6.1 Overview of Function Codes

Function codes enable the FRENIC-HVAC series of inverters to be set up to match your system requirements.

The function codes are classified into these groups: Fundamental Functions (F codes), Extension Terminal Functions (E codes), Control Functions (C codes), Motor 1 Parameters (P codes), High Performance Functions (H and H1 codes), Application Functions 1 (J codes), PID Control 1 (J1 codes), PID Control 2 (J2 codes), External PID Control 1 (J5 codes), External PID Control 2 and 3 (J6 codes), Application Functions 2 (d codes), Customizable Logic Functions (U and U1 codes), Link Functions (y codes), Timer Operation Functions (T codes), Keypad Functions (K codes), and Option Functions (o codes). To determine the property of each function code, set data to the function code.

This manual does not contain the descriptions of Option Functions (o codes). For o codes, refer to the instruction manual for each option.

6.2 Function Code Tables

The following descriptions supplement those given in the function code tables on page 6-3 and subsequent pages.

■ Changing, validating, and saving function code data when the inverter is running

Function codes are indicated by the following based on whether they can be changed or not when the inverter is running:

Notation	Change when running	Validating and saving function code data
Y*	Possible	If the data of the codes marked with Y* is changed with ▲ / ▼ / ◀ / ▶ keys, the change will immediately take effect; however, the change is not saved into the inverter's memory. To save the change, press the SET key. If you press the PRG key without pressing the SET key to exit the current state, then the changed data will be discarded and the previous data will take effect for the inverter operation.
Y	Possible	Even if the data of the codes marked with Y is changed with ▲ / ▼ / ◀ / ▶ keys, the change will not take effect. Pressing the SET key will make the change take effect and save it into the inverter's memory.
N	Impossible	—

■ Copying data

The keypad is capable of copying the function code data stored in the inverter's memory into the keypad's memory (PRG > 2(Function Code) > 4(Data Copy)). With this feature, you can easily transfer the data saved in a source inverter to other destination inverters.

If the specifications of the source and destination inverters differ, some code data may not be copied to ensure safe operation of your power system. Whether data will be copied or not is detailed with the following symbols in the "Data copying" column of the function code tables given on page 6-3 and subsequent pages.

Y: Will be copied unconditionally.
Y1: Will not be copied if the rated capacity differs from the source inverter.
N: Will not be copied. (The function code marked with "N" is not subject to the Verify operation, either.)

■ Using negative logic for programmable I/O terminals

The negative logic signaling system can be used for the programmable, digital input and output terminals by setting the function code data specifying the properties for those terminals. Negative logic refers to the inverted ON/OFF (logical value 1 (true)/0 (false)) state of input or output signal. An active-ON signal (the function takes effect if the terminal is short-circuited.) in the normal logic system is functionally equivalent to active-OFF signal (the function takes effect if the terminal is opened.) in the negative logic system. Active-ON signals can be switched to active-OFF signals, and vice versa, with the function code data setting, except some signals.

To set the negative logic system for an input or output terminal, enter data of 1000s (by adding 1000 to the data for the normal logic) in the corresponding function code.

Example: "Coast to a stop" command ***BX*** assigned to any of digital input terminals [X1] to [X7] using any of function codes E01 through E07.

Function code data	Description
7	Turning ***BX*** ON causes the motor to coast to a stop. (Active-ON)
1007	Turning ***BX*** OFF causes the motor to coast to a stop. (Active-OFF)

The following tables list the function codes available for the FRENIC-HVAC series of inverters.

F codes: Fundamental Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
F00	Data Protection	0: Disable both data protection and digital reference protection 1: Enable data protection and disable digital reference protection 2: Disable data protection and enable digital reference protection 3: Enable both data protection and digital reference protection	Y	Y	0	6-41
F01	Frequency Command 1	0: ⏶ / ⏷ / ⏴ / ⏵ keys on keypad 1: Voltage input to terminal [12] (-10 to +10 VDC) 2: Current input to terminal [C1] (4 to 20 mA DC) 3: Sum of voltage and current inputs to terminals [12] and [C1] 5: Voltage input to terminal [V2] (0 to 10 VDC) 7: Terminal command ***UP/DOWN*** control 8: ⏶ / ⏷ / ⏴ / ⏵ keys on keypad (balanceless-bumpless switching available) 10: Pattern operation	N	Y	0	6-42
F02	Operation Method	0: FWD/REV/STOP keys on keypad (Motor rotational direction specified by terminal command ***FWD***/***REV***) 1: External signals (Terminal command ***FWD*** or ***REV***) 2: FWD/STOP keys on keypad (forward) 3: REV/STOP keys on keypad (reverse)	N	Y	0	6-49
F03	Maximum Frequency 1	25.0 to 120.0 Hz	N	Y	200V class series A: 60.0 E: 50.0 400V class series AE: 50.0	6-50
F04	Base Frequency 1	25.0 to 120.0 Hz	N	Y	200V class series A: 60.0 E: 50.0 400V class series AE: 50.0	
F05	Rated Voltage at Base Frequency 1	OFF: Disable AVR (Output a voltage in proportion to input voltage) 80-240 V: Output an AVR-controlled voltage (200 V class series) 160-500 V: Output an AVR-controlled voltage (400 V class series)	N	Y	A: 220/415 E: 230/400	
F06	Maximum Output Voltage 1	80-240 V: Output an AVR-controlled voltage (200 V class series) 160-500 V: Output an AVR-controlled voltage (400 V class series)	N	Y		
F07	Acceleration Time 1	0.00 to 3600.00 s	Y	Y	20.00	6-53
F08	Deceleration Time 1	Note: Entering 0.00 cancels the acceleration time, requiring external soft-start.	Y	Y	20.00	
F09	Torque Boost 1	0.0% to 20.0% (percentage with respect to "F05: Rated Voltage at Base Frequency 1")	Y	Y	***1**	6-55
F10	Electronic Thermal Overload Protection for Motor 1 (Select motor characteristics)	1: For a general-purpose motor with shaft-driven cooling fan 2: For an inverter-driven motor, non-ventilated motor, or motor with separately powered cooling fan	Y	Y	1	
F11	(Overload detection level)	OFF: Disable 1% to 135% of the inverter rated current	Y	Y1	***2**	
F12	(Thermal time constant)	0.5 to 75.0 min	Y	Y	***3**	
F14	Restart Mode after Momentary Power Failure (Mode selection)	0: Trip immediately 1: Trip after a recovery from power failure 3: Continue to run, for heavy inertia or general loads 4: Restart at the frequency at which the power failure occurred, for general loads 5: Restart at the starting frequency	Y	Y	E: 0 A: 1	6-59
F15	Frequency Limiter (High)	0.0 to 120.0 Hz	Y	Y	70.0	6-66
F16	(Low)	0.0 to 120.0 Hz	Y	Y	0.0	
F18	Bias (Frequency command 1)	-100.00% to 100.00%	Y*	Y	0.00	6-67
F20	DC Braking 1 (Braking starting frequency)	0.0 to 60.0 Hz	Y	Y	0.0	
F21	(Braking level)	0% to 60% on the basis of inverter rated current	Y	Y	0	
F22	(Braking time)	OFF (Disable); 0.01 to 30.00 s	Y	Y	OFF	
F23	Starting Frequency 1	0.1 to 60.0 Hz	Y	Y	0.5	6-69
F24	(Holding time)	0.00 to 10.00 s	Y	Y	0.00	
F25	Stop Frequency	0.1 to 60.0 Hz	Y	Y	0.2	

The shaded function codes (▭) are applicable to the quick setup.

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*1 The factory default differs depending upon the inverter's capacity. See Table A.

*2 The motor rated current is automatically set. See Table B (function code P03).

*3 5.0 min for inverters of 22 kW or below; 10.0 min for those of 30 kW or above.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
F26	Motor Sound (Carrier frequency)	200 V class series 0.75 to 16 kHz (0.75 to 18.5 kW) 0.75 to 10 kHz (22 to 75 kW) 0.75 to 6 kHz (90 kW) 400 V class series 0.75 to 16 kHz (0.75 to 37 kW) 0.75 to 10 kHz (45 to 90 kW) 0.75 to 6 kHz (110 to 630 kW) 0.75 to 4 kHz (710 kW)	Y	Y	2	6-70
F27	(Tone)	0: Level 0 (Inactive) 1: Level 1 2: Level 2 3: Level 3	Y	Y	0	
F29	Analog Output [FM1] (Mode selection)	0: Output in voltage (0 to 10 VDC) 1: Output in current (4 to 20 mA DC) 2: Output in current (0 to 20 mA DC)	Y	Y	0	
F30	(Voltage adjustment)	0% to 300%	Y*	Y	100	
F31	Analog Output [FM1] (Function)	Select a function to be monitored from the followings. 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 amount 9: DC link bus voltage 10: Universal AO 13: Motor output 14: Calibration (+) 15: PID command (SV) 16: PID output (MV) 18: Inverter heat sink temperature (200°C/10 V) 20: Reference frequency 50: PID feedback amount 1 (PV1) 51: PID command 1 (SV1) 52: PID deviation 1 (ERR1) (Note 1) 53: PID final deviation (ERR) (Note 1) 54: PID feedback amount 2 (PV2) 55: PID command 2 (SV2) 56: PID deviation 2 (ERR2) (Note 1) 60: External PID feedback amount 1 (EPID1-PV) 61: External PID command 1 (EPID1-SV) 62: External PID deviation 1 (EPID1-ERR) (Note 1) 63: External PID final deviation 1 (EPID-ERR) (Note 1) 65: External PID final output 1 (EPID1-OUT) 70: External PID feedback amount 2 (EPID2-PV) 71: External PID command 2 (EPID2-SV) 72: External PID deviation 2 (EPID2-ERR) (Note 1) 75: External PID final output 2 (EPID2-OUT) 80: External PID feedback amount 3 (EPID3-PV) 81: External PID command 3 (EPID3-SV) 82: External PID deviation 3 (EPID3-ERR) (Note 1) 85: External PID final output 3 (EPID3-OUT) 111: Customizable logic output signal 1 112: Customizable logic output signal 2 113: Customizable logic output signal 3 114: Customizable logic output signal 4 115: Customizable logic output signal 5 116: Customizable logic output signal 6 117: Customizable logic output signal 7 (Note 1) Deviation output is supported only by option terminal [Ao] (o09).	Y	Y	0	6-71
F32	Pulse Output [FM2] (Mode selection)	0: Voltage (0 to +10 VDC) 1: Current (4 to +20 mA DC) 2: Current (0 to +20 mA DC)	Y	Y	0	6-74
F34	(Voltage adjustment)	0 to 300%	Y*	Y	0	
F35	(Function)	Same as F31.	Y	Y	0	
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 (Variable torque load during ACC/DEC) 4: Auto energy saving (Constant torque load during ACC/DEC) 5: Auto energy saving (Auto torque boost during ACC/DEC)	N	Y	1	6-75
F40	Torque Limiter 1 (Driving)	OFF: Disable 20% to 150%: Torque limiter level	Y	Y	OFF	6-78
F41	(Braking)					
F42	Drive Control Selection 1	0: V/f control with slip compensation inactive 1: Dynamic torque vector control 2: V/f control with slip compensation active	N	Y	0	6-80
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	6-82
F44	(Level)	20% to 120% (Assuming the inverter rated current as 100%.)	Y	Y	120	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

E codes: Extension Terminal Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
E01	Terminal [X1] Function	Selecting function code data assigns the corresponding function to terminals [X1] to [X7] as listed below.	N	Y	0	6-84
E02	Terminal [X2] Function	0 (1000): Select multistep frequency (0 to 1 steps) (***SS1***)	N	Y	1	
E03	Terminal [X3] Function	1 (1001): Select multistep frequency (0 to 3 steps) (***SS2***)	N	Y	6	
E04	Terminal [X4] Function	2 (1002): Select multistep frequency (0 to 7 steps) (***SS4***)	N	Y	7	
E05	Terminal [X5] Function	3 (1003): Select multistep frequency (0 to 15 steps) (***SS8***)	N	Y	8	
E06	Terminal [X6] Function	4 (1004): Select ACC/DEC time (2 steps) (***RT1***)	N	Y	11	
E07	Terminal [X7] Function	5 (1005): Select ACC/DEC time (4 steps) (***RT2***)	N	Y	35	
		6 (1006): Enable 3-wire operation (***HLD***)				
		7 (1007): Coast to a stop (***BX***)				
		8 (1008): Reset alarm (***RST***)				
		9 (1009): Enable external alarm trip (9 = Active OFF, 1009 = Active ON) (***THR***)				
		11 (1011): Select frequency command 2/1 (***Hz2/Hz1***)				
		13: Enable DC braking (***DCBRK***)				
		14 (1014): Select torque limiter level 2/1 (***TL2/TL1***)				
		15: Switch to commercial power (50 Hz) (***SW50***)				
		16: Switch to commercial power (60 Hz) (***SW60***)				
		17 (1017): UP (Increase output frequency) ***(UP)***				
		18 (1018): DOWN (Decrease output frequency) ***(DOWN)***				
		19 (1019): Enable data change with keypad ***(WE-KP)***				
		20 (1020): Cancel PID control ***(Hz/PID)***				
		21 (1021): Switch normal/inverse operation (***IVS***)				
		22 (1022): Interlock (***IL***)				
		24 (1024): Enable communications link via RS-485 or fieldbus (option) (***LE***)				
		25 (1025): Universal DI (***U-DI***)				
		26 (1026): Enable auto search for idling motor speed at starting (***STM***)				
		30 (1030): Force to stop (30 = Active OFF, 1030 = Active ON) (***STOP***)				
		33 (1033): Reset PID integral and differential components (***PID-RST***)				
		34 (1034): Hold PID integral component (***PID-HLD***)				
		35 (1035): Select local (keypad) operation (***LOC***)				
		38 (1038): Enable run commands (***RE***)				
		39: Protect motor from dew condensation (***DWP***)				
		40: Enable integrated sequence to switch to commercial power (50 Hz) (***ISW50***)				
		41: Enable integrated sequence to switch to commercial power (60 Hz) (***ISW60***)				
		58 (1058): Reset UP/DOWN frequency (***STZ***)				
		72 (1072): Count the run time of commercial power-driven motor 1 (***CRUN-M1***)				
		80 (1080): Cancel customizable logic (***CLC***)				
		81 (1081): Clear all customizable logic timers (***CLTC***)				
		87 (1087): Run command 2/1 (***FR2/FR1***)				
		88: Run forward 2 (***FWD2***)				
		89: Run reverse 2 (***REV2***)				
		100: No function assigned (***NONE***)				
		131 (1131): Flowrate switch (***FS***)*				
		132 (1132): Filter clogging reverse rotation command (***FRC***)				
		133 (1133): Switch PID channel (***PID2/1***)				
		134: Switch to fire mode (***FMS***)				
		171 (1171): PID multistep command 1 (***PID-SS1***)				
		172 (1172): PID multistep command 2 (***PID-SS2***)				
		181 (1181): External PID multistep command (***EPID-SS1***)				
		182 (1182): External PID multistep command (***EPID-SS2***)				
		190 (1190): Cancel timer (***TMC***)				
		191 (1191): Enable timer 1 (***TM1***)				
		192 (1192): Enable timer 2 (***TM2***)				
		193 (1193): Enable timer 3 (***TM3***)				
		194 (1194): Enable timer 4 (***TM4***)				
		201 (1201): External PID control 1 ON command (***EPID1-ON***)				
		202 (1202): Cancel external PID control 1 (***%/EPID1***)				
		203 (1203): Switch normal/inverse operation under external PID control 1 (***EPID1-IVS***)				
		204 (1204): Reset external PID1 integral and differential components (***EPID1-RST***)				
		205 (1205): Hold external PID1 integral component (***EPID1-HLD***)				
		211 (1211): External PID control 2 ON command (***EPID2-ON***)				
		212 (1212): Cancel external PID control 2 (***%/EPID2***)				
		213 (1213): Switch normal/inverse operation under external PID control 2 (***EPID2-IVS***)				
		214 (1214): Reset external PID2 integral and differential components (***EPID2-RST***)				
		215 (1215): Hold external PID2 integral component (***EPID2-HLD***)				

