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

F codes: Fundamental Functions

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
F00	Data Protection	0: Disable data protection (Function code data can be edited.) 1: Enable data protection (Function code data can not be edited.)	—	—	Y	N	0
F01	Frequency Command 1	0: Enable the ∧ and ∨ keys on the built-in keypad 1: Enable the voltage input to terminal [12] 2: Enable the current input to terminal [C1] 3: Enable the sum of voltage and current inputs to terminals [12] and [C1] 4: Enable the built-in potentiometer (POT)	—	—	N	Y	4
F02	Running/Stopping and Rotational Direction	0: Enable the RUN and STOP keys on the built-in keypad to run and stop motor (The (FWD) or (REV) command should be ON for forward or reverse rotation.) 1: Enable the external signal command (FWD) or (REV) command to run motor 2: Enable the RUN and STOP keys on the built-in keypad to run/stop motor forward 3: Enable the RUN and STOP keys on the built-in keypad to run/stop motor reverse	—	—	N	Y	2
F03	Maximum Frequency	25.0 to 400.0	0.1	Hz	N	Y	60.0 (50.0)*1
F04	Base Frequency	25.0 to 400.0	0.1	Hz	N	Y	60.0 (50.0)*1
F05	Rated Voltage (at base frequency)	0: Output voltage in line with variance in input voltage 80 to 240: Output voltage AVR-controlled for 200V class motors 160 to 500: Output voltage AVR-controlled for 400V class motors	1	V	N	Y2	0
F07	Acceleration Time 1	0.00 to 3600 Note: Acceleration time is ignored at 0.00. (External gradual acceleration pattern)	0.01	sec	Y	Y	6.00
F08	Deceleration Time 1	0.00 to 3600 Note: Deceleration time is ignored at 0.00. (External gradual deceleration pattern)	0.01	sec	Y	Y	6.00
F09	Torque Boost	0.0 to 20.0 (The set voltage at base frequency for F05 is 100 %.) Note: This setting is effective for auto torque boost/auto energy saving operations specified by function code F37 (= 0, 1, 3, or 4).	0.1	%	Y	Y	Fuji's *2 standard torque boost
F10	Electronic Thermal Overload for motor protection	1: For general-purpose motors with built-in self-cooled fans 2: For motors with forced-cooled fans	—	—	Y	Y	1
F11	(Overload detection level)	0.00 (Disabled) 1 to 135 % of rated current (allowable continuos load current) of the inverter	0.01	A	Y	Y1 Y2	Nominal *2 rated current of Fuji's standard motor

*1 Values in parentheses ( ) in the above table denote default settings for the European version except three-phase 200 V model.

*2 The "Fuji's standard torque boost," "Nominal rated current of Fuji's standard motor," and "Nominal rated capacity of Fuji's standard motor" differ depending upon the rated input voltage and rated capacity. Refer to page 9-10.

