(Supplement to RS-485 User's Manual)

FRENIC-MEGA
FRENIC-ECO
FRENIC-Multi
FRENIC-Ace
FRENIC-Mini(C2)

This document is a supplement to the “RS-485 Communication User’s Manual (24A7-E-0082, MEH448)”, and is comprised of section 5.2 (Data Format), to which content has been both added and changed.
For pages that are not included in this document, please refer to the “RS-485 Communication User’s Manual” to ensure correct use.

24A7-E-0099

5.2 Data Formats

5.2.1 List of data format numbers

The following table shows the communications data format numbers for function code data. Create data according to the data format specifications described below. For the data setting range and setting unit, see the User's Manual of each inverter type (Chapter 9 for FRENIC-Mini/Mini(C2)/Eco/Multi, and Chapter 5 for FRENIC-Ace/MEGA.) The "Support" column of the table indicates whether each function is supported by the respective models or not. Y indicates the function is supported, and N indicates the function is not supported.

RTU and FGI in the Format number field mean the Modbus RTU protocol and the Fuji general-purpose inverter protocol, respectively.

Table 5.17 List of data format numbers (F codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
F00	Data Protection	[1]	Y	Y	Y	Y	Y
F01	Frequency Command 1	[1]	Y	Y	Y	Y	Y
F02	Operation Method	[1]	Y	Y	Y	Y	Y
F03	Maximum Frequency 1	[3]	Y	Y	Y	Y	Y
F04	Base Frequency 1	[3]	Y	Y	Y	Y	Y
F05	Rated Voltage at Base Frequency 1	[1]	Y	Y	Y	Y	Y
F06	Maximum Output Voltage 1	[1]	Y	N	Y	Y	Y
F07	Acceleration Time 1	[12]	Y	Y	Y	Y	Y
F08	Deceleration Time 1	[12]	Y	Y	Y	Y	Y
F09	Torque Boost 1	[3]	Y	Y	Y	Y	Y
F10	Electronic Thermal Overload Protection for Motor (Select motor characteristics)	[1]	Y	Y	Y	Y	Y
F11	(Overload detection level)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24]] (BUS) *1	N	Y	Y	Y	Y
F12	(Thermal time constant)	[3]	Y	Y	Y	Y	Y
F14	Restart Mode after Momentary Power Failure (Mode selection)	[1]	Y	Y	Y	Y	Y
F15	Frequency Limiter (High)	[3]	Y	Y	Y	Y	Y
F16	(Low)	[3]	Y	Y	Y	Y	Y
F18	Bias (Frequency command 1)	[6]	Y	Y	Y	Y	Y
F20	DC Braking 1 (Braking starting frequency)	[3]	Y	Y	Y	Y	Y
F21	(Braking level)	[1]	Y	Y	Y	Y	Y
F22	(Braking time)	[5]	Y	Y	Y	Y	Y
F23	Starting Frequency 1	[3]	Y	Y	Y	Y	Y
F24	(Holding time)	[5]	Y	N	Y	Y	Y
F25	Stop Frequency	[3]	Y	Y	Y	Y	Y
F26	Motor Sound (Carrier frequency)	[1] *2	Y	Y	Y	Y	Y
F27	(Tone)	[1]	Y	Y	Y	Y	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

*2 The frequency of 0.75kHz will be treated as 0.

