APPLICATION FUNCTION CODES VALUES

Customer:				Date:	
Specification (Application):					
Inverter type FRN F1 -				**Option:**	
Motor data					
kW	**rpm**		**A**	**V**	**Cos φ=**

F codes: Fundamental functions

Code	Name		Setting range	Default setting	Actual setting
F00	Data protection		0: Disable data protection (function code can be edited) 1: Enable data protection	0	
F01	Frequency command 1		0: Enable arrow keys on the keypad 1: Enable voltage input to terminal [12] (0 to 10V DC) 2: Enable current input to terminal [C1] (4 to 20 mA) 3: Enable sum of voltage and current inputs terminals [12] and [C1] 5: Enable voltage input to terminal [V2] (0 to 10V DC) 7: Enable terminal command (UP) / (DOWN) control	0	
F02	RUN command		0: Enable RUN / STOP keys on the keypad (Motor rotational direction from digital input signals FWD/REV) 1: Enable terminal command FWD or REV 2: Enable RUN / STOP keys on keypad (forward) 3: Enable RUN / STOP keys on keypad (reverse)	2	
F03	Maximum frequency		25.0 to 120.0 Hz	50.0 Hz	
F04	Base frequency		25.0 to 120.0 Hz	50.0 Hz	
F05	Rated voltage at base frequency		0: Output a voltage in proportion to input voltage 80 to 240V: Output a voltage AVR-controlled (200V AC series) 160 to 500V: Output a voltage AVR-controlled (400V AC series)	400 V	
F07	Acceleration time 1		0.00 to 3600 s (Entering 0.00 cancels the acceleration time, requiring external soft-start)	20.0 s	
F08	Deceleration time 1		0.00 to 3600 s (Entering 0.00 cancels the deceleration time, requiring external soft-start)	20.0 s	
F09	Torque boost		0.0 to 20.0 % (percentage of the rated voltage at base frequency (F05)). This setting is effective when F37 = 0,1,3 or 4	Depend on the inverter power capacity	
F10	Electronic thermal overload protection for motor	Selection motor charact.	1: For general-purpose motors with built-in-self-cooling fan 2: For separately excited motor fan	1	
F11		Overload detection level	0.0: Disable 1 to 135% of the rated current (allowable continuous drive current) of the motor	100 % of the motor rated current	
F12		Thermal time constant	0.5 to 75.0 min	5.0 min (22kW or below) / 10.0 min (30kW or above)	
F14	Restart mode after momentary power failure (Mode selection)		0: Disable restart (trip immediately) 1: Disable restart (trip after a recovery from power failure) 3: Enable restart (continue to run, for heavy inertia or general loads) 4: Enable restart (restart at the frequency at which the power failure occurred, for general loads) 5: Enable restart (restart at the starting frequency, for low-inertia load)	0	
F15	Frequency limiter	High	0 to 120.0 Hz	70.0 Hz	
F16		Low	0 to 120.0 Hz	0.0 Hz	
F18	Bias (frequency command 1)		-100.00 to 100.00 %	0.00 %	
F20	DC braking	Start freq.	0.0 to 60.0 Hz	0.0 Hz	
F21		Braking level	0 to 60 % (100% is interpreted as rated output current of the inverter)	0 %	
F22		Braking time	0.00: Disable 0.01 to 30.00 s	0.00 s	
F23	Starting frequency		0.1 to 60.0 Hz	0.5 Hz	
F25	Stop frequency		0.1 to 60.0 Hz	0.2 Hz	

