (200V class) 160 to 500V : AVR operation (400V class)	N	Y2	200V class J:200 AK:220 U:230	Y	Y	Y	Y	Y	
F06	Maximum output voltage 1	80 to 240V : AVR operation (200V class) 160 to 500V : AVR operation (400V class)	N	Y2	400V class EJ:400 A:415 CK:380 U:460	Y	Y	N	Y	Y	
F07	Acceleration time1	0.00 to 6000 s	Y	Y	6.00 or 20.0 *10	Y	Y	Y	N	Y	5-61
F08	Deceleration time1	* 0.00 is for acceleration and deceleration time cancel (when performing soft-start and stop externally)	Y	Y		Y	Y	Y	N	Y	
F09	Torque boost 1	0.0 to 20.0% (% value against base frequency voltage 1)	Y	Y	*2	Y	Y	N	N	N	5-63
F10	Electronic thermal overload protection for motor 1 (Select motor characteristics)	1: Enable (For a general-purpose motor with self-cooling fan) 2: Enable (For an inverter-driven motor (FV) with separately powered cooling fan)	Y	Y	1	Y	Y	Y	Y	Y	5-63
F11	(Overload detection level)	0.00 (disable), current value of 1 to 135% of inverter rated current (Inverter rated current dependent on F80)	Y	Y1 Y2	*3	Y	Y	Y	Y	Y	
F12	(Thermal time constant)	0.5 to 75.0 min	Y	Y	*4	Y	Y	Y	Y	Y	

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

■ indicates quick setup target function code.

*2: Factory defaults are depended on motor capacity. Refer to "5.2.3 Factory default value per applicable electric motor capacitance".

*3: The motor rated current is automatically set. Refer to "5.2.4 Motor constant".

*4: 5.0min for inverters of nominal applied motor 22kW or below; 10.0min for those of 30kW or above.

*5: Available at ROM version 0300 or later.

*10:6.00s for inverters of nominal applied motor 22kW or below; 20.0s for those of 30kW or above.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
F14	Restart mode after momentary power failure (Mode selection)	0: Trip immediately 1: Trip after a recovery from power failure 2: Trip after momentary deceleration is stopped 3: Continue to run (for heavy inertia load or general load) 4: Restart from frequency at power failure (for general load) 5: Restart from starting frequency	Y	Y	EU: 0 ACJK:1	Y	Y	Y	N	Y	5-66
F15	Frequency limiter (Upper limit)	0.0 to 500.0Hz	Y	Y	70.0	Y	Y	Y	N	Y	5-73
F16	(Lower limit)	0.0 to 500.0Hz	Y	Y	0.0	Y	Y	Y	N	Y	
F18	Bias (for frequency setting 1)	-100.00 to 100.00%	Y*	Y	0.00	Y	Y	Y	N	Y	5-73
F20	DC braking 1 (Braking starting frequency)	0.0 to 60.0Hz	Y	Y	0.0	Y	Y	Y	N	Y	5-74
F21	(Braking level)	0 to 100% (HHD mode), 0 to 80% (HD/HND mode) 0 to 60% (ND mode)	Y	Y	0	Y	Y	Y	N	Y	
F22	(Braking time)	0.00 (Disable): 0.01 to 30.00 s	Y	Y	0.00	Y	Y	Y	N	Y	
F23	Starting frequency 1	0.0 to 60.0Hz	Y	Y	0.5	Y	Y	Y	N	Y	5-77
F24	(Holding time)	0.00 to 10.00 s	Y	Y	0.00	Y	Y	Y	N	Y	
F25	Stop frequency	0.0 to 60.0 Hz	Y	Y	0.2	Y	Y	Y	N	Y	
F26	Motor sound (Carrier frequency)	ND mode - 0.75 to 10 kHz (FRN0002 to 0059E2-4□) - 0.75 to 6 kHz (FRN0072E2-4□ or above) HD/HND mode - 0.75 to 16 kHz (FRN0001 to 0088E2-2□) - 0.75 to 16 kHz (FRN0002 to 0059E2-4□) - 0.75 to 16 kHz (FRN0001 to 0012E2-7□) - 0.75 to 10 kHz (FRN0072 to 0168E2-4□) - 0.75 to 10 kHz (FRN0115E2-2□) - 0.75 to 6 kHz (FRN0203E2-4□ or above) HHD mode - 0.75 to 16 kHz (FRN0001 to 0115E2-2□) - 0.75 to 16 kHz (FRN0002 to 0168E2-4□) - 0.75 to 16 kHz (FRN0001 to 0012E2-7□) - 0.75 to 10 kHz (FRN0203E2-4□ or above)	Y	Y	2	Y	Y	Y	Y	Y	5-80
F27	(Tone)	0: Level 0 (Disable) 1 to 3 : Level 1 to 3	Y	Y	0	Y	Y	N	N	N	
F29	Terminal FM (Mode selection)	0: Voltage output (0 to +10 VDC) 1: Current output (4 to 20 mA DC) 2: Current output (0 to 20 mA DC) 3: Pulse output	Y	Y	0	Y	Y	Y	Y	Y	5-81
F30	(Output gain)	0 to 300%	Y*	Y	100	Y	Y	Y	Y	Y	
F31	(Function selection)	0: Output frequency 1 (before slip compensation) 1: Output frequency 2 (after slip compensation) 2: Output current 3: Output voltage 4: Output torque 5: Load factor 6: Input power 7: PID feedback value 8: Actual speed/estimated speed *5 9: DC link bus voltage 10: Universal AO 13: Motor output 14: Calibration (+) 15: PID command (SV) 16: PID output (MV) 17: Position error in master-follower operation *5 18: Inverter heat sink temperature 21: PG feedback value *5 111 to 120 Customizable logic output signal 1 to 10	Y	Y	0	Y	Y	Y	N	Y	
F32	Terminal FM 2 *1 (Mode selection)	0: Voltage output (0 to +10 VDC) 1: Current output (4 to 20 mA DC) 2: Current output (0 to 20 mA DC)	Y	Y	0	Y	Y	Y	Y	Y	
F33	Terminal FM (Pulse rate)	25 to 32000 p/s (number of pulse at monitor value 100%)	Y*	Y	1440	Y	Y	Y	Y	Y	
F34	Terminal FM 2 *1 (Output gain)	0 to 300%	Y*	Y	100	Y	Y	Y	Y	Y	
F35	(Function selection)	Same as F31	Y	Y	2	Y	Y	Y	N	Y	

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

■ indicates quick setup target function code.

*1: F34 and F35 only exist for GB model and C model (for China).

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
F37	Load selection/ Auto torque boost/ Auto energy-saving operation 1	0: Variable torque load 1: Constant torque load 2: Auto torque boost 3: Auto energy-saving operation (variable torque load) 4: Auto energy-saving operation (constant torque load) 5: Auto energy-saving operation with auto torque boost	N	Y	1	Y	Y	Y	N	N	5-84
F38	Stop frequency (Detection mode) *5	0: Actual speed / estimated speed 1: Reference speed	N	Y	0	N	N	Y	N	N	5-86
F39	Stop frequency (Holding time)	0.00 to 10.00 s	Y	Y	0.00	Y	Y	Y	N	Y	
F40	Torque limiter 1 (Driving)	0 to 300%; 999 (Disable)	Y	Y	999	Y	Y	Y	Y	Y	5-86
F41	(Braking)	0 to 300%; 999 (Disable)	Y	Y	999	Y	Y	Y	Y	Y	
F42	Drive control selection 1	0: V/f control without slip compensation 1: Vector control without speed sensor (dynamic torque vector) 2: V/f control with slip compensation 3: V/f control with speed sensor *5 4: V/f control with speed sensor and auto torque boost *5 6: Vector control for induction motor with speed sensor *5 15: Vector control for synchronous motor without speed sensor nor pole position sensor *5	N	Y	0	Y	Y	Y	Y	Y	5-92
F43	Current limiter (Mode selection)	0: Disable (No current limiter works.) 1: Enable at constant speed (Disable during ACC/DEC) 2: Enable during ACC/constant speed operation	Y	Y	2	Y	Y	N	N	N	5-96
F44	(Level)	20 to 200% (Rated current of the inverter for 100%)	Y	Y	J:180/160 ACEKU: 130	Y	Y	N	N	N	
F50	Electronic thermal overload protection for braking resistor (Discharging capacity)	1 to 9000 kW OFF (Cancel)	Y	Y1 Y2	OFF	Y	Y	Y	Y	Y	5-97
F51	(Allowable average loss)	0.001 to 99.99 kW	Y	Y1 Y2	0.001	Y	Y	Y	Y	Y	
F52	(Braking resistance value)	0.00: Resistance not required (Compatible mode with FRENIC-Multi series) 0.01 to 999 Ω	Y	Y1 Y2	0.00	Y	Y	Y	Y	Y	
F80	Switching between ND, HD, HND and HHD drive modes	0: HHD mode 1: HND mode 3: HD mode 4: ND mode ND/HD mode is not supported for 200V class series.	N	Y	4	Y	Y	Y	Y	Y	5-99

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)
*5: Available at ROM version 0300 or later.

■ E code: Extension Terminal Functions (Terminal function)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
E01	Terminal [X1] function	0 (1000): Select multistep frequency (0 to 1 steps) "SS1"	N	Y	0	Y	Y	Y	N	Y	5-100
E02	Terminal [X2] function	1 (1001): Select multistep frequency (0 to 3 steps) "SS2"	N	Y	1	Y	Y	Y	N	Y	
E03	Terminal [X3] function	2 (1002): Select multistep frequency (0 to 7 steps) "SS4"	N	Y	2	Y	Y	Y	N	Y	
E04	Terminal [X4] function	3 (1003): Select multistep frequency (0 to 15 steps) "SS8"	N	Y	7	Y	Y	Y	N	Y	
E05	Terminal [X5] function	4 (1004): Select ACC/DEC time (2 steps) "RT1"	N	Y	8	Y	Y	Y	N	Y	
		5 (1005): Select ACC/DEC time (4 steps) "RT2"				Y	Y	Y	N	Y	
		6 (1006): Select 3-wire operation "HLD"				Y	Y	Y	N	Y	
		7 (1007): Coast to a stop command "BX"				Y	Y	Y	Y	Y	
		8 (1008): Reset alarm (Abnormal) "RST"				Y	Y	Y	Y	Y	
		9 (1009): External alarm (9 = Active OFF/ 1009 = Active ON) "THR"				Y	Y	Y	Y	Y	
		10 (1010): Ready for jogging "JOG"				Y	Y	Y	N	N	
		11 (1011): Select frequency setting 2/ frequency setting 1 "Hz2/ Hz1"				Y	Y	Y	N	Y	
		12 (1012): Select motor 2 "M2"				Y	Y	Y	Y	Y	
		13: DC braking command "DCBRK"				Y	Y	Y	N	N	
		14 (1014): Select torque limit 2/ torque limit 1 "TL2/ TL1"				Y	Y	Y	Y	Y	
		15: Switch to commercial power (50 Hz) "SW50"				Y	Y	N	N	N	
		16: Switch to commercial power (60 Hz) "SW60"				Y	Y	N	N	N	
		17 (1017): UP command "UP"				Y	Y	Y	N	Y	
		18 (1018): DOWN command "DOWN"				Y	Y	Y	N	Y	
		19 (1019): Allow function code editing (Data change enabled) "WE-KP"				Y	Y	Y	Y	Y	
		20 (1020): Cancel PID control "Hz/PID"				Y	Y	Y	N	Y	
		21 (1021): Switch normal/ inverse operation "IVS"				Y	Y	Y	N	Y	
		22 (1022): Interlock "IL"				Y	Y	Y	Y	Y	
		23 (1023): Cancel torque control *5 "Hz/TRQ"				N	N	N	Y	N	
		24 (1024): Select link operation (RS-485, BUS option) "LE"				Y	Y	Y	Y	Y	
		25 (1025): Universal DI "U-DI"				Y	Y	Y	Y	Y	
		26 (1026): Select auto search for idling motor speed at starting "STM"				Y	Y	N	N	Y	
		30 (1030): Force to stop (30 = Active OFF/1030 = Active ON) "STOP"				Y	Y	Y	Y	Y	
		32 (1032): Pre-excite *5 "EXITE"				N	N	Y	Y	N	
		33 (1033): Reset PID integral and differential terms "PID-RST"				Y	Y	Y	N	Y	
		34 (1034): Hold PID integral term "PID-HLD"				Y	Y	Y	N	Y	
		35 (1035): Select local (Keypad) command "LOC"				Y	Y	Y	Y	Y	
		42 (1042): Activate the limit switch at start point *5 "LS"				Y	Y	N	N	N	
		43 (1043): Start / Reset *5 "S/R"				Y	Y	N	N	N	
		44 (1044): Switch to the serial pulse receiving mode *5 "SPRM"				Y	Y	N	N	N	
		45 (1045): Enter the return mode *5 "RTN"				Y	Y	N	N	N	
		46 (1046): Enable overload stop "OLS"				Y	Y	Y	N	Y	
47 (1047): Servo lock command *5 "LOCK"				N	N	Y	N	N			
48: Pulse train input (Only for X5 terminal (E05)) "PIN"				Y	Y	Y	N	Y			
49 (1049): Pulse train sign (Other than X5 terminal (E01 to E04)) "SIGN"				Y	Y	Y	N	Y			
59 (1059): Enable battery-driven operation *11 "BATRY/UPS"				Y	Y	Y	N	N			
60 (1060): Select torque bias1 *5 "TB1"				N	N	Y	N	N			
61 (1061): Select torque bias2 *5 "TB2"				N	N	Y	N	N			
62 (1062): Hold torque bias *5 "H-TB"				N	N	Y	N	N			
65 (1065): Check brake "BRKE"				Y	Y	Y	N	N			
70 (1070): Cancel line speed control *5 "Hz/LSC"				Y	Y	Y	N	N			