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
F12	(Thermal time constant)	0.5 to 75.0	0.1	min	Y	Y	5.0
F14	Restart Mode after Instantaneous Power Failure	0: Inactive (Trip immediately without restart) 1: Inactive (Trip without restart after recovery of power) 4: Active (Restart at the frequency at which the power failure occurred, for general load) 5: Active (Restart at the starting frequency, for low-inertia load)	—	—	Y	Y	1 (0)*1
F15	Frequency Limiter (Peak)	0.0 to 400.0	0.1	Hz	Y	Y	70.0
F16	(Bottom)	0.0 to 400.0	0.1	Hz	Y	Y	0.0
F18	Bias (for Frequency Command 1)	-100.00 to 100.00	0.01	%	Y*	Y	0.00
F20	DC Braking (Starting frequency)	0.0 to 60.0	0.1	Hz	Y	Y	0.0
F21	(Braking level)	0 to 100 (Rated output current of the inverter interpreted as 100 %.)	1	%	Y	Y	0
F22	(Braking time)	0.00 (Disabled), 0.01 to 30.00	0.01	sec	Y	Y	0.00
F23	Starting Frequency	0.1 to 60.0	0.1	Hz	Y	Y	1.0
F25	Stop Frequency	0.1 to 60.0	0.1	Hz	Y	Y	0.2
F26	Motor Sound (Carrier frequency)	0.75 to 15	1	kHz	Y	Y	2 (15)*1
F27	(Sound tone)	0: Level 0 1: Level 1 2: Level 2 3: Level 3	—	—	Y	Y	0
F30	Terminal [FMA] (Gain to output voltage)	0 to 200 If 100 is set, 10 VDC will be output from [FMA] at full scale.	1	%	Y*	Y	100
F31	Analog Output Signal Selection for [FMA] (Monitor object)	0: Output frequency 1 (before slip compensation) Maximum output frequency at full scale 1: Output frequency 2 (after slip compensation) Maximum output frequency at full scale 2: Output current Two times the inverter's rated output current at full scale 3: Output voltage 250 V (500 V) at full scale 6: Input power Two times the inverter's rated output capacity at full scale 7: PID feedback amount Feedback amount is 100 % at full scale 9: DC link circuit voltage 500 VDC (1000 VDC) at full scale 14: Test analog output (+) Full scale	—	—	Y	Y	0

*1 Values in parentheses ( ) in the above table denote default settings for the European version except three-phase 200 V model.

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
F37	Load Selection/ Auto Torque Boost/ Auto Energy Saving Operation	0: Torque reversely proportional to the square of speed 1: Constant torque load 2: Auto-torque boost 3: Auto-energy saving operation (Variable torque load during acceleration and deceleration) 4: Auto-energy saving operation (Constant torque load during acceleration and deceleration) 5: Auto-energy saving operation (Auto-torque boost during acceleration and deceleration)	—	—	N	Y	1
F43	Current Limiter (Operation condition)	0: Disabled 1: In constant speed (Disabled during acceleration and deceleration) 2: At acceleration and in constant speed (Disabled during deceleration)	—	—	Y	Y	0
F44	(Limiting level)	20 to 200 (The data is interpreted as the rated output current of the inverter for 100 %.)	1	%	Y	Y	200
F50	Electronic Thermal Overload Relay (for braking resistor) (Discharging capability)	0: (To be set for braking resistor built-in type) 1 to 900 999: (Disabled)	1	kWs	Y	Y	999/0
F51	(Allowable loss)	0.000: Applied for built-in braking resistor, 0.001 to 50.000	0.001	kW	Y	Y	0.000

Note: The default setting of function code F50 is 999 for standard models, and 0 for braking resistor built-in type.

E codes: Extension Terminal Functions

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
E01	Terminal Command Assignment to: [X1]	To assign a negative logic input to a terminal, set the value of 1000s shown in ( ) in the table below to the function code. 0: (1000) Multi-step frequency selection (0 to 1 steps) (SS1) 1: (1001) Multi-step frequency selection (0 to 3 steps) (SS2) 2: (1002) Multi-step frequency selection (0 to 7 steps) (SS4) 4: (1004) ACC/DEC time selection (2 steps) (RT1) 6: (1006) 3-wire operation stop command (HLD) 7: (1007) Coast-to-stop command (BX) 8: (1008) Alarm reset (RST) 9: (1009) Alarm from external equipment (THR) 10: (1010) Ready for jogging (JOG) 11: (1011) Frequency command 2 or 1 (Hz2/Hz1) 19: (1019) Enable editing of function codes from keypad (WE-KP) 20: (1020) Disable PID control (Hz/PID) 21: (1021) Switch normal/inverted driving (IVS) 24: (1024) Select link operation (RS485 (standard), BUS (option)) (LE) 33: (1033) Reset PID integral and differential components (PID-RST) 34: (1034) Hold PID integral component (PID-HLD)	—	—	N	Y	0
E02	[X2]		—	—	N	Y	7
E03	[X3]		—	—	N	Y	8