Code	Name		Setting range	Default setting	Actual setting
F26	Motor sound	Carrier frequency	0.75 to 15 kHz (22kW or below) 0.75 to 10 kHz (30kW to 75kW) 0.75 to 6 kHz (90kW or above)	15/10/6 kHz	
F27		Sound tone	0: Level 0 (Inactive) 1: Level 1 2: Level 2 3: Level 3	0	
F29	Analog ouptut (FMA)	Mode selection	0: Output in voltage (0 to 10V DC) 1: Output in current (4 to 20mA DC)	0	
F30		Output adjust.	0 to 200 %	100 %	
F31		Function	Select a function to be monitored from the following 0: Output frequency 2: Output current 3: Output voltage 4: Output torque 5: Load factor 6: Input power 7: PID feedback value (PV) 9: DC link bus voltage 10: Universal AO 13: Motor output 14: Calibration analog output (+10V DC / 20 mA DC) 15: PID process command (SV) 16: PID process output (MV)	0	
F34	Analog output (FMI)	Duty	0 to 200 %: Voltage output adjustment	100 %	
F35		Function	Select a function to be monitored from the following: 0: Output frequency 2: Output current 3: Output voltage 4: Output torque 5: Load factor 6: Input power 7: PID feedback value (PV) 9: DC link bus voltage 10: Universal AO 13: Motor output 14: Calibration analog output (20 mA DC) 15: PID process command (SV) 16: PID process output (MV)	0	
F37	Load selection/ Auto torque boost/ Auto energy saving operation		0: Variable torque load increasing in proportion to square of speed 1: Variable torque load increasing in proportion to square of speed (Higher startup torque required) 2: Auto-torque boost 3: Auto-energy saving operation (Variable torque load increasing in proportion to square of speed) 4: Auto-energy saving operation (Variable torque load increasing in proportion to square of speed; higher startup torque required) Note: Apply this setting to a load with short acceleration time. 5: Auto-energy saving operation (Auto-torque boost) Note: Apply this setting to a load with long acceleration time.	1	
F43	Current limiter	Mode selection	0: Disable (No current limiter works) 1: Enable at constant speed (Disabled during acceleration and deceleration) 2: Enable during acceleration and at constant speed	0	
F44		Level	20 to 120 % (100% is interpreted as rated output current of the inverter)	110 %	

	The shaded function codes are applicable to the quick setup menu

E codes: Extension terminal functions

Code	Name	Data setting range	Default setting	Actual setting
E01	Command assignment to: [X1]	Selecting function code data assigns the corresponding function to terminals [X1] to [X5] as listed below. Setting the value of 1000s in parentheses () shown below assigns a negative logic input to a terminal. In the case of (THR) and (STOP), data 1009 and 1030 are for normal logic and 9 and 30 are for negative logic, respectively.	6	
E02	[X2] [X3]		7	
E03	[X4] [X5]		8	
E04		0 (1000): Select multistep frequency (SS1)	11	
E05		1 (1001): Select multistep frequency (SS2) 2 (1002): Select multistep frequency (SS4)	35	
		3 (1003): Select multistep frequency (SS8) 6 (1006): Enable 3-wire operation (HLD) 7 (1007): Coast to stop (BX) 8 (1008): Reset alarm (RST) 9 (1009): Enable external alarm trip (THR) 11 (1011): Switch frequency command 2/1 (Hz2/Hz1) 13: Enable DC brake (DCBRK) 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 write from keypad (Data changeable) (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 RS485 or field bus (LE) (option) 25 (1025): Universal DI (U-DI) 26 (1026): Select starting characteristics (STM) 30 (1030): Force to stop (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 to run (RE) 39: Protect motor from dew condensation (DWP) 40: Enable integrated sequence to switch to commercial power (ISW50) (50 Hz) 41: Enable integrated sequence to switch to commercial power (ISW60) (60 Hz) 50 (1050): Clear periodic switching time (MCLR) 51 (1051): Enable pump drive (motor 1) (MEN1) 52 (1052): Enable pump drive (motor 2) (MEN2) 53 (1053): Enable pump drive (motor 3) (MEN3) 54 (1054): Enable pump drive (motor 4) (MEN4) 87 (1087): Switch RUN command 2/1 (FR2/FR1) 88: RUN forward 2 (FWD2) 89: RUN reverse 2 (REV2)		
E14	Acceleration Time (Multistep Frequency + UP/DOWN)	0.00 to 3600 s	20.00	
E15	Deceleration Time (Multistep Frequency + UP/DOWN)			