*5: Available at ROM version 0300 or later.
 *11: Available at ROM version 0500 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
		71 (1071): Hold line speed control frequency in the memory *5 "LSC-HLD"				Y	Y	Y	N	N	
		72 (1072): Count the run time of commercial power-driven motor 1 *5 "CRUN-M1"				Y	Y	Y	Y	N	
		73 (1073): Count the run time of commercial power-driven motor 2 *5 "CRUN-M2"				Y	Y	Y	Y	N	
		76 (1076): Select droop control "DROOP"				Y	Y	Y	N	N	
		78 (1078): Select speed control parameter 1 *5 "MPRM1"				N	Y	Y	Y	Y	
		79 (1079): Select speed control parameter 2 *5 "MPRM2"				N	Y	Y	Y	Y	
		80 (1080): Cancel customizable logic "CLC"				Y	Y	Y	Y	Y	
		81 (1081): Clear all customizable logic timers "CLTC"				Y	Y	Y	Y	Y	
		82 (1082): Cancel anti-regenerative control "AR-CCL"				Y	Y	Y	N	Y	
		100: No function assigned "NONE"				Y	Y	Y	Y	Y	
		171 (1171): PID control multistage command 1 "PID-SS1"				Y	Y	Y	N	Y	
		172 (1172): PID control multistage command 2 "PID-SS2"				Y	Y	Y	N	Y	
		* Inside the () is the negative logic signal (OFF at short-circuit)									
E10	Acceleration time2	0.00 to 6000 s	Y	Y	6.00 or 20.0 *10	Y	Y	Y	N	Y	5-116
E11	Deceleration time2	* 0.00 is for acceleration and deceleration time cancel (when performing soft-start and stop externally)	Y	Y		Y	Y	Y	N	Y	
E12	Acceleration time 3		Y	Y		Y	Y	Y	N	Y	
E13	Deceleration time 3		Y	Y		Y	Y	Y	N	Y	
E14	Acceleration time 4		Y	Y		Y	Y	Y	N	Y	
E15	Deceleration time 4		Y	Y		Y	Y	Y	N	Y	
E16	Torque limiter 2 (Driving)		0 to 300%; 999 (Disable)	Y	Y	999	Y	Y	Y	Y	Y
E17	(Braking)	0 to 300%; 999 (Disable)	Y	Y	999	Y	Y	Y	Y	Y	
E20	Terminal [Y1] function	0 (1000): Inverter running "RUN"	N	Y	0	Y	Y	Y	Y	Y	5-117
E21	Terminal [Y2] function	1 (1001): Frequency (speed) arrival "FAR"	N	Y	7	Y	Y	Y	N	Y	
E27	Terminal [30A/B/C] function (Relay output)	2 (1002): Frequency (speed) detected "FDT"	N	Y	99	Y	Y	Y	Y	Y	
		3 (1003): Under voltage detected (inverter stopped) "LU"				Y	Y	Y	Y	Y	
		4 (1004): Detected torque polarity "B/D"				Y	Y	Y	Y	Y	
		5 (1005): Inverter output limiting "IOL"				Y	Y	Y	Y	Y	
		6 (1006): Auto-restarting after momentary power failure "IPF"				Y	Y	Y	Y	Y	
		7 (1007): Motor overload early warning "OL"				Y	Y	Y	Y	Y	
		8 (1008): Keypad operation enabled "KP"				Y	Y	Y	Y	Y	
		10 (1010): Inverter ready to run "RDY"				Y	Y	Y	Y	Y	
		15 (1015): Switch MC on the input power lines "AX"				Y	Y	Y	Y	Y	
		16 (1016): Pattern operation stage transition "TU"				Y	Y	Y	N	Y	
		17 (1017): Pattern operation cycle completed "TO"				Y	Y	Y	N	Y	
		18 (1018): Pattern operation stage 1 "STG1"				Y	Y	Y	N	Y	
		19 (1019): Pattern operation stage 2 "STG2"				Y	Y	Y	N	Y	
		20 (1020): Pattern operation stage 4 "STG4"				Y	Y	Y	N	Y	
		21 (1021): Frequency (speed) arrival 2 "FAR2"				Y	Y	Y	N	Y	
		22 (1022): Inverter output limiting with delay "IOL2"				Y	Y	Y	Y	Y	
		25 (1025): Cooling fan in operation "FAN"				Y	Y	Y	Y	Y	
26 (1026): Auto-resetting "TRY"				Y	Y	Y	Y	Y			
27 (1027): Universal DO "U-DO"				Y	Y	Y	Y	Y			
28 (1028): Heat sink overheat early warning "OH"				Y	Y	Y	Y	Y			
29 (1029): Synchronization completed *5 "SY"				N	Y	Y	N	N			
30 (1030): Lifetime alarm "LIFE"				Y	Y	Y	Y	Y			
31 (1031): Frequency (speed) detected 2 "FDT2"				Y	Y	Y	Y	Y			
33 (1033): Reference loss detected "REF OFF"				Y	Y	Y	N	Y			
35 (1035): Inverter outputting "RUN 2"				Y	Y	Y	Y	Y			
36 (1036): Overload prevention controlling "OLP"				Y	Y	Y	N	Y			
37 (1037): Current detected "ID"				Y	Y	Y	Y	Y			
38 (1038): Current detected 2 "ID2"				Y	Y	Y	Y	Y			
39 (1039): Current detected 3 "ID3"				Y	Y	Y	Y	Y			

*5: Available at ROM version 0300 or later.

*10:6.00s for inverters of nominal applied motor 22kW or below; 20.0s for those of 30kW or above.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
		41 (1041): Low current detected "IDL"				Y	Y	Y	Y	Y	
		42 (1042): PID alarm "PID-ALM"				Y	Y	Y	N	Y	
		43 (1043): Under PID control "PID-CTL"				Y	Y	Y	N	Y	
		44 (1044): Under sleep mode of PID control "PID-STP"				Y	Y	Y	N	Y	
		45 (1045): Low torque detected "U-TL"				Y	Y	Y	Y	Y	
		46 (1046): Torque detected 1 "TD1"				Y	Y	Y	Y	Y	
		47 (1047): Torque detected 2 "TD2"				Y	Y	Y	Y	Y	
		48 (1048): Motor 1 selected "SWM1"				Y	Y	Y	Y	Y	
		49 (1049): Motor 2 selected "SWM2"				Y	Y	Y	Y	Y	
		52 (1052): Running forward "FRUN"				Y	Y	Y	Y	Y	
		53 (1053): Running reverse "RRUN"				Y	Y	Y	Y	Y	
		54 (1054): Under remote mode "RMT"				Y	Y	Y	Y	Y	
		56 (1056): Motor overheat detected by thermistor "THM"				Y	Y	Y	Y	Y	
		57 (1057): Brake control "BRKS"				Y	Y	Y	N	N	
		58 (1058): Frequency (speed) detected 3 "FDT3"				Y	Y	Y	Y	Y	
		59 (1059): Terminal [C1] (C1 function) wire break detected "C1OFF"				Y	Y	Y	Y	Y	
		70 (1070): Speed valid *5 "DNZS"				N	Y	Y	Y	Y	
		71 (1071): Speed agreement *5 "DSAG"				N	Y	Y	N	Y	
		72 (1072): Frequency (speed) arrival 3 "FAR3"				Y	Y	Y	N	Y	
		76 (1076): PG error detected *5 "PG-ERR"				N	Y	Y	N	Y	
		77 (1077): Low DC link bus voltage detection "U-EDC"				Y	Y	Y	Y	Y	
		79 (1079): During decelerating at momentary power failure "IPF2"				Y	Y	Y	Y	Y	
		80 (1080): Stop position override alarm *5 "OT"				N	Y	N	N	N	
		81 (1081): Under positioning *5 "TO"				N	Y	N	N	N	
		82 (1082): Positioning completed *5 "PSET"				N	Y	Y	N	N	
		83 (1083): Current position count over-flowed *5 "POF"				N	Y	N	N	N	
		84 (1084): Maintenance timer counted up "MNT"				Y	Y	Y	Y	Y	
		87 (1087): Frequency arrival and detected "FARFDT"				Y	Y	Y	N	Y	
		90 (1090): Alarm content 1 "AL1"				Y	Y	Y	Y	Y	
		91 (1091): Alarm content 2 "AL2"				Y	Y	Y	Y	Y	
		92 (1092): Alarm content 4 "AL4"				Y	Y	Y	Y	Y	
		93 (1093): Alarm content 8 "AL8"				Y	Y	Y	Y	Y	
		98 (1098): Light alarm "L-ALM"				Y	Y	Y	Y	Y	
		99 (1099): Alarm output "ALM"				Y	Y	Y	Y	Y	
		101 (1101): EN circuit failure detected "DECF"				Y	Y	Y	Y	Y	
		102 (1102): EN terminal input OFF "ENOFF"				Y	Y	Y	Y	Y	
		105 (1105): Braking transistor broken "DBAL"				Y	Y	Y	Y	Y	
		111 (1111): Customizable logic output signal 1 "CLO1"				Y	Y	Y	Y	Y	
		112 (1112): Customizable logic output signal 2 "CLO2"				Y	Y	Y	Y	Y	
		113 (1113): Customizable logic output signal 3 "CLO3"				Y	Y	Y	Y	Y	
		114 (1114): Customizable logic output signal 4 "CLO4"				Y	Y	Y	Y	Y	
		115 (1115): Customizable logic output signal 5 "CLO5"				Y	Y	Y	Y	Y	
		116 (1116): Customizable logic output signal 6 "CLO6"				Y	Y	Y	Y	Y	
		117 (1117): Customizable logic output signal 7 "CLO7"				Y	Y	Y	Y	Y	
		118 (1118): Customizable logic output signal 8 "CLO8"				Y	Y	Y	Y	Y	
		119 (1119): Customizable logic output signal 9 "CLO9"				Y	Y	Y	Y	Y	
		120 (1120): Customizable logic output signal 10 "CLO10"				Y	Y	Y	Y	Y	
		* Inside the () is written the negative logic signal setting (OFF at short-circuit)									
E29	Frequency arrival delay timer (FAR2)	0.01 to 10.00 s	Y	Y	0.10	Y	Y	Y	N	Y	5-126
E30	Frequency arrival detection width (Detection width)	0.0 to 10.0 Hz	Y	Y	2.5	Y	Y	Y	N	Y	

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
E31	Frequency detection 1 (Level)	0.0 to 500.0 Hz	Y	Y	200V class AJKU:60.0 400V class ACE:50.0 JKU:60.0	Y	Y	Y	N	Y	5-128
E32	(Hysteresis width)	0.0 to 500.0 Hz	Y	Y	1.0	Y	Y	Y	N	Y	
E34	Overload early warning/Current detection (Level)	0.00 (Disable), 1 to 200% of inverter rated current (Inverter rated current dependent on F80)	Y	Y1 Y2	*3	Y	Y	Y	Y	Y	5-129
E35	(Timer)	0.01 to 600.00 s	Y	Y	10.00	Y	Y	Y	Y	Y	
E36	Frequency detection 2 (Level)	0.0 to 500.0 Hz	Y	Y	200V class AJKU:60.0 400V class ACE:50.0 JKU:60.0	Y	Y	Y	Y	Y	5-130
E37	Current detection 2/ Low current detection (Level)	0.00 (Disable), 1 to 200% of inverter rated current (Inverter rated current dependent on F80)	Y	Y1 Y2	*3	Y	Y	Y	Y	Y	5-130
E38	(Timer)	0.01 to 600.00 s	Y	Y	10.00	Y	Y	Y	Y	Y	
E39	Display coefficient for transport time	0.000 to 9.999	Y	Y	0.000	Y	Y	Y	N	Y	5-130
E42	LED display filter	0.0 to 5.0 s	Y	Y	0.5	Y	Y	Y	Y	Y	5-130
E43	LED monitor (Item selection)	0: Speed monitor (Selectable with E48) 3: Output current 4: Output voltage 8: Calculated torque 9: Input power 10: PID process command 12: PID feedback value 13: Timer value(for timed operation) 14: PID output 15: Load factor 16: Motor output 17: Analog signal input monitor 21: Current position pulse *5 22: Position error pulse *5 23: Torque current (%) *5 24: Magnetic flux command(%) *5 25: Input watt-hour	Y	Y	0	Y	Y	Y	Y	Y	5-131
E44	(Display when stopped)	0: Specified value 1: Output value	Y	Y	0	Y	Y	Y	Y	Y	5-132
E48	LED monitor (Speed monitor item)	0: Output frequency 1 (before slip compensation) 1: Output frequency 2 (after slip compensation) 2: Reference frequency 3: Motor rotation speed 4: Load rotation speed 5: Line speed 6: Transport time for specified length 7: Speed (%)	Y	Y	0	Y	Y	Y	Y	Y	5-132
E49	Torque Command Monitor *5 (Polarity selection)	0: Torque polarity 1: Plus for driving, Minus for braking	Y	Y	1	Y	Y	Y	Y	Y	5-132
E50	Display coefficient for speed monitor	0.01 to 200.00	Y	Y	30.00	Y	Y	Y	Y	Y	5-133
E51	Display coefficient for "Input watt-hour data"	0.000 (Cancel/Reset). 0.001 to 9999	Y	Y	0.010	Y	Y	Y	Y	Y	5-133
E52	Keypad (Menu display mode)	0: Function code data setting mode (Menu 0, Menu1, and Menu 7) 1: Function code data check mode (Menu 2 and Menu 7) 2: Full-menu mode	Y	Y	0	Y	Y	Y	Y	Y	5-134
E54	Frequency detection 3 (Level)	0.0 to 500.0Hz	Y	Y	200V class J:50.0 AUK:60.0 400V class ACEJ:50.0 UK:60.0	Y	Y	Y	Y	Y	5-134
E55	Current detection 3 (Level)	0.00 (Disable), 1 to 200% of inverter rated current (Inverter rated current dependent on F80)	Y	Y1 Y2	*3	Y	Y	Y	Y	Y	5-134
E56	(Timer)	0.01 to 600.00 s	Y	Y	10.00	Y	Y	Y	Y	Y	


Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

E52 indicates quick setup target function code.

*3: The motor rated current is automatically set. Refer to "5.2.4 Motor constant" (function code P03).