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1500 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		221 (1221): External PID control 3 ON command (***EPID3-ON***) 222 (1222): Cancel external PID control 3 (***%/EPID3***) 223 (1223): Switch normal/inverse operation under external PID control 3 (***EPID3-IVS***) 224 (1224): Reset external PID3 integral and differential components (***EPID3-RST***) 225 (1225): Hold external PID3 integral component (***EPID3-HLD***) Setting the value in parentheses ( ) shown above assigns a negative logic output to a terminal. (True if OFF.) Setting the value of 1000s in parentheses ( ) shown above assigns a negative logic input to a terminal.				6-84
E10	Acceleration Time 2	0.00 to 3600.00 s Note: Entering 0.00 cancels the acceleration time, requiring external soft-start and -stop.	Y	Y	20.00	6-105
E11	Deceleration Time 2		Y	Y	20.00	
E12	Acceleration Time 3		Y	Y	20.00	
E13	Deceleration Time 3		Y	Y	20.00	
E14	Acceleration Time 4		Y	Y	20.00	
E15	Deceleration Time 4		Y	Y	20.00	
E16	Torque Limiter 2 (Driving)	OFF: Disable	Y	Y	OFF	
E17	(Braking)	20% to 150%: Torque limiter level	Y	Y	OFF	
E20	Terminal [Y1] Function	Selecting function code data assigns the corresponding function to terminals [Y1] to [Y5A/C] and [30A/B/C] as listed below. 0 (1000): Inverter running (***RUN***) 1 (1001): Frequency (speed) arrival signal (***FAR***) 2 (1002): Frequency (speed) detected (***FDT***) 3 (1003): Undervoltage detected (Inverter stopped) (***LU***) 5 (1005): Inverter output limiting (***IOL***) 6 (1006): Auto-restarting after momentary power failure (***IPF***) 7 (1007): Motor overload early warning (***OL***) 10 (1010): Inverter ready to run (***RDY***) 11: Switch motor drive source between commercial power and inverter output (For MC on commercial line) (***SW88***) 12: Switch motor drive source between commercial power and inverter output (For secondary side) (***SW52-2***) 13: Switch motor drive source between commercial power and inverter output (For primary side) (***SW52-1***) 15 (1015): Select ***AX*** terminal function (For MC on primary side) (***AX***) 16 (1016): Shifted to pattern operation stage (***TU***) 17 (1017): Pattern operation cycle completed (***TO***) 18 (1018): Pattern operation stage number (***STG1***) 19 (1019): Pattern operation stage number (***STG2***) 20 (1020): Pattern operation stage number (***STG4***) 22 (1022): Inverter output limiting with delay (***IOL2***) 25 (1025): Cooling fan in operation (***FAN***) 26 (1026): Auto-resetting (***TRY***) 27 (1027): Universal DO (***U-DO***) 28 (1028): Heat sink overheat early warning (***OH***) 30 (1030): Lifetime alarm (***LIFE***) 31 (1031): Frequency (speed) detected 2 (***FDT2***) 33 (1033): Reference loss detected (***REF OFF***) 35 (1035): Inverter output on (***RUN2***) 36 (1036): Overload prevention control (***OLP***) 37 (1037): Current detected (***ID***) 38 (1038): Current detected 2 (***ID2***) *10 42 (1042): PID alarm (***PID-ALM***) 43 (1043): Under PID control (***PID-CTL***) 44 (1044): Motor stopped due to slow flowrate under PID control (***PID-STP***)* 45 (1045): Low output torque detected (***U-TL***) 52 (1052): Running forward (***FRUN***) 53 (1053): Running reverse (***RRUN***) 54 (1054): In remote operation (***RMT***) 55 (1055): Run command entered (***AX2***) 56 (1056): Motor overheat detected by thermistor (***THM***) 59 (1059): Terminal [C1] wire break (***C1OFF***) 84 (1084): Maintenance timer (***MNT***) 87(1087): Frequency arrival signal (***FARFDT***) 95(1095): Running in fire mode (***FMRUN***) 98 (1098): Light alarm (***L-ALM***) 99 (1099): Alarm output (for any alarm) (***ALM***) 101(1101): EN terminal detection circuit error (***DECF***) 102(1102): EN terminal OFF (***ENOFF***)	N	Y	0	6-106
E21	Terminal [Y2] Function		N	Y	1	
E22	Terminal [Y3] Function		N	Y	2	
E23	Terminal [Y4] Function		N	Y	7	
E24	Terminal [Y5A/C] Function		N	Y	15	
E27	Terminal [30A/B/C] Function (Relay output)		N	Y	99	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1600 or later.
*10 Available at ROM version 2450 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		111 (1111): Customizable logic output signal 1 (***CLO1***) 112 (1112): Customizable logic output signal 2 (***CLO2***) 113 (1113): Customizable logic output signal 3 (***CLO3***) 114 (1114): Customizable logic output signal 4 (***CLO4***) 115 (1115): Customizable logic output signal 5 (***CLO5***) 116 (1116): Customizable logic output signal 6 (***CLO6***) 117 (1117): Customizable logic output signal 7 (***CLO7***) 190 (1190): In timer operation (***TMD***) 191 (1191): Timer 1 enabled (***TMD1***) 192 (1192): Timer 2 enabled (***TMD2***) 193 (1193): Timer 3 enabled (***TMD3***) 194 (1194): Timer 4 enabled (***TMD4***) 200 (1200): Under PID2 control (***PID2***) 201 (1201): PID1 alarm (***PV1-ALM***) 202 (1202): PID1 feedback error (***PV1-OFF***) 203 (1203): PID2 alarm (***PV2-ALM***) 204 (1204): PID2 feedback error (***PV2-OFF***) 211 (1211): Under external PID1 control (***EPID1-CTL***) 212 (1212): External PID1 output (***EPID1-OUT***) 213 (1213): Running under external PID1 (***EPID1-RUN***) 214 (1214): External PID1 alarm (***EPV1-ALM***) 215 (1215): External PID1 feedback error (***EPV1-OFF***) 221 (1221): Under external PID2 control (***EPID2-CTL***) 222 (1222): External PID2 output (***EPID2-OUT***) 223 (1223): Running under external PID2 (***EPID2-RUN***) 224 (1224): External PID2 alarm (***EPV2-ALM***) 225 (1225): External PID2 feedback error (***EPV2-OFF***) 231 (1231): Under external PID3 control (***EPID3-CTL***) 232 (1232): External PID3 output (***EPID3-OUT***) 233 (1233): Running under external PID3 (***EPID3-RUN***) 234 (1234): External PID3 alarm (***EPV3-ALM***) 235 (1235): External PID3 feedback error (***EPV3-OFF***) Setting the value in parentheses ( ) shown above assigns a negative logic output to a terminal. (True if OFF.) Setting the value of 1000s in parentheses ( ) shown above assigns a negative logic input to a terminal.				6-106
E30	Frequency Arrival (Hysteresis width)	0.0 to 10.0 Hz	Y	Y	2.5	6-118
E31	Frequency Detection 1 (Level)	0.0 to 120.0 Hz	Y	Y	200V class series A: 60.0 E: 50.0 400V class series AE: 50.0	6-119
E32	(Hysteresis width)	0.0 to 120.0 Hz	Y	Y	1.0	
E34	Overload Early Warning/Current Detection (Level)	OFF: Disable 1 to 150% of inverter rated current	Y	Y1	***2**	
E35	(Timer)	0.01 to 600.00s	Y	Y	10.00	
E37	Current Detection 2 (Level) *10	OFF: Disable 1 to 150% of inverter rated current	Y	Y1	***2**	
E38	(Timer) *10	0.01 to 600.00s	Y	Y	10.00	
E61	Terminal [12] Extended Function	0: None	N	Y	0	6-121
E62	Terminal [C1] Extended Function	1: Auxiliary frequency command 1	N	Y	0	
E63	Terminal [V2] Extended Function	2: Auxiliary frequency command 2 3: PID process command 1 4: PID process command 2 5: PID feedback value 1 12: Acceleration/deceleration time ratio setting 13: Upper limit frequency 14: Lower limit frequency 20: Analog signal input monitor 30: PID feedback value 2 31: Auxiliary input 1 to PID process command 32: Auxiliary input 2 to PID process command 33: Flowrate sensor* 41: External PID process command 1 42: External PID feedback value 1 43: External PID manual command 1 44: External PID process command 2 45: External PID feedback value 2 46: External PID manual command 2 47: External PID process command 3 48: External PID feedback value 3 49: External PID manual command 3	N	Y	0	
E64	Saving of Digital Reference Frequency	0: Automatic saving (when main power is turned OFF) 1: Saving by pressing (SET) key	Y	Y	1	6-122

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1500 or later.

*2 The motor rated current is automatically set. See Table B (function code P03).

*10 Available at ROM version 2450 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
E65	Reference Loss Detection (Continuous running frequency)	OFF: Cancel Decel: Decelerate to stop 20% to 120%	Y	Y	OFF	6-123
E80	Low Torque Detection (Level)	0% to 150%	Y	Y	20	6-124
E98	Terminal [FWD] Function	Selecting function code data assigns the corresponding function to terminals [FWD] and [REV] as listed below. 0 (1000): Select multistep frequency (0 to 1 steps) (***SS1***)	N	Y	98	6-124
E99	Terminal [REV] Function	1 (1001): Select multistep frequency (0 to 3 steps) (***SS2***) 2 (1002): Select multistep frequency (0 to 7 steps) (***SS4***) 3 (1003): Select multistep frequency (0 to 15 steps) (***SS8***) 4 (1004): Select ACC/DEC time (2 steps) (***RT1***) 5 (1005): Select ACC/DEC time (4 steps) (***RT2***) 6 (1006): Enable 3-wire operation (***HLD***) 7 (1007): Coast to a stop (***BX***) 8 (1008): Reset alarm (***RST***) 9 (1009): Enable external alarm trip (9 = Active OFF, 1009 = Active ON) (***THR***) 11 (1011): Select frequency command 2/1 (***Hz2/Hz1***) 13: Enable DC braking (***DCBRK***) 14 (1014): Select torque limiter level 2/1 (***TL2/TL1***) 15: Switch to commercial power (50 Hz) (***SW50***) 16: Switch to commercial power (60 Hz) (***SW60***) 17 (1017): UP (Increase output frequency) (***UP***) 18 (1018): DOWN (Decrease output frequency) (***DOWN***) 19 (1019): Enable data change with keypad (***WE-KP***) 20 (1020): Cancel PID control (***Hz/PID***) 21 (1021): Switch normal/inverse operation (***IVS***) 22 (1022): Interlock (***IL***) 24 (1024): Enable communications link via RS-485 or fieldbus (***LE***) 25 (1025): Universal DI (***U-DI***) 26 (1026): Enable auto search for idling motor speed at starting (***STM***) 30 (1030): Force to stop (30 = Active OFF, 1030 = Active ON) (***STOP***) 33 (1033): Reset PID integral and differential components (***PID-RST***) 34 (1034): Hold PID integral component (***PID-HLD***) 35 (1035): Select local (keypad) operation (***LOC***) 38 (1038): Enable run commands (***RE***) 39: Protect motor from dew condensation (***DWP***) 40: Enable integrated sequence to switch to commercial power (50 Hz) (***ISW50***) 41: Enable integrated sequence to switch to commercial power (60 Hz) (***ISW60***) 58 (1058): Reset UP/DOWN frequency (***STZ***) 72 (1072): Count the run time of commercial power-driven motor 1 (***CRUN-M1***) 80 (1080): Cancel customizable logic (***CLC***) 81 (1081): Clear all customizable logic timers (***CLTC***) 87 (1087): Run command 2/1 (***FR2/FR1***) 88: Run forward 2 (***FWD2***) 89: Run reverse 2 (***REV2***) 98: Run forward (***FWD***) 99: Run reverse (***REV***) 100: No function assigned (***NONE***) 131 (1131): Flowrate switch (***FS***)* 132 (1132): Filter clogging reverse rotation command (***FRC***) 133 (1133): Switch PID channel (***PID2/1***) 134: Switch to fire mode (***FMS***) 171 (1171): PID multistep command (***PID-SS1***) 172 (1172): PID multistep command (***PID-SS2***) 181 (1181): External PID multistep command (***EPID-SS1***) 182 (1182): External PID multistep command (***EPID-SS2***) 190 (1190): Cancel timer (***TMC***) 191 (1191): Enable timer 1 (***TM1***) 192 (1192): Enable timer 2 (***TM2***) 193 (1193): Enable timer 3 (***TM3***) 194 (1194): Enable timer 4 (***TM4***) 201 (1201): External PID control 1 ON command (***EPID1-ON***) 202 (1202): Cancel external PID control 1 (***%/EPID1***) 203 (1203): Switch normal/inverse operation under external PID control 1 (***EPID1-IVS***) 204 (1204): Reset external PID1 integral and differential components (***EPID1-RST***) 205 (1205): Hold external PID1 integral component (***EPID1-HLD***)	N	Y	99	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1500 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		211 (1211): External PID control 2 ON command (***EPID2-ON***) 212 (1212): Cancel external PID control 2 (***%/EPID2***) 213 (1213): Switch normal/inverse operation under external PID control 2 (***EPID2-IVS***) 214 (1214): Reset external PID2 integral and differential components (***EPID2-RST***) 215 (1215): Hold external PID2 integral component (***EPID2-HLD***) 221 (1221): External PID control 3 ON command (***EPID3-ON***) 222 (1222): Cancel external PID control 3 (***%/EPID3***) 223 (1223): Switch normal/inverse operation under external PID control 3 (***EPID3-IVS***) 224 (1224): Reset external PID3 integral and differential components (***EPID3-RST***) 225 (1225): Hold external PID3 integral component (***EPID3-HLD***) Setting the value in parentheses ( ) shown above assigns a negative logic output to a terminal. (True if OFF.) Setting the value of 1000s in parentheses ( ) shown above assigns a negative logic input to a terminal.				6-124