Code	Name		Data setting range	Default setting	Actual setting
E20	Command assignment to: [Y1]		Selecting function code data assigns the corresponding function to terminals [Y1] to [Y3], [Y5A/C], and [30A/B/C] as listed below. Setting the value of 1000s in parentheses () shown below assigns a negative logic input to a terminal.	0	
E21	[Y2] [Y3]			1	
E22	[Y5A/C] [30A/B/C]			2	
E24			0 (1000): Inverter running (RUN) 1 (1001): Frequency arrival signal (FAR) 2 (1002): Frequency 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 primary side) (SW52-2) 13: Switch motor drive source between commercial power and inverter output (For secondary side) (SW52-1) 15 (1015): Select AX terminal function (For MC on primary side) (AX) 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): Service life alarm (LIFE) 33 (1033): Command loss detected (REF OFF) 35 (1035): Inverter output on (RUN2) 36 (1036): Overload prevention control (OLP) 37 (1037): Current detected (ID) 42 (1042): PID alarm (PID-ALM) 43 (1043): Under PID control (PID-CTL) 44 (1044): Motor stopping due to slow flowrate under PID control (PID-STP) 45 (1045): Low output torque detected (U-TL) 54 (1054): Inverter in remote operation (RMT) 55 (1055): Run command activated (AX2) 56 (1056): Motor overheat detected (PTC) (THM) 59 (1059): C1 disconnection detected (C1OFF) 60 (1060): Sequenced start motor 1, inverter-driven (M1_I) 61 (1061): Sequenced start motor 1, commercial-power driven (M1_L) 62 (1062): Sequenced start motor 2, inverter-driven (M2_I) 63 (1063): Sequenced start motor 2, commercial-power driven (M2_L) 64 (1064): Sequenced start motor 3, inverter-driven (M3_I) 65 (1065): Sequenced start motor 3, commercial-power driven (M3_L) 67 (1067): Sequenced start motor 4, commercial-power driven (M4_L) 68 (1068): Periodic switching early warning (MCHG) 69 (1069): Pump control limit signal (MLIM) 87 (1087): (FAR AND FDT) signal (FARFDT) 99 (1099): Alarm output (for any alarm) (ALM)	10	
E27				99	
E31	Frequency detection (FDT)	Detection level	0.0 to 120.0 Hz	50.0 Hz	
E32		Hysteresis	0.0 to 120.0 Hz	1.0 Hz	
E34	Overload early warning/ Current detection	Level	0: Disable Current value of 1% to 150% of the inverter rated current	100% of the motor rated current	
E35		Timer	0.01 to 600.00 s	10.00 s	
E40	PID display coefficient A		-999 to 0.00 to 999	100	
E41	PID display coefficient B		-999 to 0.00 to 999	0.00	
E43	LED monitor	Item selection	0: Speed monitor (Select by E48) 3: Output current 4: Output voltage 8: Calculated torque 9: Input power 10: PID process command (Final) 12: PID feedback value 14: PID output 15: Load factor 16: Motor output 17: Analog input	0	
E45	LCD monitor (only with multi-functional keypad TP-G1)	Item selection	0: Running status, rotational direction and operation guide 1: Bar charts for output frequency, current and calculated torque	0	
E46	Keypad TP-G1)	Language selection	0: Japanese 1: English 2: German 3: French 4: Spanish 5: Italian	1	
E47	Contrast control	0 (Low) to 10 (High)	5		