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
E59	Terminal [C1] function selection	0: Current input (C1 function) 1: Voltage input (V2 function)	N	Y	0	Y	Y	Y	Y	Y	5-135
E61	Terminal [12] extended function	0: None	N	Y	0	Y	Y	Y	Y	Y	5-136
E62	Terminal [C1] (C1 extended function)	1: Auxiliary frequency setting 1 2: Auxiliary frequency setting 2 3: PID process command 5: PID feedback value	N	Y	0	Y	Y	Y	Y	Y	
E63	Terminal [C1] (V2 extended function)	6: Ratio setting 7: Analog torque limiter A 8: Analog torque limiter B 9: Torque bias *5 10: Torque command *5 11: Torque current command *5 17: Speed limit for forward rotation *5 18: Speed limit for reverse rotation *5 20: Analog signal input monitor	N	Y	0	Y	Y	Y	Y	Y	
E64	Saving of digital reference frequency	0: Auto saving (main power is turned off) 1: Save by turning  key ON	Y	Y	0	Y	Y	Y	Y	Y	5-136
E65	Reference loss detection	0: Stop deceleration 20 to 120%, 999: Cancel	Y	Y	999	Y	Y	Y	N	Y	5-137
E76	DC link bus low-voltage detection level	200 to 400 V (200 V class) 400 to 800 V (400 V class)	Y	Y	235 470	Y	Y	Y	Y	Y	5-137
E78	Torque detection 1 (Level)	0 to 300%	Y	Y	100	Y	Y	Y	Y	Y	5-138
E79	(Timer)	0.01 to 600.00 s	Y	Y	10.00	Y	Y	Y	Y	Y	
E80	Torque detection 2/ low torque detection (Level)	0 to 300%	Y	Y	20	Y	Y	Y	Y	Y	5-138
E81	(Timer)	0.01 to 600.00 s	Y	Y	20.00	Y	Y	Y	Y	Y	
E98	Terminal [FWD] function	0 (1000): Select multistep frequency (0 to 1 steps) "SS1"	N	Y	98	Y	Y	Y	N	Y	5-138
E99	Terminal [REV] function	1 (1001): Select multistep frequency (0 to 3 steps) "SS2"	N	Y	99	Y	Y	Y	N	Y	
		2 (1002): Select multistep frequency (0 to 7 steps) "SS4"				Y	Y	Y	N	Y	
		3 (1003): Select multistep frequency (0 to 15 steps) "SS8"				Y	Y	Y	N	Y	
		4 (1004): Select ACC/DEC time (2 steps) "RT1"				Y	Y	Y	N	Y	
		5 (1005): Select ACC/DEC time (4 steps) "RT2"				Y	Y	Y	N	Y	
		6 (1006): Select 3-wire operation "HLD"				Y	Y	Y	N	Y	
		7 (1007): Coast to a stop command "BX"				Y	Y	Y	Y	Y	
		8 (1008): Reset alarm (Abnormal) "RST"				Y	Y	Y	Y	Y	
		9 (1009): External alarm (9 = Active OFF/1009 = Active ON) "THR"				Y	Y	Y	Y	Y	
		10 (1010): Ready for jogging "JOG"				Y	Y	Y	N	N	
		11 (1011): Select frequency setting 2/ frequency setting 1 "Hz2/ Hz1"				Y	Y	Y	N	Y	
		12 (1012): Select Motor 2 "M2"				Y	Y	Y	Y	Y	
		13: DC braking command "DCBRK"				Y	Y	Y	N	N	
		14 (1014): Select torque limit 2/ torque limit 1 "TL2/ TL1"				Y	Y	Y	Y	Y	
		15: Switch to commercial power (50 Hz) "SW50"				Y	Y	N	N	N	
		16: Switch to commercial power (60 Hz) "SW60"				Y	Y	N	N	N	
		17 (1017): UP command "UP"				Y	Y	Y	N	Y	
		18 (1018): DOWN command "DOWN"				Y	Y	Y	N	Y	
		19 (1019): Allow function code editing (Data change enabled) "WE-KP"				Y	Y	Y	Y	Y	
		20 (1020): Cancel PID control "Hz/PID"				Y	Y	Y	N	Y	
		21 (1021): Switch normal/ inverse operation "IVS"				Y	Y	Y	N	Y	
		22 (1022): Interlock "IL"				Y	Y	Y	Y	Y	
		23 (1023): Cancel torque control *5 "Hz/TRQ"				N	N	N	Y	N	
		24 (1024): Select link operation (RS-485, BUS option) "LE"				Y	Y	Y	Y	Y	
		25 (1025): Universal DI "U-DI"				Y	Y	Y	Y	Y	
		26 (1026): Select auto search for idling motor speed at starting "STM"				Y	Y	N	N	Y	
		30 (1030): Force to stop (30 = Active OFF/1030 = Active ON) "STOP"				Y	Y	Y	Y	Y	
		32 (1032): Pre-excite *5 "EXITE"				N	N	Y	Y	N	

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
		33 (1033): Reset PID integral and differential terms "PID-RST"				Y	Y	Y	N	Y	
		34 (1034): Hold PID integral term "PID-HLD"				Y	Y	Y	N	Y	
		35 (1035): Select local (Keypad) command "LOC"				Y	Y	Y	Y	Y	
		42 (1042): Activate the limit switch at start point *5 "LS"				Y	Y	N	N	N	
		43 (1043): Start / Reset *5 "S/R"				Y	Y	N	N	N	
		44 (1044): Switch to the serial pulse receiving mode *5 "SPRM"				Y	Y	N	N	N	
		45 (1045): Enter the return mode *5 "RTN"				Y	Y	N	N	N	
		46 (1046): Enable overload stop "OLS"				Y	Y	Y	N	Y	
		47 (1047): Servo lock command *5 "LOCK"				N	N	Y	N	N	
		49 (1049): Pulse train sign "SIGN"				Y	Y	Y	N	Y	
		59 (1059): Enable battery-driven operation *11 "BATRY/UPS"				Y	Y	Y	N	N	
		60 (1060): Select torque bias1 *5 "TB1"				N	N	Y	N	N	
		61 (1061): Select torque bias2 *5 "TB2"				N	N	Y	N	N	
		62 (1062): Hold torque bias *5 "H-TB"				N	N	Y	N	N	
		65 (1065): Check brake "BRKE"				Y	Y	Y	N	N	
		70 (1070): Cancel line speed control *5 "Hz/LSC"				Y	Y	Y	N	N	
		71 (1071): Hold line speed control frequency in the memory *5 "LSC-HLD"				Y	Y	Y	N	N	
		72 (1072): Count the run time of commercial power-driven motor 1 *5 "CRUN-M1"				Y	Y	Y	Y	N	
		73 (1073): Count the run time of commercial power-driven motor 2 *5 "CRUN-M2"				Y	Y	Y	Y	N	
		76 (1076): Select droop control "DROOP"				Y	Y	Y	N	N	
		78 (1078): Select speed control parameter 1 *5 "MPRM1"				N	Y	Y	Y	Y	
		79 (1079): Select speed control parameter 2 *5 "MPRM2"				N	Y	Y	Y	Y	
		80 (1080): Cancel customizable logic "CLC"				Y	Y	Y	Y	Y	
		81 (1081): Clear all customizable logic timers "CLTC"				Y	Y	Y	Y	Y	
		82 (1082): Cancel anti-regenerative control "AR-CCL"				Y	Y	Y	N	Y	
		98: Run forward / stop command "FWD"				Y	Y	Y	Y	Y	
		99: Run reverse / stop command "REV"				Y	Y	Y	Y	Y	
		100: No function assigned "NONE"				Y	Y	Y	Y	Y	
		171 (1171): PID control multistage command 1 "PID-SS1"				Y	Y	Y	N	Y	
		172 (1172): PID control multistage command 2 "PID-SS2"				Y	Y	Y	N	Y	
		* Inside the () is the negative logic signal. (OFF at short-circuit)									

*5: Available at ROM version 0300 or later.

*11: Available at ROM version 0500 or later.

■ C code: Control Functions of Frequency (Control function)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
C01	Jump frequency 1	0.0 to 500.0Hz	Y	Y	0.0	Y	Y	Y	N	Y	5-139
C02	2		Y	Y	0.0	Y	Y	Y	N	Y	
C03	3		Y	Y	0.0	Y	Y	Y	N	Y	
C04	(Skip width)	0.0 to 30.0Hz	Y	Y	3.0	Y	Y	Y	N	Y	
C05	Multistep frequency 1	0.00 to 500.00Hz	Y	Y	0.00	Y	Y	Y	N	Y	5-140
C06	2		Y	Y	0.00	Y	Y	Y	N	Y	
C07	3		Y	Y	0.00	Y	Y	Y	N	Y	
C08	4		Y	Y	0.00	Y	Y	Y	N	Y	
C09	5		Y	Y	0.00	Y	Y	Y	N	Y	
C10	6		Y	Y	0.00	Y	Y	Y	N	Y	
C11	7		Y	Y	0.00	Y	Y	Y	N	Y	
C12	8		Y	Y	0.00	Y	Y	Y	N	Y	
C13	9		Y	Y	0.00	Y	Y	Y	N	Y	
C14	10		Y	Y	0.00	Y	Y	Y	N	Y	
C15	11		Y	Y	0.00	Y	Y	Y	N	Y	
C16	12		Y	Y	0.00	Y	Y	Y	N	Y	
C17	13		Y	Y	0.00	Y	Y	Y	N	Y	
C18	14		Y	Y	0.00	Y	Y	Y	N	Y	
C19	15		Y	Y	0.00	Y	Y	Y	N	Y	
C20	Jogging frequency	0.00 to 500.00 Hz	Y	Y	0.00	Y	Y	Y	N	N	5-140
C21	Pattern operation / timed operation (Mode selection)	0: 1 cycle operation 1: Repetition operation 2: Constant speed operation after 1 cycle operation 3: Timed operation	N	Y	0	Y	Y	Y	N	Y	5-141
C22	(Stage 1)	Special setting: Press key three times.	Y	Y	1st: 0.00	Y	Y	Y	N	Y	
C23	(Stage 2)	1st: Set run time 0.0 to 6000 s and press key.	Y	Y	2nd: F	Y	Y	Y	N	Y	
C24	(Stage 3)	2nd: Set rotational direction F (forward) or r (reverse) and	Y	Y	3rd: 1	Y	Y	Y	N	Y	
C25	(Stage 4)	press key.	Y	Y		Y	Y	Y	N	Y	
C26	(Stage 5)	3rd: Set acceleration/deceleration time 1 to 4 and press	Y	Y		Y	Y	Y	N	Y	
C27	(Stage 6)	key.	Y	Y		Y	Y	Y	N	Y	
C28	(Stage 7)		Y	Y		Y	Y	Y	N	Y	
C30	Frequency setting 2	0: Keypad key operation 1: Analog voltage input (Terminal [12]) (from 0 to ±10 VDC) 2: Analog current input (Terminal [C1] (C1 function)) (4 to 20 mA DC, 0 to 20 mA DC) 3: Analog voltage input (Terminal [12]) + Analog current input (Terminal [C1] (C1 function)) 5: Analog voltage input (Terminal [C1] (V2 function)) (0 to 10 VDC) 7: UP DOWN control 8: Keypad key operation (key) (With balanceless bumpless) 10: Pattern operation 11: Digital input/output interface card (option) *5 12: Pulse train input	N	Y	2	Y	Y	Y	N	Y	5-143
C31	Analog input adjustment (Terminal [12]) (Offset)	-5.0 to 5.0%	Y*	Y	0.0	Y	Y	Y	Y	Y	5-144
C32	(Gain)	0.00 to 200.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C33	(Filter)	0.00 to 5.00 s	Y	Y	0.05	Y	Y	Y	Y	Y	
C34	(Gain base point)	0.00 to 100.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C35	(Polarity selection)	0: Bipolar 1: Unipolar	N	Y	1	Y	Y	Y	Y	Y	
C36	Analog input adjustment (Terminal [C1] (C1 function)) (Offset)	-5.0 to 5.0%	Y*	Y	0.0	Y	Y	Y	Y	Y	
C37	(Gain)	0.00 to 200.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C38	(Filter)	0.00 to 5.00 s	Y	Y	0.05	Y	Y	Y	Y	Y	
C39	(Gain base point)	0.00 to 100.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C40	Terminal [C1] (C1 function) range / polarity selection	0: 4 to 20 mA Unipolar 1: 0 to 20 mA Unipolar 10: 4 to 20 mA Bipolar 11: 0 to 20 mA Bipolar	N	Y	0	Y	Y	Y	Y	Y	

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
C41	Analog input adjustment (Terminal [C1] (V2 function)) (Offset)	-5.0 to 5.0%	Y*	Y	0.0	Y	Y	Y	Y	Y	
C42	(Gain)	0.00 to 200.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C43	(Filter)	0.00 to 5.00 s	Y	Y	0.05	Y	Y	Y	Y	Y	
C44	(Gain base point)	0.00 to 100.00%	Y*	Y	100.0	Y	Y	Y	Y	Y	
C45	(Polarity selection)	0: Bipolar 1: Unipolar	N	Y	1	Y	Y	Y	Y	Y	
C50	Bias (for frequency setting 1) (Bias base point)	0.00 to 100.00%	Y*	Y	0.00	Y	Y	Y	N	Y	5-146
C53	Selection of normal/inverse operation (Frequency setting 1)	0: Normal 1: Inverse	Y	Y	0	Y	Y	Y	N	Y	5-146
C55	Analog input adjustment (Terminal 12) (Bias)	-100.00 to 100.00%	Y	Y	0.00	Y	Y	Y	Y	Y	5-144
C56	(Bias base point)	0.00 to 100.00 %	Y	Y	0.00	Y	Y	Y	Y	Y	
C58	(Display unit)	* Same as J105 (However, setting range is, 1 to 80)	Y	Y	2	Y	Y	Y	Y	Y	5-147
C59	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	Y	Y	Y	Y	Y	5-147
C60	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	Y	Y	Y	Y	Y	
C61	Analog input adjustment (Terminal[C1](C1 function)) (Bias)	-100.00 to 100.00 %	Y	Y	0.00	Y	Y	Y	Y	Y	5-144
C62	(Bias base point)	0.00 to 100.00 %	Y	Y	0.00	Y	Y	Y	Y	Y	
C64	(Display unit)	* Same as J105 (However, setting range is, 1 to 80)	Y	Y	2	Y	Y	Y	Y	Y	5-147
C65	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	Y	Y	Y	Y	Y	5-147
C66	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	Y	Y	Y	Y	Y	
C67	Analog input adjustment (Terminal [C1] (V2 function)) (Bias)	-100.00 to 100.00 %	Y	Y	0.00	Y	Y	Y	Y	Y	5-144
C68	(Bias base point)	0.00 to 100.00 %	Y	Y	0.00	Y	Y	Y	Y	Y	
C70	(Display unit)	* Same as J105 (However, setting range is, 1 to 80)	Y	Y	2	Y	Y	Y	Y	Y	5-147
C71	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	Y	Y	Y	Y	Y	5-147
C72	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	Y	Y	Y	Y	Y	
C89	Frequency correction 1 by (Numerator)	-32768 to 32767 (Keypad display is 8000 to 7FFFH) (Interpreted as 1 when the value is set to 0)	Y	Y	0001	Y	Y	Y	N	Y	—
C90	Frequency correction 2 by (Denominator)	-32768 to 32767 (Keypad display is 8000 to 7FFFH) (Interpreted as 1 when the value is set to 0)	Y	Y	0001	Y	Y	Y	N	Y	—