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
E10	Acceleration Time 2	0.00 to 3600	0.01	sec	Y	Y	6.00
E11	Deceleration Time 2	0.00 to 3600	0.01	sec	Y	Y	6.00
E20	Status Signal Assignment to: [Y1]	To assign a negative logic output to a terminal, set the value of 1000s shown in ( ) on the table below to the function code.	—	—	N	Y	0
E27	[30A, B, C] (Mechanical relay contacts)	0: (1000) Inverter running (RUN) 1: (1001) Frequency equivalence signal (FAR) 2: (1002) Frequency level detection (FDT) 3: (1003) Undervoltage detection signal (LU) 5: (1005) Torque limiting (Current limiting) (IOL) 6: (1006) Auto-restarting after recovery of power (IPF) 7: (1007) Motor overload early warning (OL) 26: (1026) Retry in operation (TRY) 30: (1030) Lifetime alarm (LIFE) 35: (1035) Inverter running (RUN2) 36: (1036) Overload prevention control (OLP) 37: (1037) Current detection (ID) 41: (1041) Low level current detection (IDL) 99: (1099) Alarm relay output (for any alarm) (ALM)	—	—	N	Y	99
E31	Frequency Detection (FDT) (Detection level)	0.0 to 400.0	0.1	Hz	Y	Y	60.0 (50.0)*1
E34	Overload Early Warning/ Current Detection/ Low Current Detection (Level)	0 (Disabled) Current value of 1 to 200 % of the rated inverter current	0.01	A	Y	Y1 Y2	Nominal *2 rated current of Fuji's standard motor
E35	(Timer)	0.01 to 600.00	0.01	sec	Y	Y	10.00
E39	Coefficient for Constant Feeding Rate Time	0.000 to 9.999	0.001	—	Y	Y	0.000
E40	PID Display Coefficient A	-999 to 0.00 to 999	0.01	—	Y	Y	100
E41	PID Display Coefficient B	-999 to 0.00 to 999	0.01	—	Y	Y	0.00
E43	Monitor Item Selection	0: Speed monitor (Select by E48.) 3: Output current 4: Output voltage 9: Input power 10: PID final command value 12: PID feedback value 13: Timer value (Timer operation)	—	—	Y	Y	0
E45	(Note 1)						
E46							
E47							
E48	LED Monitor (Speed monitor item)	0: Output frequency before slip compensation 1: Output frequency after slip compensation 2: Set frequency 4: Load shaft speed in rpm 5: Line speed in m/min 6: Constant feeding rate time	—	—	Y	Y	0

(Note 1) Function codes E45 to E47 appear on the LED monitor; however, the FRENIC-Mini series of inverters does not recognize these codes, so do not access these codes.

*1 Values in parentheses ( ) in the above table denote default settings for the European version except three-phase 200 V model.

*2 The "Fuji's standard torque boost," "Nominal rated current of Fuji's standard motor," and "Nominal rated capacity of Fuji's standard motor" differ depending upon the rated input voltage and rated capacity. Refer to page 9-10.