Code	Name		Setting range	Default setting	Actual setting
E48	LED monitor	Speed item	0: Output frequency 3: Motor speed in r/min 4: Load shaft in r/min 7: Display speed in %	0	
E50	Coefficient for speed indication		0.01 to 200.00	30.00	
E51	Display coefficient for input watt-hour data		0.000: (Cancel / reset) 0.001 to 9999	0.010	
E52	Keypad (menu display mode)		0: Function code data editing mode (Menus #0, #1 and #7) 1: Function code data check mode (Menus #2 and #7) 2: Full-menu mode (Menus #0 through #7)	0	
E61	Analog input for (Extension function selection)	[12]	Selecting function code data assigns the corresponding function to terminals [12], [C1] and [V2] as listed below	0	
E62		[C1]	0: None	0	
E63		[V2]	1: Auxiliary frequency command 1 2: Auxiliary frequency command 2 3: PID process command 1 5: PID feedback value 20: Analog input monitor	0	
E64	Saving digital reference frequency		0: Auto saving (at the time of main power turned off) 1: Saving by pressing FUNC/DATA key	0	
E65	Command loss detection	Level	0: Decelerate to stop 20 to 120 % 999: Disable	999	
E80	Detect low torque	Detection level	0 to 150 %	20 %	
E81		Timer	0.01 to 600.00 s	20.00 s	
E98	Command assignment to: [FWD]		Selecting function code data assigns the corresponding function to terminals [FWD] and [REV] as listed below. Setting the value of 1000s in parentheses () shown below assigns a negative logic input to a terminal. In the case of (THR) and (STOP), data 1009 and 1030 are for normal logic and 9 and 30 are for negative logic, respectively.	98	
E99	[REV]			99	
			0 (1000): Select multistep frequency (SS1) 1 (1001): Select multistep frequency (SS2) 2 (1002): Select multistep frequency (SS4) 3 (1003): Select multistep frequency (SS8) 6 (1006): Enable 3-wire operation (HLD) 7 (1007): Coast to stop (BX) 8 (1008): Reset alarm (RST) 9 (1009): Enable external alarm trip (THR) 11 (1011): Switch frequency command 2/1 (Hz2/Hz1) 13: Enable DC brake (DCBRK) 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 write from keypad (Data changeable) (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 RS485 or field bus (option) (LE) 25 (1025): Universal DI (U-DI) 26 (1026): Select starting characteristics (STM) 30 (1030): Force to stop (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 to run (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) 50 (1050): Clear periodic switching time (MCLR) 51 (1051): Enable pump drive (motor 1) (MEN1) 52 (1052): Enable pump drive (motor 2) (MEN2) 53 (1053): Enable pump drive (motor 3) (MEN3) 54 (1054): Enable pump drive (motor 4) (MEN4) 87 (1087): Switch run command 2/1 (FR2/FR1) 88: RUN forward 2 (FWD2) 89: RUN reverse 2 (REV2) 98: RUN forward (FWD) 99: RUN reverse (REV)		

The shaded function codes are applicable to the quick setup menu

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C codes: Control functions of frequency

Code	Name		Data setting range	Default setting	Actual setting
C01	Jump frequency	1	0.0 to 120.0 Hz	0.0 Hz	
C02		2		0.0 Hz	
C03		3		0.0 Hz	
C04		Band	0.0 to 30.0 Hz	3.0 Hz	
C05	Multistep frequency	1	0.00 to 120.00 Hz	0.00 Hz	
C06		2		0.00 Hz	
C07		3		0.00 Hz	
C08		4		0.00 Hz	
C09		5		0.00 Hz	
C10		6		0.00 Hz	
C11		7		0.00 Hz	
C12		8		0.00 Hz	
C13		9		0.00 Hz	
C14		10		0.00 Hz	
C15		11		0.00 Hz	
C16		12		0.00 Hz	
C17		13		0.00 Hz	
C18		14		0.00 Hz	
C19		15		0.00 Hz	
C30	Frequency command 2		0: Enable arrow keys on the keypad 1: Enable voltage input to terminal [12] (0 to 10V DC) 2: Enable current input to terminal [C1] (4 to 20 mA) 3: Enable sum of voltage and current inputs to terminals [12] and [C1] 5: Enable voltage input to terminal [V2] (0 to 10V DC) 7: Enable terminal command (UP) / (DOWN) control	2	
Code	**Name**		**Data setting range**	**Default setting**	**Actual setting**
C32	Analog input adjustment for [12]	Gain for terminal input [12]	0.00 to 200.00 %	100.0 %	
C33		Filter time constant	0.00 to 5.00 s	0.05 s	
C34		Gain reference point	0.00 to 100.00 %	100.0 %	
C37	Analog input adjustment for [C1]	Gain for terminal input [C1]	0.00 to 200.00 %	100.0 %	
C38		Filter time constant	0.00 to 5.00 s	0.05 s	
C39		Gain reference point	0.00 to 100.00 %	100.0 %	
C42	Analog input adjustment for [V2]	Gain for terminal input [V2]	0.00 to 200.00 %	100.0 %	
C43		Filter time constant	0.00 to 5.00 s	0.05 s	
C44		Gain reference point	0.00 to 100.00 %	100.0 %	
C50	Bias reference point (Frequency command 1)		0.00 to 100.0 %	0.00 %	
C51	Bias for PID command 1	Bias value	-100.0 to 100.00 %	0.00 %	
C52		Bias reference point	0.00 to 100.00 %	0.00 %	
C53	Selection of normal/inverse operation (Frequency command 1)		0: Normal operation 1: Inverse operation	0	