■ P codes: Motor 1 Parameters (Motor 1 parameter)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
P01	Motor 1 (No. of poles)	2 to 22 poles	N	Y1 Y2	4	Y	Y	Y	Y	Y	5-148
P02	(Rated capacity)	0.01 to 1000 kW (At P99 = 0 or 4, 15) 0.01 to 1000 HP (At P99 = 1)	N	Y1 Y2	*6	Y	Y	Y	Y	Y	5-148
P03	(Rated current)	0.00 to 2000A	N	Y1 Y2	*6	Y	Y	Y	Y	Y	5-148
P04	(Auto-tuning)	0: Disable 1: Stop tuning 2: Rotation tuning 5: Stop tuning(%R1, %X) *5	N	N	0	Y	Y	Y	Y	Y	5-149
P05	(Online tuning)	0: Invalid 1: Valid	Y	Y	0	Y	Y	N	N	N	5-150
P06	(No-load current)	0.00 to 2000A	N	Y1 Y2	*6	Y	Y	Y	Y	N	5-151
P07	(%R1)	0.00 to 50.00%	Y	Y1 Y2	*6	Y	Y	Y	Y	N	
P08	(%X)	0.00 to 50.00%	Y	Y1 Y2	*6	Y	Y	Y	Y	N	
P09	(Slip compensation gain for driving)	0.0 to 200.0%	Y*	Y	100.0	Y	Y	Y	N	N	5-151
P10	(Slip compensation response time)	0.01 to 10.00 s	Y	Y1 Y2	0.5	Y	Y	N	N	N	
P11	(Slip compensation gain for braking)	0.0 to 200.0 %	Y*	Y	100.0	Y	Y	Y	N	N	
P12	(Rated slip frequency)	0.00 to 15.00 Hz	N	Y1 Y2	*6	Y	Y	Y	N	N	5-152
P13	(Iron loss factor 1)	0.00 to 20.00 %	Y	Y1 Y2	*6	Y	Y	Y	Y	N	5-152
P16	(Magnetic saturation factor 1) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	5-152
P17	(Magnetic saturation factor 2) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
P18	(Magnetic saturation factor 3) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
P19	(Magnetic saturation factor 4) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
P20	(Magnetic saturation factor 5) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
P30	(PMSM drive magnetic pole position detection mode) *5	0: Pull-in by current 1: For IPMSM (Interior permanent magnet synchronous motor) 2: For SPMSM (Surface permanent magnet synchronous motor) 3: Pull-in by current for IPMSM (Interior permanent magnet synchronous motor)	N	Y1 Y2	1	N	N	N	N	Y	5-153
P53	(%X correction factor 1) *5	0 to 300 %	Y	Y1 Y2	100	Y	Y	Y	Y	N	5-153
P55	(Torque current under vector control) *5	0.00 to 2000 A	N	Y1 Y2	*6	N	N	Y	Y	N	5-153
P56	(Induced voltage factor under vector control) *5	50 to 100 %	N	Y1 Y2	*6	N	N	Y	Y	N	
P60	(PMSM armature resistance)*5	0.000 to 50.000 ohm	N	Y1 Y2	*7	N	N	N	N	Y	5-153
P61	(PMSM d-axis inductance)*5	0.00 to 500.00 mH	N	Y1 Y2	*7	N	N	N	N	Y	
P62	(PMSM q-axis inductance)*5	0.00 to 500.00 mH	N	Y1 Y2	*7	N	N	N	N	Y	
P63	(PMSM induced voltage)*5	80 to 240V (200V class); 160 to 500V (400Vclass)	N	Y1 Y2	*7	N	N	N	N	Y	
P64	(PMSM iron loss)*5	0.0 to 20.0 %	Y	Y1 Y2	*7	N	N	N	N	Y	
P65	(PMSM d-axis inductance magnetic saturation correction)*5 *9	0.0 to 100.0 % ; 999	Y	Y1 Y2	*7	N	N	N	N	Y	5-154

■ indicates quick setup target function code.

*5: Available at ROM version 0300 or later.

*6: Factory defaults are depended on motor capacity. Refer to "5.2.4 Motor constant".

*7: Factory defaults are the parameters for Fuji standard PMSM and depended on motor capacity.

*9: Factory use. Do not access these function codes.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
P74	(PMSM reference current at starting)*5	10 to 200 % (100%= motor rated current)	Y*	Y1 Y2	*7	N	N	N	N	Y	5-154
P83	(Reserved for PMSM)*5 *9	0.0 to 50.0; 999	Y	Y1 Y2	999	N	N	N	N	-	5-154
P84	(Reserved for PMSM)*5 *9	0.0 to 100.0; 999	N	Y1 Y2	999	N	N	N	N	-	
P85	(PMSM flux limitation value)	50.0 to 150.0; 999	Y	Y1 Y2	999	N	N	N	N	Y	5-154
P86	(Reserved for PMSM)	0.0 to 100.0%	N	N	0.0	N	N	N	N	-	5-154
P87	(PMSM reference current for polarity discrimination)	0 to 200 %	N	Y1 Y2	60	N	N	N	N	Y	-
P88	(Reserved for PMSM)*5 *9	0 to 100 %; 999	N	Y1 Y2	999	N	N	N	N	-	5-154
P89	(Reserved for PMSM)*5 *9	0; 1 to 100	N	Y1 Y2	0	N	N	N	N	-	
P90	(PMSM overcurrent protection level)*5	0.00(disable); 0.01 to 2000 A	N	Y1 Y2	*7	N	N	N	N	Y	5-154
P99	Motor 1 selection	0: Motor characteristics 0 (Fuji standard IM, 8-series) 1: Motor characteristics 1 (HP rating IMs) 4: Other IMs 20: Other motors(PMSMs) *5 21: Motor characteristics (Fuji PMSM GNB2 series) *5	N	Y1 Y2	U:1 ACEJK:0	Y	Y	Y	Y	Y	5-154

P99 indicates quick setup target function code.

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

*5: Available at ROM version 0300 or later.

*7: Factory defaults are the parameters for Fuji standard PMSM and depended on motor capacity.

*9: Factory use. Do not access these function codes.

■ H codes: High Performance Functions (High level function)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
H02	Data initialization (Method)	0: Standard 1: User	N	Y	0	Y	Y	Y	Y	Y	5-155
H03	(Target)	0: Manual setting value 1: Initial value (factory default value) 2: Initialize motor 1 parameters 3: Initialize motor 2 parameters 11: Initialize the parameters(excluding parameters related to communication) 12: Initialize the parameters related to customizable logic	N	N	0	Y	Y	Y	Y	Y	
H04	Auto-reset (Times)	0: Disable, 1 to 20: Number of retries	Y	Y	0	Y	Y	Y	Y	Y	5-157
H05	(Interval)	0.5 to 20.0 s	Y	Y	5.0	Y	Y	Y	Y	Y	
H06	Cooling fan ON/OFF control	0: Disable (Always Fan ON) 1: Enable (ON/OFF control effective)	Y	Y	0	Y	Y	Y	Y	Y	5-158
H07	Curve acceleration/ deceleration	0: Disable (Linear acceleration/deceleration) 1: S-curve acceleration/deceleration (Weak) 2: S-curve acceleration/deceleration (Arbitrary: According to H57 to H60) 3: Curve acceleration/deceleration	Y	Y	0	Y	Y	Y	N	Y	5-158
H08	Rotational direction limitation	0: Disable 1: Enable (Reverse rotation inhibited) 2: Enable (Forward rotation inhibited)	N	Y	0	Y	Y	Y	N	Y	5-158
H09	Starting mode (Auto search)	0: Disable 1: Enable (Only at restart after momentary power failure) 2: Enable (At normal start and at restart after momentary power failure)	N	Y	0	Y	Y	N	N	N	5-159
H11	Deceleration mode	0: Normal deceleration 1: Coast to a stop	Y	Y	0	Y	Y	Y	N	Y	5-161
H12	Instantaneous overcurrent limiting (Mode selection)	0: Disable 1: Enable	Y	Y	1	Y	Y	N	N	N	5-161
H13	Restart mode after momentary power failure (Restart timer)	0.1 to 20.0 s	Y	Y1 Y2	*2	Y	Y	Y	N	N	5-161
H14	(Frequency fall rate)	0.00: Selected deceleration time, 0.01 to 100.00Hz/s, 999 (According to current limiter)	Y	Y	999	Y	Y	N	N	N	
H15	(Continuous running level)	200 to 300V: (200 V class) 400 to 600V: (400V class)	Y	Y2	235 470	Y	Y	Y	N	Y	
H16	(Allowable momentary power failure time)	0.0 to 30.0s, 999 (Depend on inverter judgment)	Y	Y	999	Y	Y	Y	N	Y	
H18	Torque control *5 (Mode selection)	0: Disable (Speed control) 2: Function (Torque current command) 3: Function (Torque command)	N	Y	0	N	N	Y	Y	N	5-162
H26	Thermistor (for motor) (Mode selection)	0: Disable 1: PTC: I^2R trip and stop the inverter 2: PTC: Output motor overheat detected "THM" and continue to run	Y	Y	0	Y	Y	Y	Y	Y	5-164
H27	(Level)	0.00 to 5.00 V	Y	Y	1.60	Y	Y	Y	Y	Y	
H28	Droop control	-60.0 to 0.0Hz	Y	Y	0.0	Y	Y	Y	N	N	5-166
H30	Communication link function (Mode selection)	Frequency command Run command 0: F01/C30 F02 1: RS-485 (Port 1) F02 2: F01/C30 RS-485 (Port 1) 3: RS-485 (Port 1) RS-485 (Port 1) 4: RS-485 (Port 2) F02 5: RS-485 (Port 2) RS-485 (Port 1) 6: F01/C30 RS-485 (Port 2) 7: RS-485 (Port 1) RS-485 (Port 2) 8: RS-485 (Port 2) RS-485 (Port 2)	Y	Y	0	Y	Y	Y	Y	Y	5-167
H42	Capacitance of DC link bus capacitor	For adjustment at replacement (0000 to FFFF (in hexadecimal))	Y	N	-	Y	Y	Y	Y	Y	5-169
H43	Cumulative run time of cooling fan	For adjustment at replacement Displays the cumulative run time of cooling fan in units of ten hours.	Y	N	-	Y	Y	Y	Y	Y	
H44	Startup count for motor 1	For adjustment at replacement (0000 to FFFF in hexadecimal)	Y	N	-	Y	Y	Y	Y	Y	5-173
H45	Mock alarm	0: Disable 1: Occurrence of mock Alarm	Y	N	0	Y	Y	Y	Y	Y	5-173
H46	Starting mode (Auto search delay time 2)	0.1 to 20.0 s	Y	Y1 Y2	*6	Y	Y	N	N	Y	5-173

*2: Factory defaults are depended on motor capacity. Refer to "5.2.3 Factory default value per applicable electric motor capacitance".

*5: Available at ROM version 0300 or later.

*6: Factory defaults are depended on motor capacity. Refer to "5.2.4 Motor constant".

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
H47	Initial capacitance of DC link bus capacitor	For adjustment at replacement (0000 to FFFF in hexadecimal)	Y	N	-	Y	Y	Y	Y	Y	5-173
H48	Cumulative run time of capacitors on printed circuit boards	For adjustment at replacement Change in cumulative motor run time (Reset is enabled) (in units of ten hours)	Y	N	-	Y	Y	Y	Y	Y	5-169 5-173
H49	Starting mode (Auto search delay time 1)	0.0 to 10.0 s	Y	Y	0.0	Y	Y	Y	N	Y	5-174
H50	Non-linear V/f 1 (Frequency)	0.0 (Cancel), 0.1 to 500.0 Hz	N	Y	0.0	Y	Y	N	N	N	5-174
H51	(Voltage)	0 to 240 V:AVR operation (200 V class) 0 to 500V:AVR operation (400V class)	N	Y2	0	Y	Y	N	N	N	
H52	Non-linear V/f 2 (Frequency)	0.0 (Cancel), 0.1 to 500.0 Hz	N	Y	0.0	Y	Y	N	N	N	
H53	(Voltage)	0 to 240V:AVR operation (200V class) 0 to 500V:AVR operation (400V class)	N	Y2	0	Y	Y	N	N	N	
H54	Acceleration time (Jogging)	0.00 to 6000 s	Y	Y	6.00 or 20.0 *10	Y	Y	Y	N	Y	5-174
H55	Deceleration time (Jogging)	0.00 to 6000 s	Y	Y		Y	Y	Y	N	Y	
H56	Deceleration time for forced stop	0.00 to 6000 s	Y	Y		Y	Y	Y	N	Y	
H57	1st S-curve acceleration range (At starting)	0 to 100%	Y	Y	10	Y	Y	Y	N	Y	
H58	2nd S-curve acceleration range (At arrival)	0 to 100%	Y	Y	10	Y	Y	Y	N	Y	
H59	1st S-curve deceleration range (At starting)	0 to 100%	Y	Y	10	Y	Y	Y	N	Y	
H60	2nd S-curve deceleration range (At arrival)	0 to 100%	Y	Y	10	Y	Y	Y	N	Y	
H61	UP/DOWN control (Initial frequency setting)	0: Initial value is 0.00 Hz 1: Last UP/DOWN command value on releasing the run command.	N	Y	1	Y	Y	Y	N	Y	5-174
H63	Low limiter (Mode selection)	0: Limit by F16 (Frequency limiter: Low) and continue to run 1: If the output frequency lowers below the one limited by F16 (Frequency limiter: Low), decelerate to stop the motor.	Y	Y	0	Y	Y	Y	N	Y	5-174
H64	(Lower limiting frequency)	0.0: Depends on F16 (Frequency limiter, Low) 0.1 to 60.0 Hz	Y	Y	1.6	Y	Y	N	N	Y	
H65	Non-linear V/f 3 (Frequency)	0.0 (Cancel), 0.1 to 500.0 Hz	N	Y	0.0	Y	Y	N	N	N	5-174
H66	(Voltage)	0 to 240V: AVR operation (200V class) 0 to 500V: AVR operation (400V class)	N	Y2	0	Y	Y	N	N	N	
H68	Slip compensation 1 (Operating conditions selection)	0: Enable during acceleration/deceleration, enable at base frequency or higher 1: Disable during acceleration/deceleration, enable at base frequency or higher 2: Enable during acceleration/deceleration, disable at base frequency or higher 3: Disable during acceleration/deceleration, disable at base frequency or higher	N	Y	0	Y	Y	N	N	N	5-174
H69	Anti-regenerative control (Mode selection)	0: Disable 2: Torque limit control with force-to-stop (Cancel limit control after three times of deceleration time has passed) 3: DC link bus voltage control with force-to-stop (Cancel voltage control after three times of deceleration time has passed) 4: Torque limit control without force-to-stop 5: DC link bus voltage control without force-to-stop	Y	Y	0	Y	Y	Y	N	Y	5-175
H70	Overload prevention control	0.00: Follow the deceleration time selected 0.01 to 100.00 Hz/s, 999 (Cancel)	Y	Y	999	Y	Y	Y	N	Y	5-176
H71	Deceleration characteristics	0: Disable 1: Enable	Y	Y	0	Y	Y	Y	N	N	5-176
H72	Main power shutdown detection (Mode selection)	0: Disable 1: Enable (Available FRN0088E2■-2□/FRN0059E2■-4□ or above)	Y	Y	1	Y	Y	Y	Y	Y	5-176
H74	Torque limiter *5 (Control target)	0: Torque limit 1: Torque current limit	N	Y	1	N	N	Y	Y	Y	5-177
H76	Torque limiter (Braking) (Frequency rising limiter for braking)	0.0 to 500.0Hz	Y	Y	5.0	Y	Y	N	N	N	5-177
H77	Service life of DC link bus capacitor	0 to 8760 (in units of ten hours)	Y	N	6132 (ND spec)	Y	Y	Y	Y	Y	5-177

*5: Available at ROM version 0300 or later.