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

C codes: Control Functions of Frequency

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
C01	Jump Frequency 1	0.0 to 120.0 Hz	Y	Y	0.0	6-125
C02	2		Y	Y	0.0	
C03	3		Y	Y	0.0	
C04	(Hysteresis width)	0.0 to 30.0 Hz	Y	Y	3.0	
C05	Multistep Frequency 1	0.00 to 120.00 Hz	Y	Y	0.00	
C06	2		Y	Y	0.00	
C07	3		Y	Y	0.00	
C08	4		Y	Y	0.00	
C09	5		Y	Y	0.00	
C10	6		Y	Y	0.00	
C11	7		Y	Y	0.00	
C12	8		Y	Y	0.00	
C13	9		Y	Y	0.00	
C14	10		Y	Y	0.00	
C15	11		Y	Y	0.00	
C16	12		Y	Y	0.00	
C17	13		Y	Y	0.00	
C18	14		Y	Y	0.00	
C19	15		Y	Y	0.00	
C21	Pattern Operation (Mode selection)	0: Carry out a single cycle of the specified pattern operation and stop the inverter output 1: Carry out the specified pattern operation repeatedly and stop the inverter output upon receipt of a stop command. 2: Carry out a single cycle of the specified pattern operation and continue to run at the last reference frequency.	N	Y	0	6-127
C22	Pattern Operation (Stage 1)	0.00 to 6000.00 s	Y	Y	0.00	6-128
C23	(Stage 2)	FWD/RED 1 to 4			FWD 1	
C24	(Stage 3)					
C25	(Stage 4)					
C26	(Stage 5)					
C27	(Stage 6)					
C28	(Stage 7)					
C30	Frequency Command 2	0: Enable ⌃ / ⌄ keys on the keypad 1: Voltage input to terminal [12] (-10 to +10 VDC) 2: Current input to terminal [C1] (4 to 20 mA DC) 3: Sum of voltage and current inputs to terminals [12] and [C1] 5: Voltage input to terminal [V2] (0 to 10 VDC) 7: Terminal command ***UP***/***DOWN*** control 8: Enable ⌃ / ⌄ keys on the keypad (balanceless-bumpless switching available) 10: Pattern operation	N	Y	2	6-130
C31	Analog Input Adjustment for [12] (Offset)	-5.0% to 5.0%	Y*	Y	0.0	
C32	(Gain)	0.00% to 200.00%	Y*	Y	100.00	
C33	(Filter time constant)	0.00 to 5.00 s	Y	Y	0.05	
C34	(Gain base point)	0.00% to 100.00%	Y*	Y	100.00	
C35	(Polarity)	0: Bipolar 1: Unipolar	N	Y	1	
C36	Analog Input Adjustment for [C1] (Offset)	-5.0% to 5.0%	Y*	Y	0.0	
C37	(Gain)	0.00% to 200.00%	Y*	Y	100.00	
C38	(Filter time constant)	0.00 to 5.00s	Y	Y	0.05	
C39	(Gain base point)	0.00% to 100.00%	Y*	Y	100.00	
C40	Terminal [C1] Input Range Selection	0: 4 to 20 mA 1: 0 to 20 mA	N	Y	0	
C41	Analog Input Adjustment for [V2] (Offset)	-5.0% to 5.0%	Y*	Y	0.0	
C42	(Gain)	0.00% to 200.00%	Y*	Y	100.00	
C43	(Filter time constant)	0.00 to 5.00 s	Y	Y	0.05	
C44	(Gain base point)	0.00% to 100.00%	Y*	Y	100.00	
C45	(Polarity)	0: Bipolar 1: Unipolar	N	Y	1	
C53	Selection of Normal/Inverse Operation (Frequency command 1)	0: Normal operation 1: Inverse operation	Y	Y	0	6-131
C55	Analog Input Adjustment for Terminal [12] (Bias value)	-100.00 to 100.00%	Y	Y	0.00	
C56	(Bias base point)	0.00 to 100.00%	Y	Y	0.00	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
C58	Analog Input Adjustment for Terminal [12] (Display unit)	1: none 2: % 4: r/min 7: kW Flowrate 20: m^3/s 21: m^3/min 22: m^3/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 (Pound per square inch) 47: mWG 48: inWG Temperature 60: K 61: °C 62: °F Density 80: ppm	Y	Y	2	6-132
C59	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	6-132
C60	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
C61	Analog Input Adjustment for Terminal [C1] (Bias value)	-100.00 to 100.00%	Y	Y	0.00	6-133
C62	(Bias base point)	0.00 to 100.00%	Y	Y	0.00	
C64	(Display unit)	Same as C58.	Y	Y	2	6-134
C65	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	
C66	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
C67	Analog Input Adjustment for Terminal [V2] (Bias value)	-100.00 to 100.00%	Y	Y	0.00	6-135
C68	(Bias base point)	0.00 to 100.00%	Y	Y	0.00	
C70	(Display unit)	Same as C58.	Y	Y	2	
C71	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	6-135
C72	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
C94	Jump Frequency 4 *10	0.0 to 120.0 Hz	Y	Y	0.0	6-125
C95	5 *10		Y	Y	0.0	
C96	6 *10		Y	Y	0.0	

P codes: Motor 1 Parameters

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
P01	Motor 1 (No. of poles)	2 to 22 poles	N	Y1	4	6-137
P02	(Rated capacity)	0.01 to 1000.00 kW (when P99 = 0 or 4) 0.01 to 1000.00 HP (when P99 = 1)	N	Y1	***4**	
P03	(Rated current)	0.00 to 2000.00 A	N	Y1	***4**	
P04	(Auto-tuning)	0: Disable 1: Tune the motor while it is stopped (%R1, %X) 2: Tune the motor while it is rotating under V/f control (%R1, %X, no-load current)	N	N	0	6-138
P05	(Online-tuning)	0: Disable 1: Enable	Y	Y	0	6-139
P06	(No-load current)	0.00 to 2000.00 A	N	Y1	***4**	
P07	(%R1)	0.00% to 50.00%	Y	Y1	***4**	
P08	(%X)	0.00% to 50.00%	Y	Y1	***4**	
P10	(Slip compensation response time)	0.01 to 10.00 s	Y	Y1	0.50	6-140
P12	(Rated slip frequency)	0.00 to 15.00 Hz	N	Y1	***4**	
P99	Motor 1 Selection	0: Motor characteristics 0 (Fuji standard motors, 8-series) 1: Motor characteristics 1 (HP rating motors) 4: Other motors	N	Y1	AE: 0	

The shaded function codes ( ) are applicable to the quick setup.

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*4 The motor parameters are set by capacities. See Table B.

*10 Available at ROM version 2450 or later.

H codes: High Performance Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
H03	Data Initialization	0: Disable initialization 1: Initialize all function code data to factory defaults 2: Initialize motor 1 parameters 10: Initialize real-time clock information 11: Initialize function code data except communication function codes 12: Initialize U code data (Customizable logic function codes) 71: Initialize according to application (Compressor) 72: Initialize according to application (Fan) 73: Initialize according to application (Single pump)	N	N	0	6-141
H04	Auto-reset (Times)	OFF: Disable; 1 to 20	Y	Y	OFF	6-146
H05	(Reset interval)	0.5 to 60.0 s	Y	Y	5.0	
H06	Cooling Fan ON/OFF Control	0: Disable (Always in operation) 1: Enable (ON/OFF controllable)	Y	Y	1	6-148
H07	Acceleration/Deceleration Pattern	0: Linear 1: S-curve (Weak) 2: S-curve (Strong) 3: Curvilinear	Y	Y	0	
H08	Rotational Direction Limitation	0: Disable 1: Enable (Reverse rotation inhibited) 2: Enable (Forward rotation inhibited) 3: Enable (Reverse rotation inhibited, setting only) 4: Enable (Forward rotation inhibited, setting only)	N	Y	0	
H09	Starting Mode (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	0	
H11	Deceleration Mode	0: Normal deceleration 1: Coast-to-stop	Y	Y	0	6-151
H12	Instantaneous Overcurrent Limiting (Mode selection)	0: Disable 1: Enable	Y	Y	1	
H13	Restart Mode after Momentary Power Failure (Restart time)	0.1 to 20.0 s	Y	Y1	***1**	
H14	(Frequency fall rate)	Inherit: With the selected deceleration time 0.01 to 100.00 Hz/s Auto: With the current limiter	Y	Y	Auto	
H15	(Continuous running level)	200 to 300 V (200 V class series) 400 to 600 V (400 V class series)	Y	Y1	235/470	
H16	(Allowable momentary power failure time)	Auto: Automatically determined by inverter 0.0 to 30.0 s	Y	Y	Auto	
H26	Thermistor (for motor) (Mode selection)	0: Disable 1: PTC (The inverter immediately trips with OH4 displayed.) 2: PTC (The inverter issues output signal ***THM*** and continues to run.)	Y	Y	0	
H27	(Level)	0.00 to 5.00 V	Y	Y	0.35	
H30	Communications 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	6-153
H42	Capacitance of DC Link Bus Capacitor	Meas (Measure initial value), Failed (Measurement failed), 2 to 65535 Indication for replacement of DC link bus capacitor	Y	N	-	6-155
H43	Cumulative Run Time of Cooling Fan	Indication for replacement of cooling fan 0 to 99990 (in units of 10 hours)	Y	N	-	
H44	Startup Counter for Motor 1	Indication of cumulative startup count 0 to 65535	Y	N	-	6-158
H45	Mock Alarm	0: Disable 1: Enable (Once a mock alarm occurs, the data automatically returns to 0.)	Y	N	0	6-159
H46	Starting Mode (Auto search delay time 2)	0.1 to 20.0 s	Y	Y1	***4**	
H47	Initial Capacitance of DC Link Bus Capacitor	Meas (Measure initial value), Failed (Measurement failed), 2 to 65535 Indication for replacement of DC link bus capacitor	Y	N	-	
H48	Cumulative Run Time of Capacitors on Printed Circuit Boards	Indication for replacement of capacitors 0 to 99990 (in units of 10 hours)	Y	N	-	6-155 6-159
H49	Starting Mode (Auto search delay time 1)	0.0 to 10.0 s	Y	Y	0.0	6-159

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*1 The factory default differs depending upon the inverter's capacity. See Table A.

*4 The motor parameters are set by capacities. See Table B.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
H50	Non-linear V/f Pattern 1 (Frequency)	OFF: Cancel, 0.1 to 120.0 Hz	N	Y	***1**	6-159
H51	(Voltage)	0-240 V: Output an AVR-controlled voltage (200 V class series) 0-500 V: Output an AVR-controlled voltage (400 V class series)	N	Y1	***1**	
H52	Non-linear V/f Pattern 2 (Frequency)	OFF: Cancel, 0.1 to 120.0 Hz	N	Y	OFF	
H53	(Voltage)	0-240 V: Output an AVR-controlled voltage (200 V class series) 0-500 V: Output an AVR-controlled voltage (400 V class series)	N	Y1	0	
H56	Deceleration Time for Forced Stop	0.00 to 3600 s	Y	Y	20.0	
H61	Multistep Frequency + UP/DOWN Control (Initial frequency setting)	1: Last UP/DOWN command value on releasing the run command 13 to 106: Multistep frequency + UP/DOWN command (Initial value to be preserved)	N	Y	1	6-160
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	6-164
H64	(Lower limiting frequency)	Inherit: Depends on F16 (Frequency limiter, Low) 0.1 to 60.0 Hz	Y	Y	2.0	
H68	Slip Compensation 1 (Operating conditions)	0: Enable during ACC/DEC and at base frequency or above 1: Disable during ACC/DEC and enable at base frequency or above 2: Enable during ACC/DEC and disable at base frequency or above 3: Disable during ACC/DEC and at base frequency or above	N	Y	0	
H69	Automatic Deceleration (Mode selection)	0: Disable 2: Torque limit control with Force-to-stop if actual deceleration time exceeds three times the specified one 3: DC link bus voltage control with Force-to-stop if actual deceleration time exceeds three times the specified one 4: Torque limit control with Force-to-stop disabled 5: DC link bus voltage control with Force-to-stop disabled	Y	Y	0	
H70	Overload Prevention Control	OFF: Cancel Inherit: Follow the selected deceleration time 0.01 to 100.00 Hz/s	Y	Y	OFF	6-165
H71	Deceleration Characteristics	0: Disable 1: Enable	Y	Y	0	6-166
H72	Main Power Down Detection (Mode selection)	0: Disable 1: Enable	Y	Y	1	
H76	Torque Limiter for Braking (Frequency increment limit)	0.0 to 120.0 Hz	Y	Y	5.0	
H77	Service Life of DC Link Bus Capacitor (Remaining time)	0 to 43800 (in units of 10 hours)	Y	N	IP21/55: 43800 IP00: 87600	6-167
H78	Maintenance Interval (M1)	OFF: Disable 10 to 99990 (in units of 10 hours)	Y	N		
H79	Preset Startup Count for Maintenance (M1)	OFF: Disable 1 to 65535	Y	N	OFF	6-168
H80	Output Current Fluctuation Damping Gain for Motor 1	0.00 to 1.00	Y	Y	0.20	
H89	Reserved ***5**	0, 1	Y	Y	1	6-169
H90	Reserved ***5**	0, 1	Y	Y	0	
H91	Current Input Wire Break Detection	OFF: Disable, 0.1 to 60.0 s	Y	Y	OFF	
H92	Continuity of Running (P)	Auto: Adjust automatically 0.000 to 10.000 times	Y	Y1	Auto	
H93	(I)	Auto: Adjust automatically 0.010 to 10.000 s	Y	Y1	Auto	
H94	Cumulative Motor Run Time 1	0 to 99990 (The cumulative run time can be modified or reset in units of 10 hours.)	N	N	-	6-169
H95	DC Braking (Braking response mode)	0: Slow 1: Quick	Y	Y	1	6-67
H96	STOP Key Priority/Start Check Function	Data: STOP key priority / Start check function 0: Disable / Disable 1: Enable / Disable 2: Disable / Enable 3: Enable / Enable	Y	Y	AE: 0	6-170
H97	Clear Alarm Data	0: Disable 1: Enable (Setting "1" clears alarm data and then returns to "0.")	Y	N	0	6-170
H98	Protection/Maintenance Function (Mode selection)	0 to 255 Bit 0: Lower the carrier frequency automatically (0: Disabled; 1: Enabled) Bit 1: Detect input phase loss (0: Disabled; 1: Enabled) Bit 2: Detect output phase loss (0: Disabled; 1: Enabled) Bit 3: Select life judgment threshold of DC link bus capacitor (0: Factory default level; 1: User setup level) Bit 4: Judge the life of DC link bus capacitor (0: Disabled; 1: Enabled) Bit 5: DC fan lock detection (0: Disabled; 1: Enabled) Bit 7: Switch IP21/IP55 enclosure (0: IP21; 1: IP55)	Y	Y	IP00/21: 19 IP55: 147	6-171

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*1 The factory default differs depending upon the inverter's capacity. See Table A.