P codes: Motor parameters

Code		Name	Data setting range	Default setting	Actual setting
P01	Motor	No. of poles	2 to 22	4	
P02		Rated capacity	0.01 to 1000 kW (If P99 is 0, 3 or 4) 0.01 to 1000 HP (If P99 is 1)	Rated capacity of the motor	
P03		Rated current	0.00 to 2000 A	Rated current of Fuji standard motor	
P04		Autotuning	0: Disable 1: Enable (Tune %R1 and %X while the motor is stopped) 2: Enable (Tune %R1 and %X while the motor is stopped and no-load current while running)	0	
P06		No-load current	0.00 to 2000 A	Rated value of Fuji standard motor	
P07		%R1	0.00 to 50.00 %	Rated value of Fuji standard motor	
P08		%X	0.00 to 50.00 %	Rated value of Fuji standard motor	
P99		Motor selection	0: Characteristics of motor 0 (Fuji standard motors, 8-series) 1: Characteristics of motor 1 (HP-rated motors) 3: Characteristics of motor 3 (Fuji standard motors, 6-series) 4: Other motors	0	

	The shaded function codes are applicable to the quick setup menu

H codes: High performance functions

Code	Name		Data setting range	Default setting	Actual setting
H03	Data initialization		0: Disable initialization 1: Initialize all function code data to the factory defaults 2: Initialize motor parameters	0	
H04	Auto-resetting	Times	0: Disable 1 to 10 times	0 times	
H05		Reset interval	0.5 to 20.0 s	5.0 s	
H06	Cooling fan ON/OFF control		0: Disable (Always in operation) 1: Enable (ON/OFF controllable)	0	
H07	Acceleration/Deceleration pattern		0: Linear 1: S-curve (Weak) 2: S-curve (Strong) 3: Curvilinear	0	
H09	Select starting characteristics (Auto search for idling motor's speed)		0: Disable 3: Enable (Follow RUN command, either forward or reverse) 4: Enable (Follow RUN command, both forward and reverse) 5: Enable (Follow RUN command, inversely both forward and reverse)	0	
H11	Deceleration mode		0: Normal deceleration 1: Coast-to-stop	0	
H12	Instantaneous overcurrent limiting		0: Disable 1: Enable	1	
H13	Restart mode after momentary power failure	Restart time	0.1 to 10.0 s	Depending on the inverter capacity	
H14		Frequency fall rate	0.00: Set deceleration time 0.01 to 100.0 Hz/s 999: Follow the current limit command	999	
H15		Continuous running level	200V series: 200 to 300VDC 400V series: 400 to 600VDC	235 V DC 470 V DC	
H16		Allowable momentary power failure time	0.0 to 30.0 s 999: The longest time automatically determined by the inverter	999	
H17	Select starting characteristics (Frequency for idling motor's speed)		0.0 to 120.0 Hz 999: Harmonize at the maximum frequency	999	
H26	PTC thermistor input	Mode selection	0: Disable 1: Enable (Upon detection of PTC, the inverter immediately trips and stops with OH4 displayed) 2: Enable (Upon detection of PTC, the inverter continues running while outputting alarm signal (THM))	0	
H27		Level	0.00 to 5.00 V DC	1.60 V DC	
H30	Communication link function (Mode selection)		Frequency command 0: F01/C30 1: RS485 link 2: F01/C30 3: RS485 link 4: RS485 link (option) 5: RS485 link (option) 6: F01/C30 7: RS485 link 8: RS485 link (option)	RUN command F02 F02 RS485 link RS485 link F02 RS485 link RS485 link (option) RS485 link (option) RS485 link (option)	0
H42	Capacitance of DC link bus capacitor		Indication for replacing DC link bus capacitor (0000 to FFFF: Hexadecimal)	Set at factory shipping	
H43	Cumulative run time of cooling fan		Indication of cumulative run time of cooling fan for replacement		
H47	Initial capacitance of DC link bus capacitor		Indication for replacing DC link bus capacitor (0000 to FFFF: Hexadecimal)		
H48	Cumulative run time of capacitors on the printed circuit board		Indication for replacing capacitors on the printed circuit board (0000 to FFFF: Hexadecimal). Resetable		
H49	Select starting characteristics (Auto search time for idling motor's speed) Non-linear V/f pattern		0.0 to 10.0 s	0.0 s	
H50		Frequency	0.0: Cancel 0.1 to 120.0 Hz	0.0 Hz (22kW or below)	5.0 Hz (30kW or above)
H51		Voltage	0 to 240V: Output a voltage AVR-controlled (for 200V AC series) 0 to 500V: Output a voltage AVR-controlled (for 400V AC series)	0 to 240V: Output a voltage AVR-controlled (for 200V AC series) 0 to 500V: Output a voltage AVR-controlled (for 400V AC series)	0 (22kW or below) 20 (30kW or above, 200V ser.) 40 (30kW or above, 400V ser.)
H56	Deceleration time for forced stop		0.00 to 3600 s	20.0 s	
H61	UP/DOWN Control		1 or 3: Display data on the keypad´s LED monitor in decimal format (in each bit, "0" for disabled, "1" for enabled) Bit 0: Last UP/DOWN command value on releasing run command (Prefixed to "1") Bit 1: Multistep Frequency + UP/DOWN Control	1 (Bit 0 = 1)	