*10:6.00s for inverters of nominal applied motor 22kW or below; 20.0s for those of 30kW or above.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
H78	Maintenance interval (M1)	0 (Disable): 1 to 9999 (in units of ten hours)	Y	N	6132 (ND spec)	Y	Y	Y	Y	Y	5-177
H79	Preset startup count for maintenance (M1)	0000 (Disable): 0001 to FFFF (in hexadecimal)	Y	N	0	Y	Y	Y	Y	Y	5-178
H80	Output current fluctuation damping gain for motor 1	0.00 to 1.00	Y	Y	0.20	Y	Y	N	N	N	5-178
H81	Light alarm selection 1	0000 to FFFF (in hexadecimal)	Y	Y	0	Y	Y	Y	Y	Y	5-179
H82	Light alarm selection 2	0000 to FFFF (in hexadecimal)	Y	Y	0	Y	Y	Y	Y	Y	
H84	Pre-excitation *5 (Level)	100 to 400 % (Motor rated magnetizing current for 100%)	Y	Y	100	N	N	Y	Y	N	5-181
H85	(Timer)	0.00; 0.01 to 30.00 s 0.00; Invalid 0.01 to 30.00 s	Y	Y	0.00	N	N	Y	Y	N	
H86	Reserved *9	0 to 2	Y	Y	0	-	-	-	-	-	5-183
H89	Reserved *9	0 to 1	Y	Y	1	-	-	-	-	-	5-183
H90	Reserved *9	0 to 1	Y	Y	0	-	-	-	-	-	5-183
H91	PID feedback wire break detection	0.0 (Alarm disable): 0.1 to 60.0 s	Y	Y	0.0	Y	Y	Y	N	Y	5-183
H92	Continuous running at the momentary power failure (P)	0.000 to 10.000 times; 999 999:Manufacturer adjustment value	Y	Y1 Y2	999	Y	Y	Y	N	Y	5-183
H93	(I)	0.010 to 10.000 s; 999 999:Manufacturer adjustment value	Y	Y1 Y2	999	Y	Y	Y	N	Y	
H94	Cumulative motor run time 1	0 to 9999 Change in cumulative motor run time (Reset is enabled) (in units of 10 hours)	N	N	-	Y	Y	Y	Y	Y	5-177 5-183
H95	DC braking (Braking response mode)	0: Slow response 1: Quick response	Y	Y	1	Y	Y	N	N	N	5-74 5-183
H96	STOP key priority/ Start check function	0: STOP key priority disable/ Start check function disable 1: STOP key priority enable/ Start check function disable 2: STOP key priority disable/ Start check function enable 3: STOP key priority enable/ Start check function enable	Y	Y	U:3 ACEJK:0	Y	Y	Y	Y	Y	5-184
H97	Clear alarm data	0: Disable 1: Alarm data clear (Automatically return to 0 after clearing data)	Y	N	0	Y	Y	Y	Y	Y	5-184
H98	Protection/Maintenance function (Mode selection)	0 to 127 (Data is displayed in decimal) Bit 0: Lower the carrier frequency automatically (0: Disable; 1: Enable) Bit 1: Input phase loss protection (0: Disable; 1: Enable) Bit 2: Output phase loss protection (0: Disable; 1: Enable) Bit 3: Main circuit capacitor life judgment selection (0: Factory default referenced; 1 User measurement value standard) Bit 4: Judge the life of main circuit capacitor (0: Disable; 1: Enable) Bit 5: Detect DC fan lock (0: Enable; 1: Disable) Bit 6: Braking transistor error detection (0: Disable; 1: Enable)	Y	Y	*11	Y	Y	Y	Y	Y	5-185
H99	Password 2 setting/check	0000 to FFFF (Hexadecimal)	Y	N	0	Y	Y	Y	Y	Y	5-187
H101	Destination	0: Not selected 1: Japan 2: Asia 3: China 4: Europe 5: Americas 7: Korea	N	Y	G(AEU):0 J:1 C:3 K:7	Y	Y	Y	Y	Y	5-190
H111	UPS operation level	120 to 220 VDC: (200 V class) 240 to 440 VDC: (400 V class)	Y	Y2	220 440	Y	Y	Y	N	N	5-190
H114	Anti-regenerative control (Level)	0.0 to 50.0%, 999: disabled	Y	Y	999	Y	Y	Y	N	Y	5-190
H147	Speed control (Jogging) FF (Gain) *5	0.00 to 99.99 s	Y*	Y	0.00	N	N	Y	N	N	5-190 5-230

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

*5: Available at ROM version 0300 or later.

*9: Factory use. Do not access these function codes.

*11:FRN0115E2■-2□ or below: 83, FRN0072E2■-4□ or below: 83, FRN0012E2■-7□ or below: 83, FRN0085E2■-4□ or above: 19.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
H154	Torque bias (Mode selection) *5	0: Invalid 1: Digital torque bias 2: Analog torque bias	N	Y	0	N	N	Y	N	N	5-190
H155	(Level 1)	-300 to +300 %	N	Y	0	N	N	Y	N	N	
H156	(Level 2)	-300 to +300 %	N	Y	0	N	N	Y	N	N	
H157	(Level 3)	-300 to +300 %	N	Y	0	N	N	Y	N	N	
H158	(Mechanical loss compensation)	0 to 300 %	N	Y	0	N	N	Y	N	N	
H159	(Startup timer)	0.00 to 1.00 s	N	Y	0.00	N	N	Y	N	N	
H161	(Shutdown timer)	0.00 to 1.00 s	N	Y	0.00	N	N	Y	N	N	
H162	(Limiter)	0 to 300 %	N	Y	200	N	N	Y	N	N	
H173	Magnetic flux level at light load *5	10 to 100 %	Y	Y	100	N	N	Y	Y	N	5-192
H180	Brake control signal (Check-timer for brake operation)	0.00 to 10.00 s	Y	Y	0.00	Y	Y	Y	N	N	5-192
H193	User initial value (Save)	0: Disable, 1: Save	Y	N	0	Y	Y	Y	Y	Y	5-156
H194	(Protection)	0: Save enable, 1: Protected (Save disable)	Y	Y	0	Y	Y	Y	Y	Y	
H195	DC braking (Braking timer at the startup)	0.00 (Disable): 0.01 to 30.00 s	Y	Y	0.00	Y	Y	N	N	N	5-74 5-192
H196	Reserved *5 *9	0.001 to 9.999, 999	Y	Y	999	Y	Y	N	N	N	—
H197	User password 1 (Selection of protective operation)	0: All function codes are disclosed, but the change is not allowed. 1: Only the function code for quick setup can be disclosed/changed. 2: Only the function code for customize logic setting is not disclosed/not changed.	Y	Y	0	Y	Y	Y	Y	Y	5-187
H198	(Setting/check)	0000 to FFFF (Hexadecimal)	Y	N	0	Y	Y	Y	Y	Y	
H199	User password protection valid	0: Disable 1: Protected	Y	N	0	Y	Y	Y	Y	Y	

*5: Available at ROM version 0300 or later.

*9: Factory use. Do not access these function codes.

■ A codes: Motor 2 Parameters (Motor 2 parameters)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control				Related page	
						V/f	PG V/f	w/ PG	Torque control		PM
A01	Maximum output frequency 2	25.0 to 500.0Hz	N	Y	200V class AJKU:60.0 400V class ACE:50.0 JKU:60.0	Y	Y	Y	Y	N	-
A02	Base frequency 2	25.0 to 500.0Hz	N	Y	200V class J:50.0 AUK:60.0 400V class ACEJ:50.0 UK:60.0	Y	Y	Y	Y	N	
A03	Rated voltage at base frequency 2	0: AVR disable (output voltage proportional to power voltage) 80 to 240V: AVR operation (200V class) 160 to 500V: AVR operation (400V class)	N	Y2	200V class J:200 AK:220 U:230	Y	Y	Y	Y	N	
A04	Maximum output voltage 2	80 to 240V: AVR operation (200V class) 160 to 500V: AVR operation (400V class)	N	Y2	400V class EJ:400 A:415 CK:380 U:460	Y	Y	N	Y	N	
A05	Torque boost 2	0.0 to 20.0% (% value against base frequency voltage 2)	Y	Y	*2	Y	Y	N	N	N	
A06	Electronic thermal overload protection for motor 2 (Select motor characteristics)	1: Enable (For a general-purpose motor with self-cooling fan) 2: Enable (For an inverter-driven motor with separately powered cooling fan)	Y	Y	1	Y	Y	Y	Y	N	
A07	(Overload detection level)	0.00 (disable), current value of 1 to 135% of inverter rated current	Y	Y1 Y2	*3	Y	Y	Y	Y	N	
A08	(Thermal time constant)	0.5 to 75.0 min	Y	Y	*4	Y	Y	Y	Y	N	
A09	DC braking 2 (Braking starting frequency)	0.0 to 60.0Hz	Y	Y	0.0	Y	Y	Y	N	N	
A10	(Braking level)	0 to 100% (HHD mode), 0 to 80% (HD/HND mode) 0 to 60% (ND mode)	Y	Y	0	Y	Y	Y	N	N	
A11	(Braking time)	0.00 (Disable): 0.01 to 30.00 s	Y	Y	0.00	Y	Y	Y	N	N	
A12	Starting frequency 2	0.0 to 60.0Hz	Y	Y	0.5	Y	Y	Y	N	N	
A13	Load selection / Auto torque boost/ Auto energy-saving operation 2	0: Variable torque load 1: Constant torque load 2: Auto torque boost 3: Auto energy-saving operation (variable torque load) 4: Auto energy-saving operation (constant torque load) 5: Auto energy-saving operation with auto torque boost	N	Y	1	Y	Y	Y	N	N	
A14	Drive control selection 2	0: V/f control without slip compensation 1: Vector control without speed sensor (Dynamic torque vector control) 2: V/f control with slip compensation 3: V/f control with speed sensor 4: V/f control with speed sensor and auto torque boost 6: Vector control for induction motor with speed sensor	N	Y	0	Y	Y	Y	Y	N	
A15	Motor 2 (No. of poles)	2 to 22 poles	N	Y1 Y2	4	Y	Y	Y	Y	N	
A16	(Rated capacity)	0.01 to 1000 kW (At P39 = 0, 4) 0.01 to 1000 HP (At P39 = 1)	N	Y1 Y2	*6	Y	Y	Y	Y	N	
A17	(Rated current)	0.00 to 2000A	N	Y1 Y2	*6	Y	Y	Y	Y	N	
A18	(Auto-tuning)	0: Disable 1: Stop tuning 2: Rotation tuning 5: Stop tuning (%R1, %X)	N	N	0	Y	Y	Y	Y	N	
A19	(Online tuning)	0: Invalid 1:Valid	Y	Y	0	Y	N	N	N	N	
A20	(No-load current)	0.00 to 2000A	N	Y1 Y2	*6	Y	Y	Y	Y	N	
A21	(%R1)	0.00 to 50.00%	Y	Y1 Y2	*6	Y	Y	Y	Y	N	
A22	(%X)	0.00 to 50.00%	Y	Y1 Y2	*6	Y	Y	Y	Y	N	

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)
 *2: Factory defaults are depended on motor capacity. Refer to "5.2.3 Factory default value per applicable electric motor capacitance".
 *3: The motor rated current is automatically set. Refer to "5.2.4 Motor constant" (function code P03).
 *4: Standard applicable electric motor is 5.0 min for 22 kW or lower and 10.0 min for 30 kW or higher.
 *6: Factory defaults are depended on motor capacity. Refer to "5.2.4 Motor constant".

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
A23	Motor 2 (Slip compensation gain for driving)	0.0 to 200.0%	Y*	Y	100.0	Y	Y	Y	N	N	5-228
A24	(Slip compensation response time)	0.01 to 10.00 s	Y	Y1 Y2	0.50	Y	Y	N	N	N	
A25	(Slip compensation gain for braking)	0.0 to 200.0%	Y*	Y	100.0	Y	Y	Y	N	N	
A26	(Rated slip frequency)	0.00 to 15.00Hz	N	Y1 Y2	*6	Y	Y	Y	N	N	
A27	(Iron loss factor 1)	0.00 to 20.00%	Y	Y1 Y2	*6	Y	Y	Y	Y	N	
A30	(Magnetic saturation factor 1) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
A31	(Magnetic saturation factor 2) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
A32	(Magnetic saturation factor 3) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
A33	(Magnetic saturation factor 4) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
A34	(Magnetic saturation factor 5) *5	0.0 to 300.0 %	Y	Y1 Y2	*6	N	N	Y	Y	N	
A39	Motor 2 selection	0: Motor characteristics 0 (Fuji standard IM, 8-series) 1: Motor characteristics 1 (HP rating IMs) 4: Other IMs	N	Y1 Y2	U:1 ACEJK:0	Y	Y	Y	Y	N	
A40	Slip compensation 2 (Operating conditions selection)	0: Enable during acceleration/deceleration, enable at base frequency or higher 1: Disable during acceleration/deceleration, enable at base frequency or higher 2: Enable during acceleration/deceleration, disable at base frequency or higher 3: Disable during acceleration/deceleration, disable at base frequency or higher	N	Y	0	Y	Y	N	N	N	
A41	Output current fluctuation damping gain for motor 2	0.00 to 1.00	Y	Y	0.20	Y	Y	N	N	N	
A43	Speed control 2 *5 (Speed command filter)	0.000 to 5.000 s	Y	Y	0.020	N	Y	Y	N	Y	
A44	(Speed detection filter)	0.000 to 0.100 s	Y*	Y	0.005	N	Y	Y	N	Y	
A45	P (Gain)	0.1 to 200.0 times	Y*	Y	10.0	N	Y	Y	N	Y	
A46	I (Integral time)	0.001 to 9.999 s; 999 (Cancel integral term)	Y	Y	0.100	N	Y	Y	N	Y	
A47	FF (Gain)	0.00 to 99.99 s	Y	Y	0.00	N	N	Y	N	Y	
A49	(Notch filter resonance frequency)	1 to 200 Hz	Y	Y	200	N	N	Y	N	N	
A50	(Notch filter attenuation level)	0 to 20 dB	Y	Y	0	N	N	Y	N	N	
A51	Cumulative motor run time 2	0 to 9999 Change in cumulative motor run time (Reset is enabled) (in units of 10 hours)	N	N	-	Y	Y	Y	Y	N	-
A52	Startup counter for motor 2	For adjustment at replacement (0000 to FFFF in hexadecimal)	Y	N	-	Y	Y	Y	Y	N	
A53	Motor 2 (%X correction factor 1)	0 to 300%	Y	Y1 Y2	100	Y	Y	Y	Y	N	
A55	(Torque current under vector control) *5	0.00 to 2000 A	N	Y1 Y2	*6	N	N	Y	Y	N	
A56	(Induced voltage factor under vector control) *5	50 to 100 %	N	Y1 Y2	*6	N	N	Y	Y	N	
A98	Motor 2 (Function selection)	0 to 255 (Data is displayed in decimal, Meaning of each bit 0: Disable; 1 Enable) bit0: Current limiter (F43, F44) bit1: Rotational direction control (H08) bit2: Non-linear V/f (H50 to H53, H65, H66) bit3: PID control (J01 to J62, H91) bit4: Brake signal bit5: Braking timer at the Startup (H195) Bit6 to 7: Reserved *9	N	Y	0	Y	Y	Y	Y	Y	5-195

Factory default***A (For Asia), C (for China), E (for Europe), U (For USA), J (for Japan), K (for Korea)

*5: Available at ROM version 0300 or later.