Table 5.17 List of data format numbers (F codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
F29	Analog Output [FMA[*1]] (Mode selection)	[1]	N	Y	N	N	Y
	Analog Output [FM] (Mode selection)	[1]	N	N	Y	Y	N
F30	Analog Output [FMA[*1]] (Voltage adjustment)	[1]	Y	Y	N	N	Y
	Analog Output [FM] (Voltage adjustment)	[1]	N	N	Y	Y	N
F31	Analog Output [FMA[*1]] (Function)	[1]	Y	Y	N	N	Y
	Analog Output [FM] (Function)	[1]	N	N	Y	Y	N
F32	Analog Output [FM2] (Mode selection)	[1]	N	N	N	Y[*8]	Y[*2]
F33	Pulse Output [FMP] (Pulse rate)	[1]	N	Y[*3]	N	N	Y[*4]
	Analog Output [FM] (Pulse rate)	[1]	N	N	Y	Y	N
F34	Pulse Output [FMP[*6]] (Gain to output voltage)	[1]	N	Y[*3]	N	N	Y[*4]
	Analog Output [FM2] (Voltage adjustment)	[1]	N	Y[*5]	N	Y[*8]	N
F35	Pulse Output [FMP[*6]] (Function)	[1]	N	Y[*3]	N	N	Y[*4]
	Analog Output [FM2] (Function)	[1]	N	Y[*5]	N	Y[*8]	N
F37	Load Selection/Auto Torque Boost/Auto Energy Saving Operation 1	[1]	Y	Y	Y	Y	Y
F38	Stop Frequency (Detection mode)	[1]	N	N	N	Y	Y
F39	(Holding time)	[5]	Y	N	Y	Y	Y
F40	Torque Limiter 1 (Limiting level for driving)	[1]	N	N	Y	Y	N
	Torque Limiter 1-1	[2]	N	N	N	N	Y
F41	Torque Limiter 1 (Limiting level for braking)	[1]	N	N	Y	Y	N
	Torque Limiter 1-2	[2]	N	N	N	N	Y
F42	Drive Control Selection 1	[1]	Y	N	Y	Y	Y
F43	Current Limiter (Mode selection)	[1]	Y	Y	Y	Y	Y
F44	(Level)	[1]	Y	Y	Y	Y	Y
F50	Electronic Thermal Overload Protection for Braking Resistor (Discharging capability)	[1] *[7]	Y	N	Y	Y	Y
F51	(Allowable average loss)	[7] *[7]	N	N	Y	N	Y
		[45]	Y	N	N	Y	N
F52	(Resistance)	[12]	N	N	N	Y	Y
F80	Switching between HD MD and LD Drive Modes (MEGA) Switching between HD ND HHD and HND Drive Modes(Ace)	[1]	N	N	N	Y	Y

*1 As for FRN□□G1□-□A, E and U the terminal name changes from FMA to FM1.
*2 Applicable only with FRN□□G1□-□A, E and U
*3 Not applicable with FRN□□□F1□-□A, E and U
*4 Not applicable with FRN□□G1□-□A, E and U
*5 Applicable only with FRN□□□F1□-□A, E and U
*6 As for FRN□□G1□-□A, E and U, the terminal name changes from FMP to FM2.
*7 The value of 999 will be treated as $7FFF_H$.
*8 Applicable only with FRN□□E2□-□C, FRN□□E2□-□GB