Code	Name		Data setting range	Default setting	Actual setting
H63	Low limiter	Mode selection	0: Limit by F16 (Frequency Limiter: Low) and continue to run 1: If the output frequency lowers less than the one limited by F16 (Frequency limiter: Low), decelerates to stop the motor	0	9
H64		Lower limiting frequency	0.0: Depends on F16 (Frequency limiter: Low) 0.1 to 60.0 Hz	2.0 Hz	
H69	Automatic deceleration		0: Disable 3: Enable (Control DC link bus voltage at a constant)	0	
H70	Overload prevention control		0.00: Follow deceleration time specified by F08 0.01 to 100.00 Hz/s 999: Disable	999	
H71	Deceleration characteristics		0: Disable 1: Enable	0	
H80	Gain for suppression of output current fluctuation for motor		0.00 to 0.40	0.10 for 45 kW or above (200V series) and for 55 kW or above (400V series) 0.20 for 37 kW or below (200V series) and for 45 kW or below (400V series)	
H86	Reserved *1		0 to 2	2 for 45 kW or above (200V series) and for 55 kW or above (400V series) 0 for 37 kW or below (200V series) and for 45 kW or below (400V series)	
H87	Reserved *1		25.0 to 120.0 Hz	25.0 Hz	
H88	Reserved *1		0 to 3 999	0	
H89	Reserved *1		0, 1	0	
H90	Reserved *1		0, 1	0	
H91	C1 signal disconnection detection		0.0 s: Wire disconnection protection disabled 0.1-60.0 s: Wire disconnection detection time	0.0 s	
H92	Continue to run	P component: gain	0.000 to 10.000 times 999	999	
H93		I component: time	0.010 to 10.000 s999	999	
H94	Cumulative run time of motor		Change or reset the cumulative data	-	
H95	DC braking (braking response mode)		0: Slow 1: Quick	1	
H96	STOP key priority/start check function		STOP key priority Start check function 0: Disable Disable 1: Enable Disable 2: Disable Enable 3: Enable Enable	0	
H97	Clear alarm data		Setting H97 data to "1" clears alarm data and then returns to zero	0	
H98	Protection/maintenance function		0 to 63: Display data on the keypad's LED monitor in decimal format (In each bit, "0" for disabled, "1" for enabled)Bit 0: Lower the carrier frequency automatically Bit 1: Detect input phase loss Bit 2: Detect output phase loss Bit 3: Select life judgement criteria of DC link bus capacitor Bit 4: Judge the life of DC link bus capacitor Bit 5: Detect DC fan lock	19 (decimal) (Bits 4,1,0 = 1 bits 5,3,2, = 0)	

*1   The H86 through H90 are displayed, but they are reserved for particular manufacturers. Unless otherwise specified, do not access these function codes.