*6: Factory defaults are depended on motor capacity. Refer to "5.2.4 Motor constant".

*9: Factory use. Do not change these function codes.

■ **b codes: Motor control parameter 3**

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
b43	Speed control 3 *5 (Speed command filter)	0.000 to 5.000 s	Y	Y	0.020	N	Y	Y	N	Y	5-228
b44	(Speed detection filter)	0.000 to 0.100 s	Y*	Y	0.005	N	Y	Y	N	Y	
b45	P (Gain)	0.1 to 200.0	Y*	Y	10.0	N	Y	Y	N	Y	
b46	I (Integral time)	0.001 to 9.999 s; 999 (Cancel integral term)	Y*	Y	0.100	N	Y	Y	N	Y	
b47	FF (Gain)	0.00 to 99.99	Y*	Y	0.00	N	N	Y	N	Y	
b49	(Notch filter resonance frequency)	1 to 200Hz	Y	Y	200	N	N	Y	N	N	
b50	(Notch filter attenuation level)	0 to 20dB	Y	Y	0	N	N	Y	N	N	

*5: Available at ROM version 0300 or later.

■ **r codes: Motor control parameter 4**

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
r43	Speed control 4 *5 (Speed command filter)	0.000 to 5.000 s	Y	Y	0.020	N	Y	Y	N	Y	5-228
r44	(Speed detection filter)	0.000 to 0.100 s	Y*	Y	0.005	N	Y	Y	N	Y	
r45	P (Gain)	0.1 to 200.0 times	Y*	Y	10.0	N	Y	Y	N	Y	
r46	I (Integral time)	0.001 to 9.999 s; 999 (Cancel integral term)	Y*	Y	0.100	N	Y	Y	N	Y	
r47	FF (Gain)	0.00 to 99.99	Y*	Y	0.00	N	N	Y	N	Y	
r49	(Notch filter resonance frequency)	1 to 200 Hz	Y	Y	200	N	N	Y	N	N	
r50	(Notch filter attenuation level)	0 to 20 dB	Y	Y	0	N	N	Y	N	N	

*5: Available at ROM version 0300 or later.

■ J codes: Application Functions 1 (Application function 1)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
J01	PID control (Mode selection)	0: Disable 1: Process (normal operation) 2: Process (inverse operation) 3: Speed control (Dancer)	N	Y	0	Y	Y	Y	N	Y	5-197
J02	(Remote command)	0: Keypad key operation (⊕/⊖key) 1: PID process command 1 (Analog input: Terminals 12, C1 and V2) 3: UP/DOWN 4: Communication	N	Y	0	Y	Y	Y	N	Y	5-198
J03	P (Gain)	0.000 to 30.000 times	Y	Y	0.100	Y	Y	Y	N	Y	5-204
J04	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	Y	Y	Y	N	Y	
J05	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	Y	Y	Y	N	Y	
J06	(Feedback filter)	0.0 to 900.0 s *1	Y	Y	0.5	Y	Y	Y	N	Y	
J10	(Anti-reset windup)	0 to 200%	Y	Y	200	Y	Y	Y	N	Y	5-207
J11	(Select Warnig output)	0: Warning caused by process command value 1: Warning caused by process command value with hold 2: Warning caused by process command value with latch 3: Warning caused by process command value with hold and latch 4: Warning caused by PID error value 5: Warning caused by PID error value with hold 6: Warning caused by PID error value with latch 7: Warning caused by PID error value with hold and latch	Y	Y	0	Y	Y	Y	N	Y	5-208
J12	(Upper limit of warning (AH))	-100% to 100%	Y	Y	100	Y	Y	Y	N	Y	
J13	(Lower limit of warning (AL))	-100% to 100%	Y	Y	0	Y	Y	Y	N	Y	
J15	(Sleep frequency)	0.0 (Disable): 1.0 to 500.0 Hz	Y	Y	0.0	Y	Y	Y	N	Y	5-210
J16	(Sleep timer)	0 to 60 s	Y	Y	30	Y	Y	Y	N	Y	
J17	(Wakeup frequency)	0.0 to 500.0Hz	Y	Y	0.0	Y	Y	Y	N	Y	
J18	(Upper limit of PID process output)	-150% to 150% ; 999 (Depends on setting of F15)	Y	Y	999	Y	Y	Y	N	Y	5-211
J19	(Lower limit of PID process output)	-150% to 150% ; 999 (Depends on setting of F16)	Y	Y	999	Y	Y	Y	N	Y	
J23	(Wakeup level of PID error)	0.0 to 100.0%	Y	Y	0.0	Y	Y	Y	N	Y	5-210
J24	(Wakeup timer)	0 to 3600 s	Y	Y	0	Y	Y	Y	N	Y	
J57	(Dancer position set point)	-100 to 0 to 100%	Y	Y	0	Y	Y	Y	N	Y	5-211
J58	(Detection width of dancer position error)	0: Disable switching PID constant 1 to 100%: Manually set value	Y	Y	0	Y	Y	Y	N	Y	5-212
J59	P (Gain) 2	0.000 to 30.000 times	Y	Y	0.100	Y	Y	Y	N	Y	
J60	I (Integral time) 2	0.0 to 3600.0 s	Y	Y	0.0	Y	Y	Y	N	Y	
J61	D (Differential time) 2	0.00 to 600.00 s	Y	Y	0.00	Y	Y	Y	N	Y	
J62	(PID control block selection)	0 to 3 bit0: Select polarity compensation for PID output/error 0=Plus (Addition); 1=Minus (Subtraction) bit1: Select compensation factor for PID output 0=Ratio (relative to the main setting) 1=Speed command (relative to maximum frequency)	N	Y	0	Y	Y	Y	N	Y	5-212
J63	Overload stop (Item selection)	0: Torque, 1: Current	Y	Y	0	Y	Y	Y	N	Y	5-213
J64	(Detection level)	20 to 200%	Y	Y	100	Y	Y	Y	N	Y	
J65	(Mode selection)	0: Disable 1: Decelerate to stop 2: Coast to a stop	N	Y	0	Y	Y	Y	N	Y	
J66	(Operation mode)	0: During constant speed running and deceleration 1: During constant speed running 2: Anytime	Y	Y	0	Y	Y	Y	N	Y	
J67	(Timer)	0.00 to 600.00 s	Y	Y	0.00	Y	Y	Y	N	Y	

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
J68	Brake control signal (Brake-release current)	0.00 to 300.00%	Y	Y	100.0	Y	Y	Y	N	N	5-214
J69	(Brake-release frequency/speed)	0.0 to 25.0 Hz	Y	Y	1.0	Y	Y	N	N	N	
J70	(Brake-release timer)	0.00 to 5.00 s	Y	Y	1.00	Y	Y	Y	N	N	
J71	(Brake-applied frequency/speed)	0.0 to 25.0 Hz	Y	Y	1.0	Y	Y	Y	N	N	
J72	(Brake-applied timer)	0.00 to 5.00 s	Y	Y	1.00	Y	Y	Y	N	N	
J73	Positioning control *5 (Start timer)	0.0 to 1000.0 s	Y	Y	0.0	Y	Y	N	N	N	5-217
J74	(Start point; upper digits)	-999(83E7) to 999(03E7) -999(83E7) to -1(8001) 0(0000) to 999(03E7)	Y	Y	0	Y	Y	N	N	N	
J75	(Start point; lower digits)	0(0000) to 9999(270F) ; P = -1(FFFF)	Y	Y	0	Y	Y	N	N	N	
J76	(Preset point; upper digits)	-999(83E7) to 999(03E7) -999(83E7) to -1(8001) 0(0000) to 999(03E7)	Y	Y	0	Y	Y	N	N	N	
J77	(Preset point; lower digits)	0(0000) to 9999(270F) ; P = -1(FFFF)	Y	Y	0	Y	Y	N	N	N	
J78	(Creep speed SW point; upper digits)	0 to 999	Y	Y	0	Y	Y	N	N	N	
J79	(Creep speed SW point; lower digits)	0 to 9999	Y	Y	0	Y	Y	N	N	N	
J80	(Creep speed)	0 to 500 Hz	Y	Y	0.0	Y	Y	N	N	N	
J81	(End point; upper digits)	-999(83E7) to 999(03E7) -999(83E7) to -1(8001) 0(0000) to 999(03E7)	Y	Y	0	Y	Y	N	N	N	
J82	(End point; lower digits)	0(0000) to 9999(270F)	Y	Y	0	Y	Y	N	N	N	
J83	(Completion range)	0 to 9999	Y	Y	0	Y	Y	N	N	N	
J84	(End timer)	0.0 to 1000.0 s	Y	Y	0.0	Y	Y	N	N	N	
J85	(Coasting compensation)	0 to 9999	Y	Y	0	Y	Y	N	N	N	
J86	(End point: serial pulse input format)	0: Direction and pulse 1: Forward and reverse pulse	Y	Y	0	Y	Y	N	N	N	
J87	(Preset positioning requirement)	0: Allow to preset at the forward rotation only 1: Allow to preset at the reverse rotation only 2: Allow to preset at any rotations	N	Y	0	Y	Y	N	N	N	
J88	(Direction of detected position)	0: Not switch the direction of detected position 1: Switch the direction of detected position	N	Y	0	Y	Y	N	N	N	
J95	Brake control signal *5 (Brake-release torque)	0.00 to 300.00 %	Y	Y	100.00	N	N	Y	N	N	5-214
J96	(Brake-apply conditions)	0 to 31 Bit0: Speed detection / Speed command (0: Speed detection ; 1: Speed command) Bit1: Reserved Bit2: Reserved Bit3: Reserved Bit4: Brake-apply condition (0: Regardless of run command status (ON or OFF) ; 1: Only when run command is OFF.)	Y	Y	0	N	N	Y	N	N	
J97	Servo lock *5 (Gain)	0.000 to 9.999 times	Y*	Y	0.010	N	N	Y	N	N	5-226
J98	(Completion timer)	0.000 to 1.000 s	Y	Y	0.100	N	N	Y	N	N	
J99	(Completion range)	0 to 9999	Y	Y	10	N	N	Y	N	N	

*5: Available at ROM version 0300 or later.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
J105	PID control (Display unit)	0 to 80 0: Inherit (PID Control 1 feedback unit) 1: none 2: % 4: r/min 7: kW [Flow] 20: m3/s 21: m3/min 22: m3/h 23: L/s 24: L/min 25: L/h [Pressure] 40: Pa 41: kPa 42: MPa 43: mbar 44: bar 45: mmHg 46: psi PSI (Pounds per square inch absolute) 47: mWG 48: inWG [Temperature] 60: K 61: degreeC 62: degreeF [Concentration] 80: ppm	N	Y	0	Y	Y	Y	N	Y	5-227
J106	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	Y	Y	Y	N	Y	
J107	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	Y	Y	Y	N	Y	
J136	PID multistep command (Multistep command 1)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	N	Y	5-227
J137	(Multistep command 2)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	N	Y	
J138	(Multistep command 3)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	N	Y	