*5 These function codes are reserved for particular manufacturers. Unless otherwise specified, do not access these function codes.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
H104	Number-of-retry Clear Time	0.5 to 5.0 (min)	Y	Y	5.0	6-174
H105	Retry Target Selection	0 to 255 Bit 0: OC1 to OC3 Bit 1: OV1 to OV3 Bit 2: OH1 OH3 OLU Bit 3: - Bit 4: OL1 Bit 5: OH4 Bit 6: - Bit 7: -	Y	Y	225	
H106	Retry Target Selection 2	0 to 255 Bit 0: OH2 Bit 1: LV Bit 2: - Bit 3: - Bit 4: - Bit 5: - Bit 6: - Bit 7: -	Y	Y	0	
H110	Input Phase Loss Protection Avoidance Operation (Mode selection)	0: Disable 1: Enable (Decrease output frequency)	Y	Y	0	6-175
H112	Voltage Shortage Avoidance Operation (Mode selection)	0: Disable 1: Enable (Decrease output frequency)	Y	Y	0	
H114	Automatic Deceleration (Operation level)	Auto: Adjust automatically 0.0 to 50.0%	Y	Y	Auto	
H116	Fire Mode (Mode selection)	0: FMS: ON 1: FMS toggle method 2: FMS latch method	N	Y	0	6-176
H117	(Confirmation time)	0.5 to 10.0 s * Set ON/OFF setting time for FMS signals.	Y	Y	3.0	
H118	(Reference frequency)	Inherit: Follow the ordinary reference frequency specified with F01, etc. 0.1 to 120.0 Hz	Y	Y	Inherit	
H119	(Rotation direction)	0: Follow the run command specified with F02, etc. 2: Forward rotation 3: Reverse rotation	N	Y	0	
H120	(Start method)	0: Follows the start methods specified with instant power failure restart 1: Auto search	Y	Y	0	
H121	(Reset interval)	0.5 to 20.0 s	Y	Y	5.0	
H181	Light Alarm Selection 1	0 to 255 Bit 0: - Bit 1: OH2 Bit 2: OH3 Bit 3: - Bit 4: - Bit 5: OL1 Bit 6: - Bit 7: -	Y	Y	0	6-178
H182	Light Alarm Selection 2	0 to 255 Bit 0: - Bit 1: - Bit 2: Er4 Bit 3: Er5 Bit 4: Er8 Bit 5: ErP Bit 6: - Bit 7: -	Y	Y	0	
H183	Light Alarm Selection 3	0 to 255 Bit 0: - Bit 1: - Bit 2: - Bit 3: CoF, PV1, PV2, PVA, PVb, PVC Bit 4: FAL Bit 5: OL Bit 6: OH Bit 7: LiF	Y	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
H184	Light Alarm Selection 4	0 to 255 Bit 0: rEF Bit 1: PA1, PA2, PAA, PAb, PAC Bit 2: UTL Bit 3: PTC Bit 4: rTE Bit 5: CnT Bit 6: - Bit 7: Lob, dtL	Y	Y	128	6-178
H197	User Password 1 (Mode selection)	0: Disclose all function codes but prohibit any change 1: Disclose function codes selected for quick setup only and allow change * This specifies the protection of user password 1.	Y	Y	0	6-180

J codes: Application Functions 1

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J21	Dew Condensation Prevention (Duty)	1% to 50%	Y	Y	1	6-181
J22	Commercial Power Switching Sequence	0: Keep inverter operation (Stop due to alarm) 1: Automatically switch to commercial-power operation	N	Y	0	

J1 codes: PID Control 1

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J101	PID Control 1 (Mode selection)	0: Disable 1: Enable (Process control, normal operation) 2: Enable (Process control, inverse operation)	N	Y	0	6-182
J102	(Command selection)	0: Keypad (△/▽ key) 1: PID command 1 (Analog input: Terminals [12], [C1] and [V2]) 3: ***UP***/***DOWN*** 4: Command via communications link (Use function code S13)	N	Y	0	6-184
J103	(Feedback selection)	1: PID control 1 feedback value 10: Addition (PID control 1 feedback value + PID control 2 feedback value) 11: Difference (PID control 1 feedback value - PID control 2 feedback value) 12: Average (PID control 1 feedback value, PID control 2 feedback value) 13: Maximum (PID control 1 feedback value, PID control 2 feedback value) 14: Minimum (PID control 1 feedback value, PID control 2 feedback value)	N	Y	1	6-189
J104	(Deviation selection)	0: (J102)-(J103) 1: Selection of maximum (selection of maximum for PID control 1 and 2 deviation) 2: Selection of minimum (selection of minimum for PID control 1 and 2 deviation)	N	Y	0	6-190

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J105	PID Control 1 (Display unit)	0: Based on the unit/scale of the PID control 1 feedback amount 1: none 2: % 4: r/min 7: kW Flowrate 20: m^3/s 21: m^3/min 22: m^3/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 (Pound per square inch) 47: mWG 48: inWG Temperature 60: K 61: °C 62: °F Density 80: ppm	N	Y	0	6-190
J106	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	6-191
J107	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
J108	(Tuning)	0: Disable 1: Short-time response 2: Long-time response	Y	Y	0	6-192
J109	(Tuning manipulated value)	10 to 100% (Maximum frequency = 100%)	Y	Y	10%	
J110	P (Gain)	0.000 to 30.000 times	Y	Y	0.100	6-194
J111	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	
J112	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	
J113	(Feedback filter)	0.0 to 900.0 s	Y	Y	0.5	
J114	(Anti-reset wind-up)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	6-197
J118	(Upper limit of PID process output)	Inherit: Depends on setting of F15 0.0 to 120.0 Hz	Y	Y	Inherit	6-198
J119	(Lower limit of PID process output)	Inherit: Depends on setting of F16 0.0 to 120.0 Hz	Y	Y	Inherit	
J121	(Alarm output selection)	0: Absolute-value alarm 1: Absolute-value alarm (with Hold) 2: Absolute-value alarm (with Latch) 3: Absolute-value alarm (with Hold and Latch) 4: Deviation alarm 5: Deviation alarm (with Hold) 6: Deviation alarm (with Latch) 7: Deviation alarm (with Hold and Latch)	Y	Y	0	6-198
J122	(Upper level alarm (AH))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J124	(Lower level alarm (AL))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J127	(Feedback failure detection (Mode selection))	0: Disable (Turns ON output signals (PV1-OFF) and continues operation.) 1: Enable (Free run stop (PV1 trip)) 2: Enable (Deceleration and stop (PV1 trip)) 3: Enable (Continuation of operation at the maximum frequency (upper limit frequency)) 4: Enable (Continuation of operation at the minimum frequency (lower limit frequency)) 5: Enable (Continuation of operation at the frequency used when failure is detected.) 6: Enable (Shift to PID control 2 (PID control 1 is restored when failure is recovered from.))	Y	Y	0	6-201

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*6 The upper and lower level values are restricted by the maximum and minimum scales.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J128	(Feedback failure continuation duration)	Cont.: After detection of the failure, continue to run as specified by J127. After stop (output shutoff), cause a PV1 trip. 0 to 3600 s	Y	Y	Cont.	6-201
J129	(Feedback failure upper-limit)	Auto: 105% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J130	(Feedback failure lower-limit)	Auto: -5% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J131	(Feedback failure detection time)	0.0 to 300.0 s	Y	Y	0.1	
J136	PID Multistep Command (Multistep command 1)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	6-204
J137	(Multistep command 2)		Y	Y	0.00	
J138	(Multistep command 3)		Y	Y	0.00	
J149	Slow Flowrate Stop Function * (Mode selection)	OFF: Disable 1: Manual operation (stop judgment: MV) 2: Manual operation (stop judgment: PV) 11: Auto operation 1 (stop judgment: MV): Deviation detection method 12: Auto operation 1 (stop judgment: PV): Deviation detection method 21: Auto operation 2 (stop judgment: MV): Flowrate sensor detection method 22: Auto operation 2 (stop judgment: PV): Flowrate sensor detection method	N	Y	OFF	
J150	* (Operation level)	Auto: Adjust automatically 0.00 to 120.00 Hz when J149 = MV 0.00 to 9990.00 when J149 = PV ***6**	Y	Y	Auto	
J151	* (Elapsed time)	0 to 60 s	Y	Y	0	
J152	* (Auto-operation frequency lower-limit)	0.0 to 120.0 Hz	Y		0.0	
J153	* (Pressurization starting frequency)	0.0 to 120.0 Hz	Y	Y	0.0	
J154	* (Pressurizing time)	0 to 60 s	Y	Y	0	
J156	* (Initiation inhibition time)	0 to 3600 s	Y	Y	0	
J157	* (Cancel frequency)	OFF: Disable 0.0 to 120.0 Hz	Y		0.0	
J158	* `(Cancel deviation level 1)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	
J159	* (Cancel delay timer)	0 to 3600s	Y	Y	0	
J160	* (Cancel deviation level 2)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	
J163	Flowrate Sensor (Input selection) *	0: Inherit Follow analog input selected by E61, E62, and E63. 1: PV1 20: m^3/s 21: m^3/min 22: m^3/h 23: L/s 24: L/min 25: L/h **Note:** Data 20 or above is to be used for connection of customizable logic.	N	Y	0	6-209
J164	* (ON level)	OFF: Disable 0.00 to 9990.00 ***6** **Note:** If J163 = 20 or above, no scale can be defined, so the setting range should be from the minimum to maximum.	Y	Y	OFF	
J165	* (OFF level)	OFF: Disable 0.00 to 9990.00 ***6** **Note:** If J163 = 20 or above, no scale can be defined, so the setting range should be from the minimum to maximum.	Y	Y	OFF	
J166	* (Input filter)	0.00 to 5.00s	Y	Y	0.20	
J188	Filter Clogging Prevention/ Anti Jam Function (Input selection)	0: Disable 1: Enable (Anti jam protection, inverter stop with rLo trip) 2: Enable (Filter clogging trouble, inverter stop with FoL trip) 3: Enable (While warning (filter clogging trouble) is output, operation is continued.)	Y	Y	0	6-210

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* J149-J166 are available in the ROM version 1600 or later.

*6 The upper and lower level values are restricted by the maximum and minimum scales.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J189	Filter Clogging Prevention Function (Reverse operation cycle time)	OFF: Disable 1 to 10000 h	Y	Y	OFF	6-210
J190	(Load resistance current)	OFF: Disable 1% to 150% of the inverter rated current	Y	Y	OFF	
J191	(Load resistance PV signal)	-999.00 to 0.00 to 9990.00 ***6** OFF	Y	Y	OFF	
J192	(Load resistance detection timer)	0 to 600 s	Y	Y	0	
J193	Filter Clogging Prevention/ Anti Jam Function (Reverse rotation running frequency)	0.0 to 120.0 Hz	Y	Y	200V class series A: 6.0 E: 5.0 400V class series AE: 5.0	
J194	(Reverse rotation running time)	0 to 600 s	Y	Y	0	
J195	(Number of allowable reverse runs)	1 to 10 times	Y	Y	3	
J198	Wet-bulb temperature presumption control	OFF: Disable 0.01 to 120.00 Hz/min	Y	Y	OFF	6-214

J2 codes: PID Control 2

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J201	PID Control 2 (Mode selection)	0: Disable 1: Enable (Process control, normal operation) 2: Enable (Process control, inverse operation)	N	Y	0	6-215
J202	(Command selection)	0: Keypad (△/▽ key) 1: PID command 1 (Analog input: Terminals [12], [C1] and [V2]) 2: PID command 2 (Analog input: Terminals [12], [C1] and [V2]) 3: ***UP*/*DOWN*** 4: Command via communications link (Use function code S13) 101: Command under PID control 1 (J102)	N	Y	0	
J203	(Feedback selection)	1: PID control 1 feedback value 2: PID control 2 feedback value 13: Maximum (PID control 1 feedback value, PID control 2 feedback value)	N	Y	2	
J205	(Display unit)	0: Based on the unit/scale of the PID control 2 feedback amount. 1: none 2: % 4: r/min 7: kW Flowrate 20: m^3/s 21: m^3/min 22: m^3/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 (Pound per square inch) 47: mWG 48: inWG Temperature 60: K 61: °C 62: °F Density 80: ppm	N	Y	0	
J206	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	
J207	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
J208	(Tuning)	0: Disable 1: For short-time response 2: For long-time response	Y	Y	0	6-192

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*6 The upper and lower level values are restricted by the maximum and minimum scales.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J209	(Tuning manipulated value)	10 to 100% (Maximum frequency = 100%)	Y	Y	10%	6-192
J210	P (Gain)	0.000 to 30.000 times	Y	Y	0.100	6-215
J211	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	
J212	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	
J213	(Feedback filter)	0.0 to 900.0 s	Y	Y	0.5	
J214	(Anti-reset wind-up)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	
J218	(Upper limit of PID process output)	Inherit: Depends on setting of F15 0.0 to 120.0 Hz	Y	Y	Inherit	6-216
J219	(Lower limit of PID process output)	Inherit: Depends on setting of F16 0.0 to 120.0 Hz	Y	Y	Inherit	
J221	PID Control 2 (Alarm output selection)	0: Absolute-value alarm 1: Absolute-value alarm (with Hold) 2: Absolute-value alarm (with Latch) 3: Absolute-value alarm (with Hold and Latch) 4: Deviation alarm 5: Deviation alarm (with Hold) 6: Deviation alarm (with Latch) 7: Deviation alarm (with Hold and Latch) 50: Absolute value alarm (Cancel PID control)	Y	Y	0	
J222	(Upper level alarm (AH))	OFF: Disable -999 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J223	(Upper level alarm detection hysteresis width)	0.00 to 9990.00 ***6**	Y	Y	0.00	
J224	(Lower level alarm (AL))	OFF: Disable -999 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J225	(Upper level alarm detection hysteresis width)	0.00 to 9990.00 ***6**	Y	Y	0.00	
J227	(Feedback failure detection (Mode selection))	0: Disable (Turns ON output signals (PV2-ERR) and continues operation.) 1: Enable (Free run stop (PV2 trip)) 2: Enable (Deceleration and stop (PV2 trip)) 3: Enable (Continuation of operation at the maximum frequency (upper limit frequency)) 4: Enable (Continuation of operation at the minimum frequency (lower limit frequency)) 5: Enable (Continuation of operation at the frequency used when failure is detected.)	Y	Y	0	
J228	(Feedback failure continuation duration)	Cont.: After detection of the failure, continue to run as specified by J227. After stop (output shutoff), cause a PV2 trip. 0 to 3600 s	Y	Y	Cont.	
J229	(Feedback failure upper-limit)	Auto: 105% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J230	(Feedback failure lower-limit)	Auto: -5% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J231	(Feedback failure detection time)	0.0 to 300.0 s	Y	Y	0.1	
J249	Slow Flowrate Stop Function * (Mode selection)	OFF: Disable 1: Manual operation (stop judgment: MV) 2: Manual operation (stop judgment: PV)	N	Y	OFF	
J250	* (Operation level)	Auto: Adjust automatically 0.00 to 120.00 Hz when J149 = MV 0.00 to 9990.00 when J149 = PV ***6**	Y	Y	Auto	
J251	* (Elapsed time)	0 to 60 s	Y	Y	0	
J256	* (Initiation inhibition time)	0 to 3600 s	Y	Y	0	
J257	* (Cancel frequency)	OFF: Disable 0.0 to 120.0 Hz	Y	Y	0.0	
J258	* (Cancel deviation level 1)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	
J259	* (Cancel delay timer)	0 to 3600 s	Y	Y	0	
J260	* (Cancel deviation level 2)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

***** J249-J260 are available in the ROM version 1600 or later.

*6 The upper and lower level values are restricted by the maximum and minimum scales.