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
E50	Coefficient for Speed Indication	0.01 to 200.00	0.01	—	Y	Y	30.00
E52	Menu Display Mode for Keypad	0: Function code data setting mode 1: Function code data check mode 2: Full-menu mode	—	—	Y	Y	0
E60	Built-in Potentiometer (Function selection)	0: None 1: Auxiliary frequency command 1 2: Auxiliary frequency command 2 3: PID process command 1	—	—	N	Y	0
E61	Analog Input Signal Definition for: [12]	0: None 1: Auxiliary frequency command 1 2: Auxiliary frequency command 2 3: PID process command 1 5: PID feedback value	—	—	N	Y	0
E62	[C1]		—	—	N	Y	0
E98	Terminal Command Assignment to: [FWD]	To assign a negative logic input to a terminal, set the value of 1000s shown in ( ) in the table below to the function code.	—	—	N	Y	98
E99	[REV]	0: (1000) Multi-step frequency selection (0 to 1 steps) (SS1) 1: (1001) Multi-step frequency selection (0 to 3 steps) (SS2) 2: (1002) Multi-step frequency selection (0 to 7 steps) (SS4) 4: (1004) ACC/DEC time selection (2 steps) (RT1) 6: (1006) 3-wire operation stop command (HLD) 7: (1007) Coast-to-stop command (BX) 8: (1008) Alarm reset (RST) 9: (1009) Alarm from external equipment (THR) 10: (1010) Ready for jogging (JOG) 11: (1011) Frequency command 2 or 1 (Hz2/Hz1) 19: (1019) Enable editing of function codes from keypad (WE-KP) 20: (1020) Disable PID control (Hz/PID) 21: (1021) Switch normal/inverted driving (IVS) 24: (1024) Select link operation (RS485 (standard), BUS (option)) (LE) 33: (1033) Reset PID integral and differential components (PID-RST) 34: (1034) Hold PID integral component (PID-HLD) 98: Run forward command (FWD) 99: Run reverse command (REV)	—	—	N	Y	99

C codes: Control Functions of Frequency

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
C01	Jump Frequency 1	0.0 to 400.0	0.1	Hz	Y	Y	0.0
C02	2					Y	0.0
C03	3					Y	0.0
C04	Jump Frequency Band	0.0 to 30.0	0.1	Hz	Y	Y	3.0
C05	Multi-step Frequency Settings 1	0.00 to 400.00	0.01	Hz	Y	Y	0.00
C06	2					Y	0.00
C07	3					Y	0.00
C08	4					Y	0.00
C09	5					Y	0.00
C10	6					Y	0.00
C11	7					Y	0.00
C20	Jogging Frequency	0.00 to 400.00	0.01	Hz	Y	Y	0.00
C21	Timer Operation	0: Disable timer operation 1: Enable timer operation	—	—	N	Y	0
C30	Frequency Command 2	0: Enable the ⌃ and ⌄ keys on the built-in keypad 1: Enable the voltage input to terminal [12] 2: Enable the current input to terminal [C1] 3: Enable the sum of voltage and current inputs to terminals [12] and [C1] 4: Enable the built-in potentiometer (POT)	—	—	N	Y	2
C32	Analog Input Adjustment (Gain for terminal input [12]) (Gain)	0.00 to 200.00	0.01	%	Y*	Y	100.0
C33	(Filter)	0.00 to 5.00	0.01	sec	Y	Y	0.05
C34	(Gain reference point)	0.00 to 100.00	0.01	%	Y*	Y	100.0
C37	Analog Input Adjustment (Gain for terminal input [C1]) (Gain)	0.00 to 200.00	0.01	%	Y*	Y	100.0
C38	(Filter)	0.00 to 5.00	0.01	sec	Y	Y	0.05
C39	(Gain reference point)	0.00 to 100.00	0.01	%	Y*	Y	100.0
C50	Bias (Frequency command 1) (Bias reference point)	0.00 to 100.00	0.01	%	Y*	Y	0.00
C51	Bias (PID command 1) (Bias value)	-100.00 to 100.00	0.01	%	Y*	Y	0.00
C52	(Bias reference point)	0.00 to 100.00	0.01	%	Y*	Y	0.00

P codes: Motor Parameters

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
P02	Motor Parameters (Rated capacity)	0.01 to 10.00 kW (where, the data of function code P99 is 0, 3, or 4.) 0.01 to 10.00 HP (where, the data of function code P99 is 1.)	0.01 0.01	kW HP	N	Y	Nominal * rated capacity of Fuji's standard motor
P03	(Rated current)	0.00 to 99.99	0.01	A	N	Y1 Y2	Nominal * rated current of Fuji's standard motor
P09	(Slip compensation gain)	0.0 to 200.0 Typical rated slip frequency at 100%	0.1	%	Y*	Y	0.0
P99	Motor Selection	0: Characteristics of motor 0 (Fuji's standard 8-series motors) 1: Characteristics of motor 1 (HP motors) 3: Characteristics of motor 3 (Fuji's standard 6-series motors) 4: Other motors	—	—	N	Y	0