■ d codes: Application Functions 2 (Application function 2)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
d01	Speed control 1 *5 (Speed command filter)	0.000 to 5.000 s	Y	Y	0.020	N	Y	Y	N	Y	5-228
d02	(Speed detection filter)	0.000 to 0.100 s	Y*	Y	0.005	N	Y	Y	N	Y	
d03	P (Gain)	0.1 to 200.0 times	Y*	Y	10.0	N	Y	Y	N	Y	
d04	I (Integral time)	0.001 to 9.999 s; 999(Cancel integral term)	Y	Y	0.100	N	Y	Y	N	Y	
d05	FF (Gain)	0.00 to 99.99 s	Y	Y	0.00	N	N	Y	N	Y	
d07	(Notch filter resonance frequency)	1 to 200 Hz	Y	Y	200	N	N	Y	N	N	
d08	(Notch filter attenuation level)	0 to 20dB	Y	Y	0	N	N	Y	N	N	
d09	Speed control (Jogging) *5 (Speed command filter)	0.000 to 5.000 s	Y	Y	0.020	N	Y	Y	N	N	
d10	(Speed detection filter)	0.000 to 0.100 s	Y*	Y	0.005	N	Y	Y	N	N	
d11	P (Gain)	0.1 to 200.0 times	Y*	Y	10.0	N	Y	Y	N	N	
d12	I (Integral time)	0.001 to 9.999 s; 999(Cancel integral term)	Y*	Y	0.100	N	Y	Y	N	N	
d14	Feedback Input *5 (Pulse input format)	0: Frequency and direction 1: Forward and reverse pulse 2: Quadrature A/B signal(B phase lead) 3: Quadrature A/B signal(A phase lead)	N	Y	2	N	Y	Y	Y	N	5-231
d15	(Encoder pulse resolution)	0014 to EA60(Hexadecimal) pulses (20 to 60000 (Decimal) pulses)	N	Y	0400 (1024)	N	Y	Y	Y	N	
d16	(Pulse scaling factor 1)	1 to 9999	N	Y	1	N	Y	Y	Y	N	
d17	(Pulse scaling factor 2)	1 to 9999	N	Y	1	N	Y	Y	Y	N	
d21	Speed agreement / PG error *5 (Hysteresis width)	0.0 to 50.0 %	Y	Y	10.0	N	Y	Y	N	Y	5-233
d22	(Detection timer)	0.00 to 10.00 s	Y	Y	0.50	N	Y	Y	N	Y	
d23	PG error processing *5	0: Continue to run 1 1: Stop with alarm 1 2: Stop with alarm 2 3: Continue to run 2 4: Stop with alarm 3 5: Stop with alarm 4	N	Y	2	N	Y	Y	N	Y	
d24	Zero speed control *5	0: Disable at startup 1: Enable at startup	N	Y	0	N	N	Y	N	N	5-234
d25	ASR switching time *5	0.000 to 1.000 s	Y	Y	0.000	N	Y	Y	Y	Y	5-234
d32	Speed limit / Over speed level 1 *5	0 to 110 %	Y	Y	100	N	N	Y	Y	Y	5-234
d33	Speed limit / Over speed level 2 *5	0 to 110 %	Y	Y	100	N	N	Y	Y	Y	
d35	Over speed detection level *5	0 to 120 %; 999 999: Depend on d32, d33	Y	Y	999	N	Y	Y	Y	Y	5-234
d41	Application specific function selection *5	0: Invalid 1: Line speed control with speed sensor 2: Master-follower operation (Immediate synchronization mode at the start, without Z phase) 3: Master-follower operation (Start after synchronization mode) 4: Master-follower operation (Immediate synchronization mode at the start, with Z phase)	N	Y	0	N	Y	N	N	N	5-234
d51	Reserved *9	-500 to 500	N	Y	*12	Y	Y	Y	Y	Y	5-237
d52	Reserved *9	-500 to 500	N	Y	*12	Y	Y	Y	Y	Y	
d55	Reserved *9	0000 to 00FF (Display in hexadecimal)	N	Y	0	Y	Y	Y	Y	Y	
d59	Command (Pulse train input) *5 (Pulse input format)	0: Frequency and direction 1: Forward and reverse pulse 2: Quadrature A/B signal(B phase lead) 3: Quadrature A/B signal(A phase lead)	N	Y	0	Y	Y	Y	Y	Y	5-244
d60	(Encoder pulse resolution)	0014 to 0E10 (Hexadecimal) pulses (20 to 3600 (Decimal) pulses)	N	Y	0400 (1024)	N	Y	Y	N	N	5-237
d61	(Filter time constant)	0.000 to 5.000 s	Y	Y	0.005	Y	Y	Y	Y	Y	5-237
d62	(Pulse scaling factor 1)	1 to 9999	Y	Y	1	Y	Y	Y	Y	Y	
d63	(Pulse scaling factor 2)	1 to 9999	Y	Y	1	Y	Y	Y	Y	Y	

*5: Available at ROM version 0300 or later.

*9: Factory use. Do not change these function codes.

*12:FRN0012E2■-7□ or below: 20, FRN0115E2■-2□ or below: 20, FRN0290E2■-4□ or below: 20, FRN0361E2■-4□ and FRN0415E2■-4□:50, FRN0520E2■-4□ or above: 100.

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
d67	PMSM starting mode *5 (Auto search)	0: Disable 1: Enable (At restart after momentary power failure) 2: Enable (At restart after momentary power failure and at normal start)	N	Y	2	N	N	N	N	Y	5-159 5-237
d69	Reserved *9	30.0 to 100.0Hz	Y	Y	30.0	Y	Y	N	N	N	5-237
d70	Speed control limiter *5	0.00 to 100.00 %	Y	Y	100.00	N	Y	N	N	N	5-247
d71	Master follower control *5 (Main speed regulator gain)	0.00 to 1.50 times	Y	Y	1.00	N	Y	Y	N	N	5-238
d72	(APR gain)	0.00 to 200.00 times	Y	Y	15.00	N	Y	Y	N	N	
d73	(APR positive output limiter)	20 to 200 %; 999: Invalid	Y	Y	999	N	Y	Y	N	N	
d74	(APR negative output limiter)	20 to 200 %; 999: Invalid	Y	Y	999	N	Y	Y	N	N	
d75	(Z phase alignment gain)	0.00 to 10.00 times	Y	Y	1.00	N	Y	Y	N	N	
d76	(Offset angle between master and follower)	0 to 359 deg	Y	Y	0	N	Y	Y	N	N	
d77	(Synchronous completion detection angle)	0 to 359 deg	Y	Y	15	N	Y	Y	N	N	
d78	(Excessive error detection level)	0 to 65535 (10 unit pulse)	Y	Y	65535	N	Y	Y	N	N	
d79	Reserved *5 *9	0; 80 to 240 V (200V order) 160 to 500 V (400V order); 999	N	Y2	0	N	N	N	N	Y	5-237
d88	Reserved *5 *9	0.00 to 100.00 %, 999	Y	Y	999	N	N	N	N	Y	5-247
d90	Magnetic flux level during deceleration under vector control *5	100 to 300 %	Y	Y	150	N	N	Y	N	N	
d91	Reserved *9	0.00 to 2.00, 999	Y	Y	999	-	-	-	-	-	5-237
d92	Reserved *5 *9	0.00 to 10.00	Y	Y	0.30	-	-	-	-	-	
d93	Reserved *5 *9	0.00 to 10.00; 999	Y	Y	999	N	N	N	N	Y	
d94	Reserved *5 *9	0.00 to 10.00; 999	Y	Y	999	N	N	N	N	Y	
d95	Reserved *5 *9	0.00 to 10.00; 999	Y	Y	999	N	N	N	N	Y	
d96	Reserved *5 *9	-50.0 to 50.0; 999	Y	Y	999	N	N	N	N	Y	
d97	Reserved *5 *9	-50.0 to 50.0; 999	Y	Y	999	N	N	N	N	Y	
d99	Extension function 1	0 to 127 ----- Bit 0-2: Reserved *9 ----- Bit 3: JOG operation from communication (0: Disable; 1: Enable) ----- Bit 4-8: Reserved *9	Y	Y	0	-	-	-	-	-	
						Y	Y	Y	N	Y	
						-	-	-	-	-	
						-	-	-	-	-	

*5: Available at ROM version 0300 or later.

*9: Factory use. Do not change these function codes.

■ U codes: Application Functions 3 (Customizable logic)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
U00	Customizable logic (Mode selection)	0: Disable 1: Enable (Customizable logic operation) ECL alarm occurs when the value is changed from 1 to 0 during operation.	Y	Y	0	Y	Y	Y	Y	Y	5-250
U01	Customizable logic: Step 1 (Block selection)	[Digital] 0: No function assigned 10 to 15: Through output + General-purpose timer 20 to 25: Logical AND + General-purpose timer 30 to 35: Logical OR + General-purpose timer 40 to 45: Logical XOR + General-purpose timer 50 to 55: Set priority flip-flop + General-purpose timer 60 to 65: Reset priority flip-flop + General-purpose timer 70, 72, 73: Rising edge detector + General-purpose timer 80, 82, 83: Falling edge detector + General-purpose timer 90, 92, 93: Rising & falling edges detector + General-purpose timer 100 to 105: Hold + General-purpose timer 110: Increment counter 120: Decrement counter 130: Timer with reset input General-purpose timer function (Least significant digit 0 to 5) _0: No timer _1: On-delay timer _2: Off-delay timer _3: Pulse (1 shot) _4: Retriggerable timer _5: Pulse train output [Analog] 2001: Adder 2002: Subtractor 2003: Multiplier 2004: Divider 2005: Limiter 2006: Absolute value of input 2007: Inverting adder 2008: Variable limiter 2009: Linear function 2051 to 2056: Comparator1 to 6 2071, 2072: Window comparator1, 2 2101: High selector 2102: Low selector 2103: Average of inputs 2151: Loading function from S13 2201: Clip and map function 2202: Scale converter 3001: Quadratic function 3002: Square root function [Digital, Analog] 4001: Hold 4002: Inverting adder with enable 4003, 4004: Selector 1, 2 4005: LPF(Low-pass filter) with enable 4006: Rate limiter with enable 5000: Selector 3 5100: Selector 4 6001: Reading function code 6002: Writing function code 6003: Temporary change of function code 6101: PID dancer output gain frequency	N	Y	0	Y	Y	Y	Y	Y	

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
U02	Customizable logic: Step 1 (Input 1)	[Digital] 0 to 105: The same as E20 value. However, 27, 111 to 120 cannot be selected	N	Y	100	Y	Y	Y	Y	Y	
U03	(Input 2)	2001 to 2200 (3001 to 3200): Output of Step 1 to 200 4001 (5001): X1 terminal input signal "X1" 4002 (5002): X2 terminal input signal "X2" 4003 (5003): X3 terminal input signal "X3" 4004 (5004): X4 terminal input signal "X4" 4005 (5005): X5 terminal input signal "X5" 4010 (5010): FWD terminal input signal "FWD" 4011 (5011): REV terminal input signal "REV" *4021(5021): Digital input I1 (OPC-DIO) *5 *4022(5022): Digital input I2 (OPC-DIO) *5 *4023(5023): Digital input I3 (OPC-DIO) *5 *4024(5024): Digital input I4 (OPC-DIO) *5 *4025(5025): Digital input I5 (OPC-DIO) *5 *4026(5026): Digital input I6 (OPC-DIO) *5 *4027(5027): Digital input I7 (OPC-DIO) *5 *4028(5028): Digital input I8 (OPC-DIO) *5 *4029(5029): Digital input I9 (OPC-DIO) *5 *4030(5030): Digital input I10 (OPC-DIO) *5 *4031(5031): Digital input I11 (OPC-DIO) *5 *4032(5032): Digital input I12 (OPC-DIO) *5 *4033(5033): Digital input I13 (OPC-DIO) *5 6000 (7000): Final run command RUN "FL_RUN" 6001 (7001): Final run command FWD "FL_FWD" 6002 (7002): Final run command REV "FL_REV" 6003 (7003): Accelerating "DACC" 6004 (7004): Decelerating "DDEC" 6005 (7005): Under anti-regenerative control "REGA" 6006 (7006): Within dancer reference position "DR_REF" 6007 (7007): With/without alarm factor "ALM_ACT" * Inside the () is the negative logic signal. (OFF at short-circuit) [Analog] 8000 to 8021: The value with 8000 added to F31 9001: Analog 12 terminal input signal [12] 9002: Analog C1 terminal input signal [C1] (C1) 9003: Analog V2 terminal input signal [C1] (V2) *9004: Analog 32 terminal input signal [32] *5 *9005: Analog C2 terminal input signal [C2] *5	N	Y	100	Y	Y	Y	Y	Y	
U04	(Function 1)	-9990 to 0.00 to 9990	N	Y	0.00	Y	Y	Y	Y	Y	
U05	(Function 2)		N	Y	0.00	Y	Y	Y	Y	Y	

*: The use of the option card lets those functions remain in effect.

*5: Available at ROM version 0300 or later.

Customizable logic Step 1 to 14 function code is assigned as follows: Setting value is the same as U01 to U05.

Block selection	Step1	Step2	Step3	Step4	Step5	Step6	Step7	Step8	Step9	Step10
Input 1	U01	U06	U11	U16	U21	U26	U31	U36	U41	U46
Input 2	U02	U07	U12	U17	U22	U27	U32	U37	U42	U47
Function 1	U03	U08	U13	U18	U23	U28	U33	U38	U43	U48
Function 2	U04	U09	U14	U19	U24	U29	U34	U39	U44	U49
	U05	U10	U15	U20	U25	U30	U35	U40	U45	U50
Block selection	Step11	Step12	Step13	Step14						
Input 1	U51	U56	U61	U66						
Input 2	U52	U57	U62	U67						
Function 1	U53	U58	U63	U68						
Function 2	U54	U59	U64	U69						
	U55	U60	U65	U70						

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
U71	Customizable logic (Output selection) Output signal 1	0: Disable 1 to 200: Output of Step 1 to 200 "S001" to "S0200"	N	Y	0	Y	Y	Y	Y	Y	
U72	Output signal 2		N	Y	0	Y	Y	Y	Y	Y	
U73	Output signal 3		N	Y	0	Y	Y	Y	Y	Y	
U74	Output signal 4		N	Y	0	Y	Y	Y	Y	Y	
U75	Output signal 5		N	Y	0	Y	Y	Y	Y	Y	
U76	Output signal 6		N	Y	0	Y	Y	Y	Y	Y	
U77	Output signal 7		N	Y	0	Y	Y	Y	Y	Y	
U78	Output signal 8		N	Y	0	Y	Y	Y	Y	Y	
U79	Output signal 9		N	Y	0	Y	Y	Y	Y	Y	
U80	Output signal 10		N	Y	0	Y	Y	Y	Y	Y	
U81	Customizable logic (Function selection) Output signal 1	0 to 172 (1000 to 1172): Same as E01 8001 to 8020: The value with 8000 added to E61	N	Y	100	Y	Y	Y	Y	Y	
U82	Output signal 2		N	Y	100	Y	Y	Y	Y	Y	
U83	Output signal 3		N	Y	100	Y	Y	Y	Y	Y	
U84	Output signal 4		N	Y	100	Y	Y	Y	Y	Y	
U85	Output signal 5		N	Y	100	Y	Y	Y	Y	Y	
U86	Output signal 6		N	Y	100	Y	Y	Y	Y	Y	
U87	Output signal 7		N	Y	100	Y	Y	Y	Y	Y	
U88	Output signal 8		N	Y	100	Y	Y	Y	Y	Y	
U89	Output signal 9		N	Y	100	Y	Y	Y	Y	Y	
U90	Output signal 10		N	Y	100	Y	Y	Y	Y	Y	
U91	Customizable logic timer monitor (Step selection)	0: Monitor disable 1 to 200: Step 1 to 200	Y	N	0	Y	Y	Y	Y	Y	
U92	Customizable logic (The coefficients of the approximate formula) (Mantissa of KA1)	-9.999 to 9.999	N	Y	0.000	Y	Y	Y	Y	Y	
U93	(Exponent part of KA1)	-5 to 5	N	Y	0	Y	Y	Y	Y	Y	
U94	(Mantissa of KB1)	-9.999 to 9.999	N	Y	0.000	Y	Y	Y	Y	Y	
U95	(Exponent part of KB1)	-5 to 5	N	Y	0	Y	Y	Y	Y	Y	
U96	(Mantissa of KC1)	-9.999 to 9.999	N	Y	0.000	Y	Y	Y	Y	Y	
U97	(Exponent part KC1)	-5 to 5	N	Y	0	Y	Y	Y	Y	Y	
U100	Task process cycle setting	0: Auto select from 2, 5, 10 or 20 ms depending on the number of steps 2: 2 ms (Up to 10 step) 5: 5 ms (Up to 50 step) 10: 10 ms (Up to 100 step) 20: 20ms (Up to 200 step) *5	N	Y	0	Y	Y	Y	Y	Y	
U101	Customizable logic (Operating point 1 (X1))	-999.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	Y	Y	5-250 5-273
U102	(Operating point 1 (Y1))		Y	N		Y	Y	Y	Y	Y	
U103	(Operating point 2 (X2))		Y	N		Y	Y	Y	Y	Y	
U104	(Operating point 2 (Y2))		Y	N		Y	Y	Y	Y	Y	
U105	(Operating point 3 (X3))		Y	N		Y	Y	Y	Y	Y	
U106	(Operating point 3 (Y3))		Y	N		Y	Y	Y	Y	Y	
U107	Customizable logic (Auto calculation of the coefficients of the approximate formula)	0: Invalid 1: Execute calculation (When the calculation is finished, the results are stored to the function code U92 to U97)	N	N	0	Y	Y	Y	Y	Y	5-250 5-274