J5 codes: External PID Function 1

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J501	External PID Control 1 (Mode selection)	0 Disable 1: Enable process control (Normal operation) 2: Enable process control (Inverse operation) 11: Enable process control, interlocking with inverter running (Normal operation) 12: Enable process control, interlocking with inverter running (Inverse operation) 21: Enable process control by external digital signal (Normal operation) 22: Enable process control by external digital signal (Inverse operation) 31: Enable process control by external digital signal, interlocking with inverter running (Normal operation) 32: Enable process control by external digital signal, interlocking with inverter running (Inverse operation)	N	Y	0	6-217
J502	(Remote command selection)	0: Keypad (⏶/⏷ key) 3: ***UP*/*DOWN*** 4: Command via communications link (Use function code S13) 51: External PID command 1 (Analog input: Terminals [12], [C1] and [V2])	N	Y	0	6-219
J503	(Feedback selection)	51: External PID feedback value 1 60: Addition (External PID feedback value 1 + External PID feedback value 2) 61: Difference External PID feedback value 1 - External PID feedback value 2) 62: Average (External PID feedback value 1, External PID feedback value 2) 63: Maximum (External PID feedback value 1, External PID feedback value 2) 64: Minimum (External PID feedback value 1, External PID feedback value 2)	N	Y	51	6-225
J504	(Deviation selection)	0: (J502) - (J503) 51: Maximum (Maximum deviation between external PID control 1 and 2) 52: Minimum (Minimum deviation between external PID control 1 and 2)	N	Y	0	6-226
J505	(Display unit)	0: Based on the unit/scale of the PID control 1 feedback amount 1: none 2: % 4: r/min 7: kW <u>Flowrate</u> 20: m^3/s 21: m^3/min 22: m^3/h 23: L/s 24: L/min 25: L/h <u>Pressure</u> 40: Pa 41: kPa 42: MPa 43: mbar 44: bar 45: mmHg 46: psi (Pound per square inch) 47: mWG 48: inWG <u>Temperature</u> 60: K 61: °C 62: °F <u>Density</u> 80: ppm	N	Y	0	6-227
J506	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100.00	6-228
J507	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J510	External PID Control 1 P (Gain)	ON/OFF: ON/OFF control 0.000 to 30.000 times	Y	Y	0.100	6-229
J511	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	
J512	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	
J513	(Feedback filter)	0.0 to 900.0 s	Y	Y	0.5	
J514	(Anti-reset wind-up)	OFF: Disable 0.00 to 9990.00 ***6**	Y	Y	OFF	6-233
J515	(ON/OFF control hysteresis width)	0.00 to 9990.00 ***6**	Y	Y	0.00	6-234
J516	(Proportional operation output convergent value)	0 to 150%	Y	Y	0	6-235
J517	(Proportional cycle)	1 to 150 s	Y	Y	30	6-236
J518	(Upper limit of PID process output)	-10 to +110%	Y	Y	100	6-237
J519	(Lower limit of PID process output)	-10 to +110%	Y	Y	0	
J520	(Upper and lower limits)	0: Limit PID output with J518, J519 1: 110%, -10% of PID output with J518 exceeded or less than J519	Y	Y	0	
J521	(Alarm output selection)	0: Absolute-value alarm (PV) 1: Absolute-value alarm (PV) (with Hold) 2: Absolute-value alarm (PV) (with Latch) 3: Absolute-value alarm (PV) (with Hold and Latch) 4: Deviation alarm (PV) 5: Deviation alarm (PV) (with Hold) 6: Deviation alarm (PV) (with Latch) 7: Deviation alarm (PV) (with Hold and Latch 8: Absolute-value alarm (SV) 9: Absolute-value alarm (SV) (with Hold) 10: Absolute-value alarm (SV) (with Latch) 11: Absolute-value alarm (SV) (with Hold and Latch) 12: Absolute-value alarm (MV) 13: Absolute-value alarm (MV) (with Hold) 14: Absolute-value alarm (MV) (with Latch) 15: Absolute-value alarm (MV) (with Hold and Latch)	Y	Y	0	6-238
J522	(Upper level alarm (AH))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J524	(Lower level alarm (AL))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J527	(Feedback error detection mode)	0: Disable (Turns ON output signals (EPV1-ERR) and continues operation.) 1: Enable (Free run stop (PVA trip)) 2: Enable (Deceleration and stop (PVA trip))	Y	Y	0	6-241
J529	(Feedback error upper-limit)	Auto: 105% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J530	(Feedback error lower-limit)	Auto: -5% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J531	(Feedback error detection time)	0.0 to 300.0 s	Y	Y	0.1	
J540	(Manual command)	0: Keypad (▲/▼ key) 8: Keypad (▲/▼ key) (Balanceless-bumpless) 51: External PID command 1 (Analog input: Terminals [12], [C1] and [V2])	N	Y	0	6-243
J550	External PID Multistep Command (Mode selection)	Bit 0: Enable multistep command under external PID control 1 Bit 1: Enable multistep command under external PID control 2 Bit 2: Enable multistep command under external PID control 3	N	Y	0	6-244
J551	(Multistep command 1)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	
J552	(Multistep command 2)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	
J553	(Multistep command 3)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*6 The upper and lower level values are restricted by the maximum and minimum scales.

J6 codes: External PID Function 2/3

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J601	External PID Control 2 (Mode selection)	0: Disable 1: Enable process control (Normal operation) 2: Enable process control (Inverse operation) 11: Enable process control, interlocking with inverter running (Normal operation) 12: Enable process control, interlocking with inverter running (Inverse operation) 21: Enable process control by external digital signal (Normal operation) 22: Enable process control by external digital signal (Inverse operation) 31: Enable process control by external digital signal, interlocking with inverter running (Normal operation) 32: Enable process control by external digital signal, interlocking with inverter running (Inverse operation)	N	Y	0	6-245
J602	(Remote command selection)	0: Keypad (△/▽ key) 3: ***UP*/*DOWN*** 4: Command via communications link 51: External PID command 1 (Analog input terminals [12], [C1] and [V2]) 52: External PID command 2 (Analog input terminals [12], [C1] and [V2]) 111: Apply external PID control 1 commands	N	Y	0	
J603	(Feedback selection)	51: External PID feedback value 1 52: External PID feedback value 2	N	Y	52	
J605	(Display unit)	0: Based on the unit/scale of the PID control 1 feedback amount 1: none 2: % 4: r/min 7: kW <u>Flowrate</u> 20: m^3/s 21: m^3/min 22: m^3/h 23: L/s 24: L/min 25: L/h <u>Pressure</u> 40: Pa 41: kPa 42: MPa 43: mbar 44: bar 45: mmHg 46: psi (Pound per square inch) 47: mWG 48: inWG <u>Temperature</u> 60: K 61: °C 62: °F <u>Density</u> 80: ppm	N	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J606	External PID Control 2 (Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100.00	6-245
J607	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
J610	P (Gain)	ON/OFF: ON/OFF control 0.000 to 30.000 times	Y	Y	0.100	
J611	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	
J612	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	
J613	(Feedback filter)	0.0 to 900.0 s	Y	Y	0.5	
J614	(Anti-reset wind-up)	OFF: Disable 0.01 to 9990.00 ***6**	Y	Y	OFF	
J615	(ON/OFF control hysteresis width)	0.00 to 9990.00 ***6**	Y	Y	0.00	
J616	(Proportional operation output convergent value)	0 to 150%	Y	Y	0	6-246
J617	(Proportion cycle)	1 to 150 s	Y	Y	30	
J618	(Upper limit of PID process output)	-10 to 110%	Y	Y	100	
J619	(Lower limit of PID process output)	-10 to 110%	Y	Y	0	
J620	(Upper and lower limits)	0: Limit PID output with J618, J619 1: 110%, -10% of PID output with J618 exceeded or less than J619	Y	Y	0	
J621	(Alarm output selection)	0: Absolute-value alarm (PV) 1: Absolute-value alarm (PV) (with Hold) 2: Absolute-value alarm (PV) (with Latch) 3: Absolute-value alarm (PV) (with Hold and Latch) 4: Deviation alarm (PV) 5: Deviation alarm (PV) (with Hold) 6: Deviation alarm (PV) (with Latch) 7: Deviation alarm (PV) (with Hold and Latch 8: Absolute-value alarm (SV) 9: Absolute-value alarm (SV) (with Hold) 10: Absolute-value alarm (SV) (with Latch) 11: Absolute-value alarm (SV) (with Hold and Latch) 12: Absolute-value alarm (MV) 13: Absolute-value alarm (MV) (with Hold) 14: Absolute-value alarm (MV) (with Latch) 15: Absolute-value alarm (MV) (with Hold and Latch)	Y	Y	0	
J622	(Upper level alarm (AH))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J624	(Lower level alarm (AL))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J627	(Feedback error detection mode)	0: Disable (Turns ON output signals (EPV2-ERR) and continues operation.) 1: Enable (Free run stop (PVb trip)) 2: Enable (Deceleration and stop (PVb trip))	Y	Y	0	
J629	(Feedback error upper-limit)	Auto: 105% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J630	(Feedback error lower-limit)	Auto: -5% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J631	(Feedback error detection time)	0.0 to 300.0 s	Y	Y	0.1	
J640	(Manual command)	0: Keypad (▲/▼ key) 8: Keypad (▲/▼ key) (Balanceless-bumpless) 51: External PID manual command 1(Analog input: Terminals [12], [C1] and [V2]) 52: External PID manual command 2(Analog input: Terminals [12], [C1] and [V2]) 111: Apply external PID control 1 manual command	N	Y	0	
J651	External PID Control 3 (Mode selection)	0: Disable 1: Enable process control (Normal operation) 2: Enable process control (Inverse operation) 11: Enable process control, interlocking with inverter running (Normal operation) 12: Enable process control, interlocking with inverter running (Inverse operation) 21: Enable process control by external digital signal (Normal operation) 22: Enable process control by external digital signal (Inverse operation) 31: Enable process control by external digital signal, interlocking with inverter running (Normal operation) 32: Enable process control by external digital signal, interlocking with inverter running (Inverse operation)	N	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*6 The upper and lower level values are restricted by the maximum and minimum scales.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
J652	External PID Control 3 (Remote command selection)	0: Keypad (▲/▼ key) 3: ***UP*/*DOWN*** 4: Command via communications link (Use function code S32) 51: External PID process command 1 (Analog input: Terminals [12], [C1] and [V2]) 52: External PID process command 2 (Analog input: Terminals [12], [C1] and [V2]) 53: External PID process command 3 (Analog input: Terminals [12], [C1] and [V2]) 111: Apply external PID control 1 commands 112: Apply external PID control 2 commands	N	Y	0	6-247
J653	(Feedback selection)	51: External PID feedback value 1 52: External PID feedback value 2 53: External PID feedback value 3	N	Y	53	
J655	(Display unit)	See J605.	N	Y	0	
J656	(Maximum scale)	-999.00 to 0.00 to 9990.00	N	Y	100	
J657	(Minimum scale)	-999.00 to 0.00 to 9990.00	N	Y	0.00	
J660	P (Gain)	ON/OFF: ON/OFF control 0.000 to 30.000 times	Y	Y	0.100	
J661	I (Integral time)	0.0 to 3600.0 s	Y	Y	0.0	
J662	D (Differential time)	0.00 to 600.00 s	Y	Y	0.00	
J663	(Feedback filter)	0.0 to 900.0 s	Y	Y	0.5	
J664	(Anti-reset wind-up)	OFF: Disable 0.00 to 9990.00 ***6**	Y	Y	OFF	
J665	(ON/OFF control hysteresis width)	0.00 to 9990.00 ***6**	Y	Y	0.00	
J666	(Proportional operation output convergent value)	0 to 150%	Y	Y	0	
J667	(Proportion cycle)	1 to 150 s	Y	Y	30	6-248
J668	(Upper limit of PID process output)	-10 to +110%	Y	Y	100	
J669	(Lower limit of PID process output)	-10 to +110%	Y	Y	0	
J670	(Upper and lower limits)	0: Limit PID output with J618, J619 1: 110%, -10% of PID output with J618 exceeded or less than J619	Y	Y	0	
J671	(Alarm output selection)	0: Absolute-value alarm (PV) 1: Absolute-value alarm (PV) (with Hold) 2: Absolute-value alarm (PV) (with Latch) 3: Absolute-value alarm (PV) (with Hold and Latch) 4: Deviation alarm 5: Deviation alarm (PV) (with Hold) 6: Deviation alarm (PV) (with Latch) 7: Deviation alarm (PV) (with Hold and Latch 8: Absolute-value alarm (SV) 9: Absolute-value alarm (SV) (with Hold) 10: Absolute-value alarm (SV) (with Latch) 11: Absolute-value alarm (SV) (with Hold and Latch) 12: Absolute-value alarm (MV) 13: Absolute-value alarm (MV) (with Hold) 14: Absolute-value alarm (MV) (with Latch) 15: Absolute-value alarm (MV) (with Hold and Latch)	Y	Y	0	
J672	(Upper level alarm (AH))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J674	(Lower level alarm (AL))	OFF: Disable -999.00 to 0.00 to 9990.00 ***6**	Y	Y	OFF	
J677	(Feedback error detection mode)	0: Disable (Turns ON output signals (EPV3-ERR) and continues operation.) 1: Enable (Free run stop (PVC trip)) 2: Enable (Deceleration and stop (PVC trip))	Y	Y	0	
J679	(Feedback error upper-limit)	Auto: 105% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J680	(Feedback error lower-limit)	Auto: -5% equivalent -999.00 to 0.00 to 9990.00 ***6**	Y	Y	Auto	
J681	(Feedback error detection time)	0.0 to 300.0 s	Y	Y	0.1	
J690	(Manual commands)	0: Keypad (▲/▼ key) 8: Keypad (▲/▼ key) (Balanceless-bumpless) 51: External PID manual command 1 (Analog input: Terminals [12], [C1] and [V2]) 52: External PID manual command 2 (Analog input: Terminals [12], [C1] and [V2]) 53: External PID manual command 3 (Analog input: Terminals [12], [C1] and [V2]) 111: Apply external PID control 1 manual commands 112: Apply external PID control 2 manual commands	N	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*6 The upper and lower level values are restricted by the maximum and minimum scales.

d codes: Application Functions 2

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
d51	Reserved ***5**	0 to 500	N	Y	***8**	6-249
d55	Reserved ***5**	0000H to 00FFH	N	Y	0	
d69	Reserved ***5**	30.0 to 100.0 Hz	Y	Y	30.0	
d98	Reserved ***5**	0000H to FFFFH	Y	Y	0	
d99	Reserved ***5**	0 to 3	Y	Y	0	

*5 These function codes are reserved for particular manufacturers. Unless otherwise specified, do not access these function codes.
*8 "5" for inverters of 3.7 kW or below, "10" for those of 5.5 kW to 22 kW, "20" for those of 30 kW or above.