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J codes: Application functions

Code	Name			Data setting range	Default setting	Actual setting
J01	PID control	Mode selection		0: Disable 1: Enable (normal operation) 2: Enable (inverse operation)	0	
J02		Remote process command		0: Enable arrow keys on keypad 1: PID process command 1 3: Enable terminal command UP/DOWN control 4: Command via communications link	0	
J03		P (gain)		0.000 to 30.000	0.100 times	
J04		I (integral time)		0.0 to 3600.0 s	0.0 s	
J05		D (differential time)		0.00 to 600.00 s	0.00 s	
J06		Feedback filter		0.0 to 900.0 s	0.5 s	
J10		Anti reset windup		0 to 200 %	200 %	
J11		Select alarm output		(Refer to FRENIC-Eco user's manual)	0	
J12		Upper limit alarm (AH)		0 to 100 %	100 %	
J13		Lower limit alarm (AL)		0 to 100 %	0 %	
J15		Stop frequency for slow flowrate		0: Disable 1 to 120 Hz	0	
J16		Slow flowrate level stop latency		1 to 60 s	30 s	
J17		Starting frequency		0: Disable 1 to 120 Hz	0	
J18		Upper limit of PID process output		1 to 120 Hz 999: Depends on setting of F15	999	
J19		Lower limit of PID process output		1 to 120 Hz 999: Depends on setting of F16	999	
J21	Dew condensation prevention (Duty)			1 to 50 %	1 %	
J22	Commercial power switching sequence			0: Keep inverter operation (Stop due to alarm) 1: Automatically switch to commercial-power operation	0	
J23	Starting from the Slow Flowrate Stop (Feedback deviation level)			0 to 100 %	0 %	
J24	Starting from the Slow Flowrate Stop (Start latency)			0 to 60 s	0	
J25	Pump control		Mode selection	0: Disable 1: Enable (Fixed inverter-driven motor) 2: Enable (Floating inverter-driven motor)	0	
J26	Motor 1 mode			0: Disable (Always OFF) 1: Enable 2: Force to run by commercial power	0	
J27	Motor 2 mode				0	
J28	Motor 3 mode				0	
J29	Motor 4 mode				0	
J30	Motor switching order			0: Fixed 1: Automatically (Constant run time)	0	
J31	Motor stop mode			0: Stop all motors (inverter-driven and commercial power-driven) 1: Stop inverter-driven motor only (excl. alarm state) 2: Stop inverter-driven motor only (incl. alarm state)	0	
J32	Periodic switching time for motor drive			0.0: Disable switching 0.1 to 720.0 h: Switching time range 999: Fix to 3 min	0.0 h	
J33	Periodic switching signaling period			0.00 to 600.00 s	0.10 s	
J34	Sequenced start of commercial power-driven motor	Frequency		0 to 120 Hz 999: Depends on setting of J18 (This code is used to judge whether or not to start a commercial power-driven motor by checking the output frequency of the inverter-driven motor)	999	
J35		Duration		0.00 to 3600 s	0.00 s	
J36	Sequenced stop of commercial power-driven motor	Frequency		0 to 120 Hz 999: Depends on setting of J19 (This code is used to judge whether or not to stop a commercial power-driven motor by checking the output frequency of the inverter-driven motor)	999	
J37		Duration		0.00 to 3600 s	0.00 s	
J38	Contactor delay time			0.01 to 2.00 s	0.10 s	
J39	Switching time for motor sequenced start (Deceleration time)			0.00: Depends on the setting of F08 0.01 to 3600 s	0.00 s	