H codes: High Performance Functions

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
H03	Data Initialization (Data reset)	0: Disable initialization 1: Initialize all function code data to the factory defaults 2: Initialize motor parameters	—	—	N	N	0
H04	Retry (No. of retries)	0: Inactive 1 to 10	1	Times	Y	Y	0
H05	(Latency time)	0.5 to 20.0	0.1	sec	Y	Y	5.0
H06	Cooling Fan ON/OFF	0: Inactive 1: Active (1.5 kW or more)	—	—	Y	Y	0
H07	Gradual Acceleration/ Deceleration	0: Inactive (Linear) 1: S-curve (Weak) 2: S-curve (Strong) 3: Curvilinear	—	—	Y	Y	0
H12	Instantaneous Overcurrent Limiting	0: Inactive (OC trip at current limiting level by hardware detection) 1: Active (Turning gates OFF immediately at current limiting level by hardware detection)	—	—	Y	Y	1
H26	PTC Thermistor Input	0: Inactive 1: Active (PTC)	—	—	Y	Y	0
H27	(Level)	0.00 to 5.00	0.01	V	Y	Y	1.60
H30	Serial Link (Function selection)	Monitor / Frequency command / Run command 0: Y / N / N 1: Y / RS485 / N 2: Y / N / RS485 3: Y / RS485 / RS485 Y: Enable by inverter and RS485 RS485: Enable by RS485 N: Enable by inverter	—	—	Y	Y	0
H42	Capacity of DC bus capacitor	For adjustment when replacing the capacitor	—	—	—	N	—
H43	Accumulated Run Time of Cooling Fan	For adjustment when replacing the cooling fan	—	—	—	N	—

*The "Fuji's standard torque boost," "Nominal rated current of Fuji's standard motor," and "Nominal rated capacity of Fuji's standard motor" differ depending upon the rated input voltage and rated capacity. Refer to page 9-10.

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
H50	Arbitrary Point on Non-linear V/f Pattern (Frequency)	0.0 (Cancel), 0.1 to 400.0	0.1	Hz	N	Y	0.0
H51	(Voltage)	0 to 240: Output voltage AVR-controlled for 200 V class motors 0 to 500: Output voltage AVR-controlled for 400 V class motors	1	V	N	Y2	0
H54	ACC/DEC Time (Jogging operation)	0.00 to 3600	0.01	sec	Y	Y	6.00
H64	Bottom Limiter (Min. freq. when limiter is activated)	0.0 (Depends on F16 : Freq. limiter (bottom)), 0.1 to 60.0	0.1	Hz	Y	Y	2.0
H69	Automatic Deceleration	0: Inactive 1: Active (When DC link circuit voltage exceeds the overvoltage limit level, deceleration time becomes threefold.)	—	—	Y	Y	0
H70	Overload Prevention Control (Frequency drop rate)	0.00 (Equivalent to deceleration time), 0.01 to 100.00, 999 (Cancel)	0.01	Hz/s	Y	Y	999
H80	Gain for Suppression of Output Current Fluctuation	0.00 to 0.20	0.01	—	Y	Y	0.20
H96	STOP Key Priority/ Start Check Function	STOP key priority / Start check function 0: Invalid / Invalid 1: Valid / Invalid 2: Invalid / Valid 3: Valid / Valid	—	—	Y	Y	0
H97	Clear Alarm Data	Returns to zero after clearing alarm data (if H97 = 1).	—	—	Y	N	—
H98	Protection/ Maintenance Function	opL / Lin / ADFCF 0: Invalid / Invalid / Invalid 1: Invalid / Invalid / Valid 2: Invalid / Valid / Invalid 3: Invalid / Valid / Valid 4: Valid / Invalid / Invalid 5: Valid / Invalid / Valid 6: Valid / Valid / Invalid 7: Valid / Valid / Valid opL: Output Phase Loss Protection Lin: Input Phase Loss Protection ADFCF: Automatic DEC Function for Carrier Frequency NOTE: For single-phase power input inverters, Lin is always invalid regardless of H98 setting.	—	—	Y	Y	3

(Note) Function codes E71 and H95 appear on the LED monitor; however, the FRENIC-Mini series of inverters does not recognize these codes, so do not access these codes.