U codes: Customizable Logic Function

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
U00	Customizable Logic (Mode selection)	0: Disable 1: Enable (Customizable logic operation) Changing this code data from "1" to "0" causes an ECL alarm.	Y	Y	0	6-249
U01	Customizable Logic: Step 1 (Control function)	0: No function assigned 10: Through output + General-purpose timer 20: ANDing + General-purpose timer 30: ORing + General-purpose timer 40: XORing + General-purpose timer 50: Set priority flip-flop + General-purpose timer 60: Reset priority flip-flop + General-purpose timer 70: Rising edge detector + General-purpose timer 80: Falling edge detector + General-purpose timer 90: Rising & falling edges detector + General-purpose timer 100: Hold + General-purpose timer 110: Increment counter 120: Decrement counter 130: Timer with reset input 2001-3002: Analog input 4001-5114: Analog + digital	N	Y	0	
U02 U03	(Input 1)	0 (1000): Inverter running (***RUN***) 1 (1001): Frequency (speed) arrival signal (***FAR***) 2 (1002): Frequency (speed) detected (***FDT***) 3 (1003): Undervoltage detected (Inverter stopped) (***LU***) 5 (1005): Inverter output limiting (***IOL***) 6 (1006): Auto-restarting after momentary power failure (***IPF***) 7 (1007): Motor overload early warning (***OL***) 10 (1010): Inverter ready to run (***RDY***) 11: Switch motor drive source between commercial power and inverter output (For MC on commercial line) (***SW88***) 12: Switch motor drive source between commercial power and inverter output (For secondary side) (***SW52-2***) 13: Switch motor drive source between commercial power and inverter output (For primary side) (***SW52-1***) 15 (1015): Select ***AX*** terminal function (For MC on primary side) (***AX***) 16 (1016): Shifted to pattern operation stage (***TU***) 17 (1017): Pattern operation cycle completed (***TO***) 18 (1018): Pattern operation stage number (***STG1***) 19 (1019): Pattern operation stage number (***STG2***) 20 (1020): Pattern operation stage number (***STG4***) 22 (1022): Inverter output limiting with delay (***IOL2***) 25 (1025): Cooling fan in operation (***FAN***) 26 (1026): Auto-resetting (***TRY***) 28 (1028): Heat sink overheat early warning (***OH***) 30 (1030): Lifetime alarm (***LIFE***) 33 (1033): Reference loss detected (***REF OFF***) 35 (1035): Inverter output on (***RUN2***) 36 (1036): Overload prevention control (***OLP***) 37 (1037): Current detected (***ID***) 38 (1038): Current detected 2 (***ID2***) *10 42 (1042): PID alarm (***PID-ALM***) 44 (1044): Motor stopped due to slow flowrate under PID control (***PID-STP***)* 45 (1045): Low output torque detected (***U-TL***) 52 (1052): Running forward (***FRUN***) 53 (1053): Running reverse (***RRUN***)	N	Y	100	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1600 or later.
*10 Available at ROM version 2450 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		54 (1054): In remote operation (***RMT***) 55 (1055): Run command entered (***AX2***) 56 (1056): Motor overheat detected by thermistor (***THM***) 59 (1059): Terminal [C1] wire break (***C1OFF***) 84 (1084): Maintenance timer (***MNT***) 87(1087): Frequency arrival signal (***FARFDT***) 95(1095): Running in fire mode (***FMRUN***) 98 (1098): Light alarm (***L-ALM***) 99 (1099): Alarm output (for any alarm) (***ALM***) 101(1101): EN terminal detection circuit error (***DECF***) 102(1102): EN terminal OFF (***ENOFF***) 190 (1190): In timer operation (***TMD***) 191 (1191): Timer 1 enabled (***TMD1***) 192 (1192): Timer 2 enabled (***TMD2***) 193 (1193): Timer 3 enabled (***TMD3***) 194 (1194): Timer 4 enabled (***TMD4***) 200 (1200): Under PID2 control (***PID2***) 201 (1201): PID1 alarm (***PV1-ALM***) 202 (1202): PID1 feedback error (***PV1-OFF***) 203 (1203): PID2 alarm (***PV2-ALM***) 204 (1204): PID2 feedback error (***PV2-OFF***) 211 (1211): Under external PID1 control (***EPID1-CTL***) 212 (1212): External PID1 output (***EPID1-OUT***) 213 (1213): External PID1 output (***EPID1-RUN***) 214 (1214): External PID1 alarm (***EPV1-ALM***) 215 (1215): External PID1 feedback error (***EPV1-OFF***) 221 (1221): Under external PID2 control (***EPID2-CTL***) 222 (1222): External PID2 output (***EPID2-OUT***) 223 (1223): External PID2 output (***EPID2-RUN***) 224 (1224): External PID2 alarm (***EPV2-ALM***) 225 (1225): External PID2 feedback error (***EPV2-OFF***) 231 (1231): Under external PID3 control (***EPID3-CTL***) 232 (1232): External PID3 output (***EPID3-OUT***) 233 (1233): External PID3 output (***EPID3-RUN***) 234 (1234): External PID3 alarm (***EPV3-ALM***) 235 (1235): External PID3 feedback error (***EPV3-OFF*** 2001 (3001): Output of step 1 (***SO01***) 2002 (3002): Output of step 2 (***SO02***) 2003 (3003): Output of step 3 (***SO03***) 2004 (3004): Output of step 4 (***SO04***) 2005 (3005): Output of step 5 (***SO05***) 2006 (3006): Output of step 6 (***SO06***) 2007 (3007): Output of step 7 (***SO07***) 2008 (3008): Output of step 8 (***SO08***) 2009 (3009): Output of step 9 (***SO09***) 2010 (3010): Output of step 10 (***SO10***) 2011 (3011): Output of step 11 (***SO11***) 2012 (3012): Output of step 12 (***SO12***) 2013 (3013): Output of step 13 (***SO13***) 2014 (3014): Output of step 14 (***SO14***) 4001 (5001): Terminal [X1] input signal (***X1***) 4002 (5002): Terminal [X2] input signal (***X2***) 4003 (5003): Terminal [X3] input signal (***X3***) 4004 (5004): Terminal [X4] input signal (***X4***) 4005 (5005): Terminal [X5] input signal (***X5***) 4006 (5006): Terminal [X6] input signal (***X6***) 4007 (5007): Terminal [X7] input signal (***X7***) 4010 (5010): Terminal [FWD] input signal (***FWD***) 4011 (5011): Terminal [REV] input signal (***REV***) 6000 (7000): Final run command (***FL_RUN***) 6001 (7001): Final FWD run command (***FL_FWD***) 6002 (7002): Final REV run command (***FL_REV***) 6003 (7003): During acceleration (***DACC***) 6004 (7004): During deceleration (***DDEC***) 6005 (7005): Under anti-regenerative control (***REGA***) 6007 (7007): Alarm factor presence (***ALM_ACT***)				6-249

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		[Analog] 8000 to 8085: 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] *9005: Analog C2 terminal input signal [C2] *9006: RTD1 [PT1] *9007: RTD2 [PT2] Setting the value in parentheses ( ) shown above assigns a negative logic output to a terminal. (True if OFF.) Setting the value of 1000s in parentheses ( ) shown above assigns a negative logic input to a terminal.				6-249
U04	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U05	(Function 2)		N	Y	0.00	
U06	Customizable Logic: Step 2 (Control function)	See U01.	N	Y	0	
U07	(Input 1)	See U02.	N	Y	0	
U08	(Input 2)	See U02.	N	Y	0	
U09	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U10	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U11	Customizable Logic: Step 3 (Control function)	See U01.	N	Y	0	
U12	(Input 1)	See U02.	N	Y	0	
U13	(Input 2)	See U02.	N	Y	0	
U14	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U15	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U16	Customizable Logic: Step 4 (Control function)	See U01.	N	Y	0	
U17	(Input 1)	See U02.	N	Y	0	
U18	(Input 2)	See U02.	N	Y	0	
U19	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U20	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U21	Customizable Logic: Step 5 (Control function)	See U01.	N	Y	0	
U22	(Input 1)	See U02.	N	Y	0	
U23	(Input 2)	See U02.	N	Y	0	
U24	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U25	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U26	Customizable Logic: Step 6 (Control function)	See U01.	N	Y	0	
U27	(Input 1)	See U02.	N	Y	0	
U28	(Input 2)	See U02.	N	Y	0	
U29	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U30	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U31	Customizable Logic: Step 7 (Control function)	See U01.	N	Y	0	
U32	(Input 1)	See U02.	N	Y	0	
U33	(Input 2)	See U02.	N	Y	0	
U34	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U35	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

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

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
U36	Customizable Logic: Step 8 (Control function)	See U01.	N	Y	0	6-249
U37	(Input 1)	See U02.	N	Y	0	
U38	(Input 2)	See U02.	N	Y	0	
U39	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U40	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U41	Customizable Logic: Step 9 (Control function)	See U01.	N	Y	0	
U42	(Input 1)	See U02.	N	Y	0	
U43	(Input 2)	See U02.	N	Y	0	
U44	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U45	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U46	Customizable Logic: Step 10 (Control function)	See U01.	N	Y	0	
U47	(Input 1)	See U02.	N	Y	0	
U48	(Input 2)	See U02.	N	Y	0	
U49	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U50	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U51	Customizable Logic: Step 11 (Control function)	See U01.	N	Y	0	
U52	(Input 1)	See U02.	N	Y	0	
U53	(Input 2)	See U02.	N	Y	0	
U54	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U55	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U56	Customizable Logic: Step 12 (Control function)	See U01.	N	Y	0	
U57	(Input 1)	See U02.	N	Y	0	
U58	(Input 2)	See U02.	N	Y	0	
U59	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U60	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U61	Customizable Logic: Step 13 (Control function)	See U01.	N	Y	0	
U62	(Input 1)	See U02.	N	Y	0	
U63	(Input 2)	See U02.	N	Y	0	
U64	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U65	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U66	Customizable Logic: Step 14 (Control function)	See U01.	N	Y	0	
U67	(Input 1)	See U02.	N	Y	0	
U68	(Input 2)	See U02.	N	Y	0	
U69	(Function 1)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U70	(Function 2)	-9990.00 to 0.00 to 9990.00	N	Y	0.00	
U71	Customizable Logic Output Signal 1 (Output selection)	0: Disable 1: Output of step 1 (***SO01***)	N	Y	0	
U72	Customizable Logic Output Signal 2	2: Output of step 2 (***SO02***)	N	Y	0	
U73	Customizable Logic Output Signal 3	3: Output of step 3 (***SO03***)	N	Y	0	
U74	Customizable Logic Output Signal 4	4: Output of step 4 (***SO04***)	N	Y	0	
U75	Customizable Logic Output Signal 5	5: Output of step 5 (***SO05***)	N	Y	0	
U76	Customizable Logic Output Signal 6	6: Output of step 6 (***SO06***)	N	Y	0	
U77	Customizable Logic Output Signal 7	7: Output of step 7 (***SO07***) 8: Output of step 8 (***SO08***) 9: Output of step 9 (***SO09***) 10: Output of step 10 (***SO10***) 11: Output of step 11 (***SO11***) 12: Output of step 12 (***SO12***) 13: Output of step 13 (***SO13***) 14: Output of step 14 (***SO14***)	N	Y	0	
U81	Customizable Logic Output Signal 1 (Function selection)	0 (1000): Select multistep frequency (0 to 1 step) (***SS1***) 1 (1001): Select multistep frequency (0 to 3 steps) (***SS2***)	N	Y	100	
U82	Customizable Logic Output Signal 2	2 (1002): Select multistep frequency (0 to 7 steps) (***SS4***)	N	Y	100	
U83	Customizable Logic Output Signal 3	3 (1003): Select multistep frequency (0 to 15 steps) (***SS8***)	N	Y	100	
U84	Customizable Logic Output Signal 4	4 (1004): Select ACC/DEC time (2 steps) (***RT1***)	N	Y	100	
U85	Customizable Logic Output Signal 5	5 (1005): Select ACC/DEC time (4 steps) (***RT2***)	N	Y	100	
U86	Customizable Logic Output Signal 6	6 (1006): Enable 3-wire operation (***HLD***)	N	Y	100	
U87	Customizable Logic Output Signal 7	7 (1007): Coast to a stop (***BX***) 8 (1008): Reset alarm (***RST***) 9 (1009): Enable external alarm trip (9 = Active OFF, 1009 = Active ON) (***THR***) 11 (1011): Select frequency command 2/1 (***Hz2/Hz1***) 13: Enable DC braking (***DCBRK***) 14 (1014): Select torque limiter level 2/1 (***TL2/TL1***) 15: Switch to commercial power (50 Hz) (***SW50***) 16: Switch to commercial power (60 Hz) (***SW60***)	N	Y	100	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		17 (1017): UP (Increase output frequency) (***UP***) 18 (1018): DOWN (Decrease output frequency) (***DOWN***) 20 (1020): Cancel PID control (***Hz/PID***) 21 (1021): Switch normal/inverse operation (***IVS***) 22 (1022): Interlock (***IL***) 24 (1024): Enable communications link via RS-485 or fieldbus (***LE***) 25 (1025): Universal DI (***U-DI***) 26 (1026): Enable auto search for idling motor speed at starting (***STM***) 30 (1030): Force to stop (***STOP***) (30 = Active OFF, 1030 = Active ON) 33 (1033): Reset PID integral and differential components (***PID-RST***) 34 (1034): Hold PID integral component (***PID-HLD***) 35 (1035): Select local (keypad) operation (***LOC***) 38 (1038): Enable run commands (***RE***) 39: Protect motor from dew condensation (***DWP***) 40: Enable integrated sequence to switch to commercial power (50 Hz) (***ISW50***) 41: Enable integrated sequence to switch to commercial power (60 Hz) (***ISW60***) 58 (1058): Reset UP/DOWN frequency (***STZ***) 72 (1072): Count the run time of commercial power-driven motor 1 (***CRUN-M1***) 81 (1081): Clear all customizable logic timers (***CLTC***) 87 (1087): Run command 2/1 (***FR2/FR1***) 88: Run forward 2 (***FWD2***) 89: Run reverse 2 (***REV2***) 98: Run forward (***FWD***) 99: Run reverse (***REV***) 100: No function assigned (***NONE***) 131 (1131): Flowrate switch (***FS***)* 132 (1132): Filter clogging reverse rotation command (***FRC***) 133 (1133): Switch PID channel (***PID2/1***) 171 (1171): PID multistep command (***PID-SS1***) 172 (1172): PID multistep command (***PID-SS2***) 181 (1181): External PID multistep command (***EPID-SS1***) 182 (1182): External PID multistep command (***EPID-SS2***) 190 (1190): Cancel timer (***TMC***) 191 (1191): Enable timer 1 (***TM1***) 192 (1192): Enable timer 2 (***TM2***) 193 (1193): Enable timer 3 (***TM3***) 194 (1194): Enable timer 4 (***TM4***) 201 (1201): External PID control 1 ON command (***EPID1-ON***) 202 (1202): Cancel external PID control 1 (***%/EPID1***) 203 (1203): Switch normal/inverse operation under external PID control 1 (***EPID1-IVS***) 204 (1204): Reset external PID1 integral and differential components (***EPID1-RST***) 205 (1205): Hold external PID1 integral component (***EPID1-HLD***) 211 (1211): External PID control 2 ON command (***EPID2-ON***) 212 (1212): Cancel external PID control 2 (***%/EPID2***) 213 (1213): Switch normal/inverse operation under external PID control 2 (***EPID2-IVS***) 214 (1214): Reset external PID2 integral and differential components (***EPID2-RST***) 215 (1215): Hold external PID2 integral component (***EPID2-HLD***) 221 (1221): External PID control 3 ON command (***EPID3-ON***) 222 (1222): Cancel external PID control 3 (***%/EPID3***) 223 (1223): Switch normal/inverse operation under external PID control 3 (***EPID3-IVS***) 224 (1224): Reset external PID3 integral and differential components (***EPID3-RST***) 225 (1225): Hold external PID3 integral component (***EPID3-HLD***) 8001: Auxiliary frequency command 1 8002: Auxiliary frequency command 2 8003: PID process command 1 8004: PID process command 2				6-249

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1500 or later.