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/ PG	Torque control	PM	
U121	Customizable logic (User parameter 1)	-9990.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	Y	Y	5-250
U122	(User parameter 2)					Y	Y	Y	Y	Y	
U123	(User parameter 3)					Y	Y	Y	Y	Y	
U124	(User parameter 4)					Y	Y	Y	Y	Y	
U125	(User parameter 5)					Y	Y	Y	Y	Y	
U126	(User parameter 6)					Y	Y	Y	Y	Y	
U127	(User parameter 7)					Y	Y	Y	Y	Y	
U128	(User parameter 8)					Y	Y	Y	Y	Y	
U129	(User parameter 9)					Y	Y	Y	Y	Y	
U130	(User parameter 10)					Y	Y	Y	Y	Y	
U131	(User parameter 11)					Y	Y	Y	Y	Y	
U132	(User parameter 12)					Y	Y	Y	Y	Y	
U133	(User parameter 13)					Y	Y	Y	Y	Y	
U134	(User parameter 14)					Y	Y	Y	Y	Y	
U135	(User parameter 15)					Y	Y	Y	Y	Y	
U136	(User parameter 16)					Y	Y	Y	Y	Y	
U137	(User parameter 17)					Y	Y	Y	Y	Y	
U138	(User parameter 18)					Y	Y	Y	Y	Y	
U139	(User parameter 19)					Y	Y	Y	Y	Y	
U140	(User parameter 20)					Y	Y	Y	Y	Y	
U171	Customizable logic (Storage area 1)	-9990.00 to 0.00 to 9990.00	Y	Y	0.00	Y	Y	Y	Y	Y	
U172	(Storage area 2)					Y	Y	Y	Y	Y	
U173	(Storage area 3)					Y	Y	Y	Y	Y	
U174	(Storage area 4)*5					Y	Y	Y	Y	Y	
U175	(Storage area 5)*5					Y	Y	Y	Y	Y	
U190	Customizable logic setting step (Step number)	1 to 200	Y	Y	15	Y	Y	Y	Y	Y	
U191	Setting step (Select block)	Same as U01	N	Y	0	Y	Y	Y	Y	Y	
U192	(Input 1)	Same as U02	N	Y	100	Y	Y	Y	Y	Y	
U193	(Input 2)	Same as U03	N	Y	100	Y	Y	Y	Y	Y	
U194	(Function 1)	Same as U04	N	Y	0.00	Y	Y	Y	Y	Y	
U195	(Function 2)	Same as U05	N	Y	0.00	Y	Y	Y	Y	Y	
U196	Customizable logic ROM version Upper digit (Monitor)	0 to 9999	N	N	0	Y	Y	Y	Y	Y	
U197	Customizable logic ROM version Upper digit (For User setting)	0 to 9999	N	Y	0	Y	Y	Y	Y	Y	
U198	Customizable logic ROM version Lower digit (Monitor)	0 to 9999	N	N	0	Y	Y	Y	Y	Y	
U199	Customizable logic ROM version Lower digit (For User setting)	0 to 9999	N	Y	0	Y	Y	Y	Y	Y	

*5: Available at ROM version 0300 or later.

■ y codes: LINK Functions (Link function)

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
y01	RS-485 Communication 1 (Station address)	1 to 255	N	Y	1	Y	Y	Y	Y	Y	5-277
y02	(Communications error processing)	0: Immediately trip with alarm E_r-B 1: Trip with alarm E_r-B after running for the period specified by timer y03 2: Retry during the period specified by timer y03. If the retry fails, trip with alarm E_r-B . If it succeeds, continue to run. 3: Continue to run	Y	Y	0	Y	Y	Y	Y	Y	
y03	(Timer)	0.0 to 60.0 s	Y	Y	2.0	Y	Y	Y	Y	Y	
y04	(Baud rate)	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps	Y	Y	3	Y	Y	Y	Y	Y	
y05	(Data length selection)	0: 8 bit 1: 7 bits	Y	Y	0	Y	Y	Y	Y	Y	
y06	(Parity selection)	0: None (Stop bit: 2 bits) 1: Even number parity (Stop bit: 1 bits) 2: Odd number parity (Stop bit: 1 bits) 3: None (Stop bit: 1 bits)	Y	Y	0	Y	Y	Y	Y	Y	
y07	(Stop bit selection)	0: 2 bits 1: 1 bits	Y	Y	0	Y	Y	Y	Y	Y	
y08	(Communication time-out detection timer)	0: Not check of the time-out 1 to 60 s	Y	Y	0	Y	Y	Y	Y	Y	
y09	(Response interval time)	0.00 to 1.00 s	Y	Y	0.01	Y	Y	Y	Y	Y	
y10	(Protocol selection)	0: Modbus RTU protocol 1: FRENIC Loader protocol (SX protocol) 2: Fuji general-purpose inverter protocol	Y	Y	1	Y	Y	Y	Y	Y	
y11	RS-485 Communication 2 (Station address)	1 to 255	N	Y	1	Y	Y	Y	Y	Y	
y12	(Communications error processing)	0: Immediately trip with alarm E_r-P 1: Trip with alarm E_r-P after running for the period specified by timer y13 2: Retry during the period specified by timer y13. If the retry fails, trip with alarm E_r-P . If it succeeds, continue to run. 3: Continue to run	Y	Y	0	Y	Y	Y	Y	Y	
y13	(Timer)	0.0 to 60.0 s	Y	Y	2.0	Y	Y	Y	Y	Y	
y14	(Baud rate)	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps	Y	Y	3	Y	Y	Y	Y	Y	
y15	(Data length selection)	0: 8 bits 1: 7 bits	Y	Y	0	Y	Y	Y	Y	Y	
y16	(Parity selection)	0: None (Stop bit: 2 bits) 1: Even number parity (Stop bit: 1 bits) 2: Odd number parity (Stop bit: 1 bits) 3: None (Stop bit: 1 bits)	Y	Y	0	Y	Y	Y	Y	Y	
y17	(Stop bit selection)	0: 2 bits 1: 1 bit	Y	Y	0	Y	Y	Y	Y	Y	
y18	(Communication time-out detection timer)	0: Not check of the time-out 1 to 60 s	Y	Y	0	Y	Y	Y	Y	Y	
y19	(Response interval time)	0.00 to 1.00 s	Y	Y	0.01	Y	Y	Y	Y	Y	
y20	(Protocol selection)	0: Modbus RTU protocol 1: FRENIC Loader protocol (SX protocol) 2: Fuji general-purpose inverter protocol	Y	Y	0	Y	Y	Y	Y	Y	

5.2 Function Codes Table

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control					Related page
						V/f	PG V/f	w/PG	Torque control	PM	
y21	Built-in CAN communication (Node ID)	1 to 127	N	Y	1	Y	Y	Y	Y	Y	5-280
y24	(Baud rate)	0: 125kbps 1: 20kbit/s 2: 50kbit/s 3: 125kbit/s 4: 250kbit/s 5: 500kbit/s 6: 800kbit/s 7: 1Mbit/s	N	Y	0	Y	Y	Y	Y	Y	
y25	Map the inverter function code1 to RPDO No. 3	0000 to FFFF (in hexadecimal) Data mapped I/O (Write)	N	Y	0000	Y	Y	Y	Y	Y	
y26	Map the inverter function code2 to RPDO No. 3					Y	Y	Y	Y	Y	
y27	Map the inverter function code3 to RPDO No. 3					Y	Y	Y	Y	Y	
y28	Map the inverter function code4 to RPDO No. 3					Y	Y	Y	Y	Y	
y29	Map the inverter function code1 to TPDO No. 3					Y	Y	Y	Y	Y	
y30	Map the inverter function code2 to TPDO No. 3					Y	Y	Y	Y	Y	
y31	Map the inverter function code3 to TPDO No. 3					Y	Y	Y	Y	Y	
y32	Map the inverter function code4 to TPDO No. 3					Y	Y	Y	Y	Y	
y33	(Operation selection)					0: Disable, 1: Enable	Y	Y	0	Y	
y34	(Communications error processing)	This function code is valid in case of y36=-4 or -5. 1: After the time specified by [y35], coast to a stop and trip with [ert]. 2: If the inverter receives any data within the time specified by [y35], ignore the communications error. After the timeout, coast to a stop and trip with [ert]. 10: Immediately decelerate to a stop. Issue [ert] after stopping. 11: After the time specified by [y35], decelerate to a stop. Issue [ert] after stopping. 12: If the inverter receives any data within the time specified by [y35], ignore the communications error. After the timeout, decelerate to a stop and trip with [ert]. Otherwise: Immediately coast to a stop and trip with [ert].	Y	Y	0	Y	Y	Y	Y	Y	
y35	(Communication time-out detection timer)	0.0 to 60.0	Y	Y	0.0	Y	Y	Y	Y	Y	
y36	(Operation selection in abort status) *5	-5 to 3	Y	Y	1	Y	Y	Y	Y	Y	
y95	Data clear processing for communications error	0: Do not clear the data of function codes Sxx when a communications error occurs. (compatible with the conventional inverters) 1: Clear the data of function codes S01/S05/S19 when a communications error occurs. 2: Clear the run command assigned bit of function code S06 when a communications error occurs. 3: Clear both data of S01/S05/S19 and run command assigned bit of S06 when a communications error occurs. * Related alarms: <i>E-rB, E-rP, E-r4, E-r5, E-rL</i>	Y	Y	0	Y	Y	Y	Y	Y	5-280
y97	Communication data storage selection	0: Store into nonvolatile memory (Rewritable times are limited) 1: Write into temporary memory (Rewritable times are unlimited) 2: Save all data from temporary memory to nonvolatile memory (After all save, return to Data 1)	Y	Y	0	Y	Y	Y	Y	Y	
y98	Bus link function (Mode selection)	Frequency command Run command 0: Follow H30 Follow H30 1: Bus link Follow H30 2: Follow H30 Bus link 3: Bus link Bus link	Y	Y	0	Y	Y	Y	Y	Y	
y99	Loader link function (Mode selection)	Frequency command Run command 0: Follow H30, y98 Follow H30, y98 1: FRENIC loader Follow H30, y98 2: Follow H30, y98 FRENIC loader 3: FRENIC loader FRENIC loader	Y	N	0	Y	Y	Y	Y	Y	5-281

*5: Available at ROM version 0300 or later.

■ K codes: Keypad functions for TP-A1-E2C

Code	Name	Data setting range	Change when running	Data copying	Factory Default	Drive control				Related page	
						V/f	PG V/f	w/ PG	Torque control		PM
K01	Multifunction keypad TP-A1-E2C (Language selection)	0: Japanese 1: English 2: German 3: French 4: Spanish 5: Italian 6: Chinese 8: Russian 9: Greek 10: Turkish 11: Polish 12: Czech 13: Swedish 14: Portuguese 15: Dutch 16: Malay 17: Vietnamese 18: Thai 19: Indonesian 100: User-Customizable language	Y	Y	J: 0 C: 6 AEUK: 1	Y	Y	Y	Y	Y	-
K02	(Backlight OFF time)	0: Always OFF 1 to 30 min	Y	Y	5	Y	Y	Y	Y	Y	-
K03	(Backlight brightness adjustment)	0 (dark) - 10 (bright)	Y	Y	5	Y	Y	Y	Y	Y	-
K04	(Contrast adjustment)	0 (low) - 10 (high)	Y	Y	5	Y	Y	Y	Y	Y	-
K08	(LCD monitor status display)	0: Not displayed 1: Fully displayed	Y	Y	1	Y	Y	Y	Y	Y	-
K15	(Sub-monitor display selection)	0: Operation guide display 1: Bar graph display	Y	Y	0	Y	Y	Y	Y	Y	-
K16	(Sub-monitor 1 display selection)	1 to 35 1: Output frequency 1 (before slip compensation) 2: Output frequency 2 (after slip compensation)	Y	Y	13	Y	Y	Y	Y	Y	-
K17	(Sub-monitor 2 display selection)	3: Reference frequency 4: Motor rotation speed 5: Load rotation speed 6: Line speed 7: Transport time for specified length 8: Speed (%) 13: Output current 14: Output voltage 18: Calculated torque 19: Input power 25: Load factor 26: Motor output 27: Analog input monitor 31: Current position pulse 32: Position error pulse 33: Torque current (%) 34: Magnetic flux command (%) 35: Input watt-hour	Y	Y	19	Y	Y	Y	Y	Y	-
K20	(Bar graph 1 display selection)	1: Output frequency 1 (before slip compensation) 13: Output current 14: Output voltage	Y	Y	1	Y	Y	Y	Y	Y	-
K21	(Bar graph 2 display selection)	18: Calculated torque 19: Input power	Y	Y	13	Y	Y	Y	Y	Y	-
K22	(Bar graph 3 display selection)	25: Load factor 26: Motor output	Y	Y	19	Y	Y	Y	Y	Y	-
K91	(< key shortcut selection)	0: disabled	Y	Y	0	Y	Y	Y	Y	Y	-
K92	(> key shortcut selection)	11 to 99: respective mode	Y	Y	64	Y	Y	Y	Y	Y	-

The keypad function K codes are used when the multi-function keypad (TP-A1-E2C) is connected. For details about the K codes, refer to the instruction manual for the keypad.