J codes: Application Functions

Code	Name	Data setting range	Incremental unit	Unit	Change when running	Data copy	Default setting
J01	PID Control	0: Inactive 1: Process control use (Normal action) 2: Process control use (Inverse action)	—	—	N	Y	0
J02	(Remote process command)	0: Keypad 1: PID process command 1 (Data settings of E61 and E62 are also required.) 4: Communication	—	—	N	Y	0
J03	P (Gain)	0.000 to 10.000	0.001	Times	Y	Y	0.100
J04	I (Integration time)	0.0 to 3600.0	0.1	sec	Y	Y	0.0
J05	D (Differentiation time)	0.00 to 600.00	0.01	sec	Y	Y	0.00
J06	(Feedback filter)	0.0 to 900.0	0.1	sec	Y	Y	0.5

y codes: Link Functions

Code	Name	Data setting range	Incre-mental unit	Unit	Change when running	Data copy	Default setting
y01	RS485 Communication (Station address)	1 to 255 (Broadcast:(0: RTU), (99: FGI-BUS))	1	—	N	Y	1
y02	(Mode selection on no response error)	0: Immediate trip and alarm *Er 8* 1: Trip and alarm *Er 8* after running for the period of the timer set by y03 2: Retry during the period of the timer set by y03. If retry fails, trip and alarm *Er 8* 3: Continue to run	—	—	Y	Y	0
y03	(Timer)	0.0 to 60.0	0.1	sec	Y	Y	2.0
y04	(Baud rate)	0: 2400 bps 1: 4800 bps 2: 9600 bps 3: 19200 bps	—	—	Y	Y	3
y05	(Data length)	0: 8 bits 1: 7 bits	—	—	Y	Y	0
y06	(Parity check)	0: None 1: Even parity 2: Odd parity	—	—	Y	Y	0
y07	(Stop bits)	0: 2 bits 1: 1 bit	—	—	Y	Y	0
y08	(No response error detection time)	0 (No detection), 1 to 60	1	sec	Y	Y	0
y09	(Response interval)	0.00 to 1.00	0.01	sec	Y	Y	0.01
y10	(Protocol selection)	0: Modbus RTU protocol 1: SX protocol (Loader protocol) 2: Fuji general-purpose inverter protocol	—	—	Y	Y	1
y99	Link Function for Supporting Data Input	Frequency setting / Run command 0: by H30 / by H30 1: from RS485 / by H30 2: by H30 / from RS485 3: from RS485 / from RS485	—	—	Y	N	0

*The table below lists the factory settings of "Fuji's standard torque boost," "Nominal rated current of Fuji's standard motor," and "Nominal rated capacity of Fuji's standard motor" in the "Default setting" column of the above tables.

Rated input voltage	Applicable motor rating (kW)	Fuji's standard value torque boost (%)	Nominal rated current of Fuji's standard motor (A)	Nominal rated capacity of Fuji's standard motor (kW)
		Function code F09	Function codes F11, E34, and P03	Function code P02
200 V	0.1	8.4	0.61	0.1
	0.2	8.4	1.16	0.2
	0.4	7.1	2.13	0.4
	0.75	6.8	3.36	0.75
	1.5	6.8	5.87	1.5
	2.2	6.8	8.80	2.2
	3.7, 4.0	5.5	14.38	3.7, 4.0
400V	0.4	7.1	1.07	0.4
	0.75	6.8	1.68	0.75
	1.5	6.8	2.94	1.5
	2.2	6.8	4.40	2.2
	3.7, 4.0	5.5	7.20	3.7, 4.0