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
		8005: PID feedback value 1 8012: Acceleration/deceleration time ratio setting 8013: Upper limit frequency 8014: Lower limit frequency 8030: PID feedback value 2 8031: Auxiliary input 1 to PID process command 8032: Auxiliary input 2 to PID process command 8033: Flowrate sensor* 8041: External PID process command 1 8042: External PID feedback value 1 8043: External PID manual command 1 8044: External PID process command 2 8045: External PID feedback value 2 8046: External PID manual command 2 8047: External PID process command 3 8048: External PID feedback value 3 8049: External PID manual command 3 Setting the value of 1000s in parentheses ( ) shown above assigns a negative logic input to a terminal.				6-249
U91	Customizable Logic Timer Monitor (Step selection)	0: Disable monitoring 1: Step 1 2: Step 2 3: Step 3 4: Step 4 5: Step 5 6: Step 6 7: Step 7 8: Step 8 9: Step 9 10: Step 10 11: Step 11 12: Step 12 13: Step 13 14: Step 14	Y	Y	1	
U92	Customizable Logic Calculation Coefficient (Mantissa of calculation coefficient K_{A1})	-9.999 to 9.999	N	Y	0.00	
U93	(Exponent of calculation coefficient K_{A1})	-5 to 5	N	Y	0	
U94	(Mantissa of calculation coefficient K_{B1})	-9.999 to 9.999	N	Y	0.00	
U95	(Exponent of calculation coefficient K_{B1})	-5 to 5	N	Y	0.	
U96	(Mantissa of calculation coefficient K_{C1})	-9.999 to 9.999	N	Y	0.00	
U97	(Exponent of calculation coefficient K_{C1})	-5 to 5	N	Y	0	

U1 codes: Custom Logic Function

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
U101	Customizable Logic Conversion point 1 (X1)	-999.00 to 0.00 to 9990.00	Y	Y	0.00	6-270
U102	(Y1)		Y	Y	0.00	
U103	Conversion point 2 (X2)		Y	Y	0.00	
U104	(Y2)		Y	Y	0.00	
U105	Conversion point 3 (X3)		Y	Y	0.00	
U106	(Y3)		Y	Y	0.00	
U107	Automatic Calculation of Conversion Coefficients (X3)	0: Disable 1: Execute calculation (Conversion 1)	N	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

* Available in the ROM version 1500 or later.

y codes: Link Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
y01	RS-485 Communication 1 (Station address)	0 to 255 * Set 1 when other than BACnet is 0. * Set 127 when BACnet is 128 or above.	N	Y	1	6-275
y02	(Communications error processing)	0: Immediately trip with alarm Er8 1: Trip with alarm Er8 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 Er8. If it succeeds, continue to run. 3: Continue to run	Y	Y	0	
y03	(Timer)	0.0 to 60.0 s	Y	Y	2.0	
y04	(Baud rate)	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps 6:76800 bps (Dedicated for BACnet protocol) *10	Y	Y	3	
y05	(Data length)	0: 8 bits 1: 7 bits	Y	Y	0	
y06	(Parity check)	0: None (2 stop bits) 1: Even parity (1 stop bit) 2: Odd parity (1 stop bit) 3: None (1 stop bit)	Y	Y	0	
y07	(Stop bits)	0: 2 bits 1: 1 bit	Y	Y	0	
y08	(No-response error detection time)	OFF: No detection, 1 to 60 s	Y	Y	OFF	
y09	(Response interval)	0.00 to 1.00 s	Y	Y	0.01	
y10	(Protocol selection)	0: Modbus RTU protocol 1: SX protocol (loader protocol) 2: Fuji general-purpose inverter protocol 3: Metasys N2 protocol 5: BACnet protocol	Y	Y	1	
y11	RS-485 Communication 2 (Station address)	0 to 255	N	Y	1	
y12	(Communications error processing)	0: Immediately trip with alarm ErP 1: Trip with alarm ErP 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 ErP. If it succeeds, continue to run. 3: Continue to run	Y	Y	0	
y13	(Timer)	0.0 to 60.0 s	Y	Y	2.0	
y14	(Baud rate)	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps 6: 76800 bps (Dedicated for BACnet protocol) *10	Y	Y	3	
y15	(Data length)	0: 8 bits 1: 7 bits	Y	Y	0	
y16	(Parity check)	0: None (2 stop bits) 1: Even parity (1 stop bit) 2: Odd parity (1 stop bit) 3: None (1 stop bit)	Y	Y	0	
y17	(Stop bits)	0: 2 bits 1: 1 bit	Y	Y	0	
y18	(No-response error detection time)	OFF: No detection, 1 to 60 s	Y	Y	OFF	
y19	(Response interval)	0.00 to 1.00 s	Y	Y	0.01	
y20	(Protocol selection)	0: Modbus RTU protocol 1: SX protocol (loader protocol) 2: Fuji general-purpose inverter protocol 3: Metasys N2 protocol 5: BACnet protocol	Y	Y	0	
y60	BACnet Device instance number (Upper) *9	0 to 4194	N	Y	37	6-278
y61	(Lower) *9	0: Compatible with present version, 128 to 999	N	Y	0	
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: Er8, ErP, Er4, Er5, ErU	Y	Y	0	6-278

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

*9 Available at ROM version 2100 or later.

*10 Available at ROM version 2450 or later.

Code	Name	Data setting range		Change when running	Data copying	Default setting	Related page
y98	Bus Link Function (Mode selection)	Frequency command	Run command	Y	Y	0	6-279
		0: Follow H30 data	Follow H30 data				
		1: Via fieldbus option	Follow H30 data				
		2: Follow H30 data	Via fieldbus option				
		3: Via fieldbus option	Via fieldbus option				
y99	Loader Link Function (Mode selection)	Frequency command	Run command	Y	N	0	
		0: Follow H30 and y98 data	Follow H30 and y98 data				
		1: Via RS-485 link (FRENIC Loader)	Follow H30 and y98 data				
		2: Follow H30 and y98 data	Via RS-485 link (FRENIC Loader)				
		3: Via RS-485 link (FRENIC Loader)	Via RS-485 link (FRENIC Loader)				

T codes: Timer Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
T01	Timer 1 Operation (Operating mode)	0: Disable 1: Enable (Run inverter) 2: Enable (Output digital signal) 3: Enable (Run inverter + Output digital signal)	N	Y	0	6-280
T02	(Start time)	Possible to specify in the special menu.	N	Y	0	6-281
T03	(End time)	Possible to specify in the special menu.	N	Y	0	
T04	(Start day of the week)	Possible to specify in the special menu.	N	Y	0	
T06	Timer 2 Operation (Operating mode)	Same as T01.	N	Y	0	6-282
T07	(Start time)	Possible to specify in the special menu.	N	Y	0	
T08	(End time)	Possible to specify in the special menu.	N	Y	0	
T09	(Start day of the week)	Possible to specify in the special menu.	N	Y	0	
T11	Timer 3 Operation (Operating mode)	Same as T01.	N	Y	0	
T12	(Start time)	Possible to specify in the special menu.	N	Y	0	
T13	(End time)	Possible to specify in the special menu.	N	Y	0	
T14	(Start day of the week)	Possible to specify in the special menu.	N	Y	0	
T16	Timer 4 Operation (Operating mode)	Same as T01.	N	Y	0	
T17	(Start time)	Possible to specify in the special menu.	N	Y	0	
T18	(End time)	Possible to specify in the special menu.	N	Y	0	
T19	(Start day of the week)	Possible to specify in the special menu.	N	Y	0	
T51	Timer Operation (Pause date 1)	Possible to specify in the special menu.	N	Y	2210H	6-283
T52	(Pause date 2)		N	Y	2210H	
T53	(Pause date 3)		N	Y	2210H	
T54	(Pause date 4)		N	Y	2210H	
T55	(Pause date 5)		N	Y	2210H	
T56	(Pause date 6)		N	Y	2210H	
T57	(Pause date 7)		N	Y	2210H	
T58	(Pause date 8)		N	Y	2210H	
T59	(Pause date 9)		N	Y	2210H	
T60	(Pause date 10)		N	Y	2210H	
T61	(Pause date 11)		N	Y	2210H	
T62	(Pause date 12)		N	Y	2210H	
T63	(Pause date 13)		N	Y	2210H	
T64	(Pause date 14)		N	Y	2210H	
T65	(Pause date 15)		N	Y	2210H	
T66	(Pause date 16)		N	Y	2210H	
T67	(Pause date 17)		N	Y	2210H	
T68	(Pause date 18)		N	Y	2210H	
T69	(Pause date 19)		N	Y	2210H	
T70	(Pause date 20)		N	Y	2210H	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

K codes: Keypad Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
K01	LCD Monitor (Language selection)	0: Japanese 1: English 2: German 3: French 4: Spanish 5: Italian 6: Chinese 8: Russian (Available soon) 9: Greek (Available soon) 10: Turkish (Available soon) 11: Polish 12: Czech 13: Swedish 14: Portuguese (Available soon) 15: Dutch (Available soon) 16: Malay 17: Vietnamese (Available soon) 18: Thai (Available soon) 19: Indonesian (Available soon) 100: User-customized language (Available soon)	Y	Y	AE: 1	6-284
K02	Backlight OFF Time	OFF: Always OFF 1 to 30 min.: Automatic OFF time	Y	Y	5	
K03	LCD Monitor (Backlight brightness control)	0 (Dark) to 10 (Light)	Y	Y	5	6-285
K04	(Contrast control)	0 (Light) to 10 (Dark)	Y	Y	5	
K08	LCD Monitor Status Display/Hide Selection	0: Hide 1: Display	Y	Y	1	
K10	Main Monitor (Display item selection)	0: Speed monitor (select by K11) 13: Output current 14: Output voltage 18: Calculated torque 19: Input power 25: Load factor 26: Motor output 27: Analog input monitor in physical quantity 35: Input watt-hour (The unit depends on K31.) 50: PID command (final) in physical quantity 51: PID feedback amount (final) in physical quantity 52: PID output 53: PID control 1 command in physical quantity 54: PID control 1 feedback amount in physical quantity 55: PID control 2 command in physical quantity 56: PID control 2 feedback amount in physical quantity 60: External PID control 1 command (final) in physical quantity 61: External PID control 1 feedback amount (final) in physical quantity 62: External PID control 1 output in % 63: External PID control 1 manual command in % 64: External PID control 1 command in physical quantity 65: External PID control 1 feedback amount in physical quantity 70: External PID control 2 command in physical quantity 71: External PID control 2 feedback amount in physical quantity 72: External PID control 2 output in % 73: External PID control 2 manual command in % 80: External PID control 3 command in physical quantity 81: External PID control 3 feedback amount in physical quantity 82: External PID control 3 output in % 83: External PID control 3 manual command in %	Y	Y	0	6-286
K11	Main Monitor (Speed monitor item)	1: Output frequency 1 (before slip compensation) 2: Output frequency 2 (after slip compensation) 3: Reference frequency 4: Motor speed in r/min 5: Load shaft speed in r/min 8: Display speed in %	Y	Y	1	6-289

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
K12	Main Monitor (Display when stopped)	0: Reference value 1: Output value	Y	Y	0	6-289
K15	Sub Monitor (Display type)	0: Numeric values 1: Bar charts	Y	Y	0	6-290
K16	Sub Monitor 1 (Display item selection)	*Refer to K10 (= 13 to 83) and K11 (= 1 to 8).	Y	Y	13	
K17	Sub Monitor 2 (Display item selection)		Y	Y	19	
K20	Bar Chart 1 (Display item selection)	1: Output frequency 1(before slip compensation) 13: Output current 14: Output voltage 18: Calculated torque 19: Input power 25: Load factor 26: Motor output	Y	Y	1	6-291
K21	Bar Chart 2 (Display item selection)		Y	Y	13	
K22	Bar Chart 3 (Display item selection)		Y	Y	19	
K29	Display Filter	0.0 to 5.0 s	Y	Y	0.5	6-292
K30	Coefficient for Speed Indication	0.01 to 200.00	Y	Y	30.00	
K31	Display Unit for Input Watt-hour Data	0: kWh 1: MWh	Y	Y	0	
K32	Display Coefficient for Input Watt-hour Data	OFF: Cancel or reset 0.001 to 9999.000	Y	Y	0.010	6-293
K33	Long-term, Input Watt-hour Data Monitor	OFF: Cancel or reset 1: Hourly 2: Daily 3: Weekly 4: Monthly	Y	Y	4	
K81	Date Format	0: Y/M/D (year/month/day) 1: D/M/Y (day/month/year) 2: M/D/Y (month/day/year) 3: MD, Y (Month day, year)	Y	Y	AE: 1	6-294
K82	Time Format	0: 24-hour format (Time : Minute : Second) 1: 12-hour format (Time : Minute : Second AM/PM) 2: 12-hour format (AM/PM Time : Minute : Second)	Y	Y	0	
K83	Daylight Saving Time (Summer time)	0: Disable 1: Enable (+ 1 hour) 2: Enable (+ 30 minutes)	Y	Y	0	
K84	(Start date)	Possible to specify in the special menu.	Y	Y	0800H	6-295
K85	(End date)		Y	Y	0800H	
K91	Shortcut Key Function for ⟨ in Running Mode (Selection screen)	0: OFF (Disable) 11 to 99	Y	Y	OFF	6-296
K92	Shortcut Key Function for ⟩ in Running Mode (Selection screen)	0: OFF (Disable) 11 to 99	Y	Y	64	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