e-Front runners

Code	Name		Data setting range	Default setting	Actual setting
J40	Switching time for motor sequenced stop (Acceleration time)		0.00: Depends on the setting of F07 0.01 to 3600 s	0.00 s	
J41	Motor Unmount Switching Level		0 to 100 %	0 %	
J42	Switching motor sequenced start/sequenced stop (Dead band)		0.0: Disable 0.1 to 50.0 %	0.0 %	
J43	PID control startup frequency		0: Disable 1 to 120Hz 999: Depends on the setting of J36	999	
J44	Motor Mount Switching Level		0: Depends on the setting of J41 1 to 100 %	0 %	
J45	Signal assignment to: (for relay output card)	[Y1 A/B/C]	Selecting function code data assigns the corresponding function to terminals [Y1A/B/C], [Y2A/B/C] and [Y3A/B/C]	100	
J46		[Y2 A/B/C]		100	
J47		[Y3 A/B/C]		100	
			100: Depends on the setting of E20 to E22 60 (1060): Sequenced start motor 1, inverter-driven (M1_I) 61 (1061): Sequenced start motor 1, commercial power-driven (M1_L) 62 (1062): Sequenced start motor 2, inverter-driven (M2_I) 63 (1063): Sequenced start motor 2, commercial power-driven (M2_L) 64 (1064): Sequenced start motor 3, inverter-driven (M3_I) 65 (1065): Sequenced start motor 3, commercial power-driven (M3_L) 67 (1067): Sequenced start motor 4, commercial power-driven (M4_L) 68 (1068): Periodic switching early warning (MCHG) 69 (1069): Pump control limit signal (MLIM)		
J48	Cumulative run time of motor	Motor 0	Indication of cumulative run time of motor for replacement	---	
J49		Motor 1		---	
J50		Motor 2		---	
J51		Motor 3		---	
J52		Motor 4		---	
J53	Maximum cumulative number of relay ON times	Y1 A/B/C to Y3 A/B/C	Indication of maximum number of ON times of relay contacts on the relay output card or those built in inverter.	---	
J54		[Y1], [Y2], [Y3]	Display of 1.000 means 1.000 times For relay output card For built-in mechanical contacts	---	
J55		[Y5A/C], [30A/B/C]		---	
J93	PID Start Frequency (Mount)		0: Depends on the setting of J36 1 to 120 Hz	0 Hz	
J94	PID Start Frequency (Unmount)		0: Depends on the setting of J34 1 to 120 Hz	0 Hz	

y codes: Link functions

Code	Name		Data setting range	Default setting	Actual setting
y01	RS485 communication (standard)	Station address	1 to 255	1	
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 retry fails, trip and alarm Er8. If it succeeds, continue to run 3: Continue to run	0	
y03		Error processing timer	0.0 to 60.0 s	2.0 s	
y04		Transmission speed	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps	3	
y05		Data length	0: 8 bits 1: 7 bits	0	
y06		Parity check	0: None 1: Even parity 2: Odd parity	0	
y07		Stop bits	0: 2 bits 1: 1 bit	0	
y08		No-response error detection time	0 (No detection) 1 to 60 s	0	
y09		Response latency time	0.00 to 1.00 s	0.01 s	
y10		Protocol selection	0: Modbus RTU protocol 1: FRENIC Loader protocol (SX protocol) 2: Fuji general-purpose inverter protocol 3: Metasys-N2	1	
y11	RS485 communication (option)	Station address	1 to 255	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 retry fails, trip and alarm ErP. If it succeeds, continue to run 3: Continue to run	0	
y13		Error processing timer	0.0 to 60.0 s	2.0 s	
y14		Transmission speed	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps	3	
y15		Data length	0: 8 bits 1: 7 bits	0	
y16		Parity check	0: None 1: Even parity 2: Odd parity	0	
y17		Stop bits	0: 2 bits 1: 1 bit	0	
y18		No-response error detection time	0 (No detection) 1 to 60 s	0	
y19		Response latency time	0.00 to 1.00 s	0.01 s	
y20		Protocol selection	0: Modbus RTU protocol 2: Fuji general-purpose inverter protocol 3: Metasys-N2	0	
y98	Bus link function (Mode selection)	Frequency command 0: Follow H30 data 1: Via field bus option 2: Follow H30 data 3: Via field bus option	RUN command Follow H30 data Follow H30 data Via field bus option Via field bus option	0	
y99	Loader link function (Mode selection)	Frequency command 0: Follow H30 and Y98 data 1: Via RS485 link (Loader) 2: Follow H30 and Y98 data 3: Via RS485 link (Loader)	RUN command Follow H30 and Y98 data Follow H30 and Y98 data Via RS485 link (Loader) Via RS485 link (Loader)	0	