o codes: Option Functions

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
o01	Terminal [Y6A/B/C] Function (Relay output)	Same as E20.	N	Y	10	-
o02	Terminal [Y7A/B/C] Function		N	Y	6	
o03	Terminal [Y8A/B/C] Function		N	Y	25	
o04	Terminal [Y9A/B/C] Function		N	Y	26	
o05	Terminal [Y10A/B/C] Function		N	Y	28	
o06	Terminal [Y11A/B/C] Function		N	Y	36	
o07	Terminal [Y12A/B/C] Function		N	Y	37	
o09	Pt Channel (Display unit)	Temperature 60: K 61: °C 62: °F	Y	Y	61	
o10	Pt Channel 1 (Sensor type)	0: Jpt100 1: Pt100 2 : Ni100 3 : Pt1000 4 : Ni1000	Y	Y	0	
o11	(Extended functions)	0: No extended function assigned 5: PID feedback value 1 30: PID feedback value 2 42: External PID feedback value 1 45: External PID feedback value 2 48: External PID feedback value 3	N	Y	0	
o12	(Filter)	0.0 to 100.0 s	Y	Y	1.0	
o15	Pt Channel 2 (Sensor type)	Same as o10.	N	Y	0	
o16	(Extended functions)	Same as o11.	N	Y	0	
o17	(Filter)	Same as o12.	Y	Y	1.0	
o27	Communications Error Processing	0: Immediately trip with alarm Er5 1: Run for the period specified by timer o28 and then trip with alarm Er5 2: Retry during the period specified by timer o28. If the retry fails, immediately trip with alarm Er5. 3: Continue to run. After recovery from the error, run according to communications command 4 to 9: Same as o27 = 0. 10: Decelerate to a stop and trip with alarm Er5 11: Run for the period specified by timer o28, decelerate to a stop, and then trip with alarm Er5 12: Retry during the period specified by timer o28. If the retry fails, decelerate to a stop. If it succeeds, continue to run according to communications command 13 to 15: Same as when o27 = 3.	Y	Y	0	
o28	(Timer)	0.0 to 60.0 s	Y	Y	0.0	
o30	Bus configuration parameter 01	0 to 255 Functions of o30 to o39 differ depending upon the bus option type. For details, refer to the instruction manual of each bus option.	N	Y	0	
o31	Bus configuration parameter 02	Same as o30.	N	Y	0	
o32	Bus configuration parameter 03		N	Y	0	
o33	Bus configuration parameter 04		N	Y	0	
o34	Bus configuration parameter 05		N	Y	0	
o35	Bus configuration parameter 06		N	Y	0	
o36	Bus configuration parameter 07		N	Y	0	
o37	Bus configuration parameter 08		N	Y	0	
o38	Bus configuration parameter 09		N	Y	0	
o39	Bus configuration parameter 10		N	Y	0	
o40	Function Code Assignment 1 for Write	0, 1 to 65535 0: No assignment Data mapped I/O (write) Whether or not to support the I/O or the number of supports differs depending upon the bus option type. For the data configuration procedure, refer to the instruction manual of each bus option.	N	Y	0	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Code	Name	Data setting range	Change when running	Data copying	Default setting	Related page
o41	Function Code Assignment 2 for Write	Same as o40.	N	Y	0	-
o42	Function Code Assignment 3 for Write		N	Y	0	
o43	Function Code Assignment 4 for Write		N	Y	0	
o44	Function Code Assignment 5 for Write		N	Y	0	
o45	Function Code Assignment 6 for Write		N	Y	0	
o46	Function Code Assignment 7 for Write		N	Y	0	
o47	Function Code Assignment 8 for Write		N	Y	0	
o48	Function Code Assignment 1 for Read	0, 1 to 65535 0: No assignment Data mapped I/O (read) Whether or not to support the I/O or the number of supports differs depending upon the bus option type. For the data configuration procedure, refer to the instruction manual of each bus option.	N	Y	0	
o49	Function Code Assignment 2 for Read	Same as o48.	N	Y	0	
o50	Function Code Assignment 3 for Read		N	Y	0	
o51	Function Code Assignment 4 for Read		N	Y	0	
o52	Function Code Assignment 5 for Read		N	Y	0	
o53	Function Code Assignment 6 for Read		N	Y	0	
o54	Function Code Assignment 7 for Read		N	Y	0	
o55	Function Code Assignment 8 for Read		N	Y	0	
o56	Function Code Assignment 9 for Read		N	Y	0	
o57	Function Code Assignment 10 for Read		N	Y	0	
o58	Function Code Assignment 11 for Read		N	Y	0	
o59	Function Code Assignment 12 for Read		N	Y	0	
o60	Terminal [32] (Function)	Same as E61.	N	Y	0	
o61	(Offset)	-5.0 to 5.0%	Y	Y	0.0	
o62	(Gain)	0.00 to 200.00%	Y	Y	100.00	
o63	(Filter setting)	0.00 to 5.00 s	Y	Y	0.05	
o64	(Gain base point)	0.00 to 100.00%	Y	Y	100.00	
o65	(Polarity)	0: Bipolar 1: Unipolar	N	Y	1	
o66	(Bias value)	-100.00 to 100.00%	Y	Y	0.00	
o67	(Bias base point)	0.00 to 100.00%	Y	Y	0.00	
o69	(Display unit)	Same as J105. (Note that the data setting range starts with "1.")	N	Y	2	
o70	(Maximum scale)	-999 to 0.00 to 9990	N	Y	100	
o71	(Minimum scale)	-999 to 0.00 to 9990	N	Y	0.00	
o75	Terminal [C2] (Current range)	0: 4-20 mA 1: 0-20 mA	N	Y	0	
o76	(Function)	Same as E61.	N	Y	0	
o77	(Offset)	-5.0 to 5.0%	Y	Y	0.0	
o78	(Gain)	0.00 to 200.00%	Y	Y	100.00	
o79	(Filter time constant)	0.00 to 5.00 s	Y	Y	0.05	
o81	(Gain reference point)	0.00 to 100.00%	Y	Y	100.00	
o82	(Bias value)	-100.00 to 100.00%	Y	Y	0.00	
o83	(Bias base point)	0.00 to 100.00%	Y	Y	0.00	
o85	(Display unit)	Same as J105. (Note that the data setting range starts with "1.")	N	Y	2	
o86	(Maximum scale)	-999 to 0.00 to 9990	N	Y	100	
o87	(Minimum scale)	-999 to 0.00 to 9990	N	Y	0.00	
o90	Terminal [Ao/CS2] Function (Function)	Same as F31.	Y	Y	0	
o91	(Output gain)	0 to 300%	Y	Y	100	
o93	(Polarity)	0: Bipolar 1: Unipolar	N	Y	1	
o96	Terminal [CS/CS1] Function (Function)	Same as F31.	Y	Y	0	
o97	(Output gain)	0 to 300 %	Y	Y	100	

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Table A Factory Defaults Depending upon Inverter Capacity

Inverter capacity		Torque boost 1 F09 [%]		Auto-restart after momentary power failure (Restart time) H13 [s]	Non-linear V/f-pattern 1 (frequency) H50 [Hz]	Non-linear V/f-pattern 1 (volt) H51 [V]
[kW]	[HP]	Destination AEJ	Destination U			
0.75	1	6.5	0.0	0.5	OFF	0
1.5	2	4.9				
2.2	3	4.5				
3.7	5	4.1				
5.5	7.5	3.4				
7.5	10	2.7				
11	15	2.1		1.0		
15	20	1.6				
18.5	25	1.3				
22	30	1.1				
30	40	0.0		1.5	200V class series: A: 6.0, E: 5.0, 400V class series: AE: 5.0,	200V class series: A: 22, E: 23, 400V class series: A: 42, E: 40,
37	50					
45	60					
55	75					
75	100					
90	125					
110	150					
132	200			2.0		
160	250					
200	300			2.5		
220	350					
280	450					
315	-			4.0		
355	500					
400	600			5.0		
500	800					
630	900					
710	1000					

Note: Alphabets in the Default setting field denote shipping destination: A (Asia), E (EU).

Table B Motor Parameter Factory Defaults

200 V class series

Destined for Asia (Base frequency 60 Hz, Rated voltage 220 V) (P99 = 0 or 4)

Inverter type	Nominal applied motor (kW) P02	Rated current (A) P03	No-load current (A) P06	%R1 (%) P07	%X (%) P08	Rated slip frequency (Hz) P12	Starting mode (Auto search delay time 2) H46
FRN0.75AR1■-2A	0.75	3.29	2.11	7.20	8.94	2.33	0.5
FRN1.5AR1■-2A	1.50	5.56	2.76	5.43	9.29	2.00	
FRN2.2AR1■-2A	2.20	8.39	4.45	5.37	9.09	1.80	0.6
FRN3.7AR1■-2A	3.70	13.67	7.03	4.80	9.32	1.93	0.8
FRN5.5AR1■-2A	5.50	20.50	10.08	4.37	11.85	1.40	1.0
FRN7.5AR1■-2A	7.50	26.41	11.46	3.73	12.15	1.57	1.2
FRN11AR1■-2A	11.00	38.24	16.23	3.13	12.49	1.07	1.3
FRN15AR1■-2A	15.00	50.05	18.33	2.69	13.54	1.13	2.0
FRN18.5AR1■-2A	18.50	60.96	19.62	2.42	13.71	0.87	
FRN22AR1■-2A	22.00	70.97	23.01	2.23	13.24	0.90	
FRN30AR1■-2A	30.00	97.38	35.66	2.18	12.38	0.80	2.3
FRN37AR1■-2A	37.00	118.2	38.04	2.28	13.56	0.80	2.5
FRN45AR1■-2A	45.00	141.9	43.54	2.09	13.36	0.80	
FRN55AR1S-2A	55.00	172.8	53.72	1.94	13.39	0.94	2.6
FRN75AR1S-2A	75.00	236.5	76.27	1.64	13.97	0.80	2.8
FRN90AR1S-2A	90.00	282.0	90.93	1.43	13.26	0.80	3.2

Destined for EU (Base frequency 50 Hz, Rated voltage 230 V) (P99 = 0 or 4)

Inverter type	Nominal applied motor (kW) P02	Rated current (A) P03	No-load current (A) P06	%R1 (%) P07	%X (%) P08	Rated slip frequency (Hz) P12	Starting mode (Auto search delay time 2) H46
FRN0.75AR1■-2E	0.75	3.58	2.65	7.50	9.30	2.33	0.5
FRN1.5AR1■-2E	1.50	5.77	3.46	5.39	9.22	2.00	
FRN2.2AR1■-2E	2.20	8.80	5.58	5.39	9.12	1.80	0.6
FRN4.0AR1■-2E	3.70	14.26	8.82	4.79	9.30	1.93	0.8
FRN5.5AR1■-2E	5.50	21.25	12.65	4.34	11.75	1.40	1.0
FRN7.5AR1■-2E	7.50	26.92	14.38	3.63	11.85	1.57	1.2
FRN11AR1■-2E	11.00	38.87	20.36	3.04	12.14	1.07	1.3
FRN15AR1■-2E	15.00	50.14	23.00	2.58	12.98	1.13	2.0
FRN18.5AR1■-2E	18.50	60.45	24.61	2.29	13.01	0.87	
FRN22AR1■-2E	22.00	70.40	28.87	2.12	12.56	0.90	
FRN30AR1■-2E	30.00	97.54	44.74	2.09	11.86	0.80	2.3
FRN37AR1■-2E	37.00	117.2	47.73	2.16	12.86	0.80	2.5
FRN45AR1■-2E	45.00	140.2	54.63	1.98	12.63	0.80	
FRN55AR1S-2E	55.00	170.9	67.39	1.84	12.67	0.94	2.6
FRN75AR1S-2E	75.00	234.5	95.68	1.55	13.25	0.80	2.8
FRN90AR1S-2E	90.00	279.7	114.0	1.36	12.58	0.80	3.2

Note: The box (■) replaces an alphabetic letter depending on the enclosure: M (IP21) or L (IP55).

Table B Motor Parameter Factory Defaults (continued)

400 V class series

Destined for Asia (Base frequency 50 Hz, Rated voltage 415 V) (P99 = 0 or 4)

Inverter type	Nominal applied motor (kW) P02	Rated current (A) P03	No-load current (A) P06	%R1 (%) P07	%X (%) P08	Rated slip frequency (Hz) P12	Starting mode (Auto search delay time 2) H46
FRN0.75AR1■-4A	0.75	1.79	1.19	8.31	10.31	2.33	0.5
FRN1.5AR1■-4A	1.50	3.04	1.57	6.19	10.60	2.00	
FRN2.2AR1■-4A	2.20	4.53	2.52	6.15	10.41	1.80	0.6
FRN3.7AR1■-4A	3.70	7.37	3.98	5.48	10.66	1.93	0.8
FRN5.5AR1■-4A	5.50	11.28	5.71	4.99	13.53	1.40	1.0
FRN7.5AR1■-4A	7.50	14.18	6.48	4.24	13.84	1.57	1.2
FRN11AR1■-4A	11.00	20.52	9.18	3.56	14.21	1.07	1.3
FRN15AR1■-4A	15.00	26.79	10.38	3.05	15.37	1.13	2.0
FRN18.5AR1■-4A	18.50	33.03	11.10	2.73	15.52	0.87	
FRN22AR1■-4A	22.00	37.90	13.07	2.53	14.99	0.90	
FRN30AR1■-4A	30.00	52.59	20.23	2.48	14.04	0.80	2.3
FRN37AR1■-4A	37.00	63.16	21.58	2.58	15.37	0.80	2.5
FRN45AR1■-4A	45.00	75.73	24.69	2.37	15.12	0.80	2.5
FRN55AR1■-4A	55.00	92.26	30.40	2.20	15.16	0.94	2.6
FRN75AR1■-4A	75.00	126.3	43.16	1.85	15.82	0.80	2.8
FRN90AR1■-4A	90.00	150.5	51.46	1.62	15.00	0.80	3.2
FRN110AR1S-4A	110.0	182.0	47.31	1.86	19.47	0.66	3.5
FRN132AR1S-4A	132.0	217.0	59.76	1.63	17.65	0.66	4.1
FRN160AR1S-4A	160.0	263.2	66.92	1.57	18.40	0.66	4.5
FRN200AR1S-4A	200.0	324.0	74.18	1.46	18.66	0.66	4.7
FRN220AR1S-4A	220.0	352.9	74.49	1.49	19.48	0.58	
FRN280AR1S-4A	280.0	446.7	97.21	1.27	17.88	0.54	5.5
FRN315AR1S-4A	315.0	503.3	124.5	0.78	15.56	0.45	5.6
FRN355AR1S-4A	355.0	561.3	136.9	0.77	15.30	0.43	
FRN400AR1S-4A	400.0	650.3	207.5	0.58	14.66	0.29	7.5
FRN500AR1S-4A	500.0	811.4	280.1	0.48	11.59	0.18	9.8
FRN630AR1S-4A	630.0	1021	368.3	0.43	11.03	0.17	10.5
FRN710AR1S-4A	710.0	1114	300.8	0.50	13.65	0.21	

Note: The box (■) replaces an alphabetic letter depending on the enclosure: M (IP21) or L (IP55).

Table B Motor Parameter Factory Defaults (continued)

400 V class series

Destined for EU and Japan (Base frequency 50 Hz, Rated voltage 400 V) (P99 = 0 or 4)

Inverter type	Nominal applied motor (kW) P02	Rated current (A) P03	No-load current (A) P06	%R1 (%) P07	%X (%) P08	Rated slip frequency (Hz) P12	Starting mode (Auto search delay time 2) H46
FRN0.75AR1■-4E	0.75	1.80	1.15	8.67	10.76	2.33	0.5
FRN1.5AR1■-4E	1.50	3.10	1.51	6.55	11.21	2.00	
FRN2.2AR1■-4E	2.20	4.60	2.43	6.48	10.97	1.80	0.6
FRN4.0AR1■-4E	3.70	7.50	3.84	5.79	11.25	1.93	0.8
FRN5.5AR1■-4E	5.50	11.50	5.50	5.28	14.31	1.40	1.0
FRN7.5AR1■-4E	7.50	14.50	6.25	4.50	14.68	1.57	1.2
FRN11AR1■-4E	11.00	21.00	8.85	3.78	15.09	1.07	1.3
FRN15AR1■-4E	15.00	27.50	10.00	3.25	16.37	1.13	2.0
FRN18.5AR1■-4E	18.50	34.00	10.70	2.92	16.58	0.87	
FRN22AR1■-4E	22.00	39.00	12.60	2.70	16.00	0.90	
FRN30AR1■-4E	30.00	54.00	19.50	2.64	14.96	0.80	2.3
FRN37AR1■-4E	37.00	65.00	20.80	2.76	16.41	0.80	2.5
FRN45AR1■-4E	45.00	78.00	23.80	2.53	16.16	0.80	
FRN55AR1■-4E	55.00	95.00	29.30	2.35	16.20	0.94	2.6
FRN75AR1■-4E	75.00	130.0	41.60	1.98	16.89	0.80	2.8
FRN90AR1■-4E	90.00	155.0	49.60	1.73	16.03	0.80	3.2
FRN110AR1S-4E	110.0	188.0	45.60	1.99	20.86	0.66	3.5
FRN132AR1S-4E	132.0	224.0	57.60	1.75	18.90	0.66	4.1
FRN160AR1S-4E	160.0	272.0	64.50	1.68	19.73	0.66	4.5
FRN200AR1S-4E	200.0	335.0	71.50	1.57	20.02	0.66	4.7
FRN220AR1S-4E	220.0	365.0	71.80	1.60	20.90	0.58	
FRN280AR1S-4E	280.0	462.0	93.70	1.36	19.18	0.54	5.5
FRN315AR1S-4E	315.0	520.0	120.0	0.84	16.68	0.45	5.6
FRN355AR1S-4E	355.0	580.0	132.0	0.83	16.40	0.43	
FRN400AR1S-4E	400.0	670.0	200.0	0.62	15.67	0.29	7.5
FRN500AR1S-4E	500.0	835.0	270.0	0.51	12.38	0.18	9.8
FRN630AR1S-4E	630.0	1050.0	355.0	0.46	11.77	0.17	10.5
FRN710AR1S-4E	710.0	1150.0	290.0	0.54	14.62	0.21	

Note: The box (■) replaces an alphabetic letter depending on the enclosure: M (IP21) or L (IP55).