Table 5.18 List of data format numbers (E codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
E01	Terminal [X1] Function	[1]	Y	Y	Y	Y	Y
E02	[X2] Function	[1]	Y	Y	Y	Y	Y
E03	[X3] Function	[1]	Y	Y	Y	Y	Y
E04	[X4] Function	[1]	N	Y	Y	Y	Y
E05	[X5] Function	[1]	N	Y	Y	Y	Y
E06	[X6] Function	[1]	N	N	N	N	Y
E07	[X7] Function	[1]	N	N	N	N	Y
E08*1	[X8] Function	[1]	N	N	N	N	Y
E09*1	[X9] Function	[1]	N	N	N	N	Y
E10	Acceleration Time 2	[12]	Y	N	Y	Y	Y
E11	Deceleration Time 2	[12]	Y	N	Y	Y	Y
E12	Acceleration Time 3	[12]	N	N	N	Y	Y
E13	Deceleration Time 3	[12]	N	N	N	Y	Y
E14	Acceleration Time 4	[12]	N	N	N	Y	Y
E15	Deceleration Time 4	[12]	N	N	N	Y	Y
E16	Torque Limiter 2 (Limiting level for driving)	[1]	N	N	Y	Y	N
	Torque Limiter 2-1	[2]	N	N	N	N	Y
E17	Torque Limiter 2 (Limiting level for braking)	[1]	N	N	Y	Y	N
	Torque Limiter 2-2	[2]	N	N	N	N	Y
E20	Terminal [Y1] Function	[1]	Y	Y	Y	Y	Y
E21	[Y2] Function	[1]	N	Y	Y	Y	Y
E22	[Y3] Function	[1]	N	Y	N	N	Y
E23	[Y4] Function	[1]	N	N	N	N	Y
E24	[Y5A/C] Function	[1]	N	Y	N	N	Y
E27	[30A/B/C] Function (Relay output)	[1]	Y	Y	Y	Y	Y
E29	Frequency Arrival Delay Time	[5]	N	N	Y	Y	N
E30	Frequency Arrival (Hysteresis width)	[3]	Y	N	Y	Y	Y
E31	Frequency Detection 1 (Level)	[3]	Y	Y	Y	Y	Y
E32	(Hysteresis width)	[3]	Y	Y	Y	Y	Y
E34	Overload Early Warning/Current Detection (Level)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *2	N	Y	Y	Y	Y
E35	(Timer)	[5]	Y	Y	Y	Y	Y
E36	Frequency Detection 2 (Level)	[3]	N	N	N	Y	Y
E37	Current Detection 2 /Low Current Detection (Level)	[24] (FGI)	Y	N	Y	Y	Y
		[19] (RTU)	Y	N	Y	Y	Y
		[24] (BUS) *2	N	N	Y	Y	Y
E38	(Timer)	[5]	Y	N	Y	Y	Y
E39	Coefficient for Constant Feeding Rate Time	[7]	Y	N	Y	Y	N
E40	PID Display Coefficient A	[12]	Y	Y	Y	N	Y
E41	PID Display Coefficient B	[12]	Y	Y	Y	N	Y
E42	LED Display Filter	[3]	Y	N	Y	Y	Y
E43	LED Monitor (Item selection)	[1]	Y	Y	Y	Y	Y
E44	(Display when stopped)	[1]	N	N	N	Y	Y
E45	LCD Monitor (Item selection)	[1]	Y	Y	Y	N	Y
E46	(Language selection)	[1]	Y	Y	Y	N	Y
E47	(Contrast control)	[1]	Y	Y	Y	N	Y
E48	LED Monitor (Speed monitor item)	[1]	Y	Y	Y	Y	Y
E49	(Choise of the torque polarity)	[1]	N	N	N	Y	Y
E50	Coefficient for Speed Indication	[5]	Y	Y	Y	Y	Y

*1 Not applicable with FRN□□G1□-□A , E and U

*2 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.18 List of data format numbers (E codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
E51	Display Coefficient for Input Watt-hour Data	[45]	Y	Y	Y	Y	Y
E52	Keypad (Menu display mode)	[1]	Y	Y	Y	Y	Y
E54	Frequency Detection 3 (Level)	[3]	N	N	N	Y	Y
E55	Current Detection 3 (Level)	[24] (FGI)	N	N	N	Y	Y
		[19] (RTU)	N	N	N	Y	Y
		[24] (BUS) *2	N	N	N	Y	Y
E56	(Timer)	[5]	N	N	N	Y	Y
E59	Switch Function of C1 Terminal	[1]	N	N	Y	Y	N
E60	Built-in Potentiometer (Function selection)	[1]	Y	N	N	N	N
E61	Terminal [12] Extended Function	[1]	Y	Y	Y	Y	Y
E62	Terminal [C1] Extended Function	[1]	Y	Y	N	N	Y
	Terminal [C1] Extended Function (C1 function)	[1]	N	N	Y	Y	N
E63	Terminal [V2] Extended Function	[1]	N	Y	N	N	Y
	Terminal [C1] Extended Function (V2 function)	[1]	N	N	Y	Y	N
E64	Saving of Digital Reference Frequency	[1]	N	Y	N	Y	Y
E65	Reference Loss Detection (Continuous running frequency)	[1] *3	N	Y	Y	Y	Y
E76	Direct Current Intermediate Voltage Detection Level	[1]	N	N	N	Y	Y
E78	Torque Detection 1 (Level)	[1]	N	N	N	Y	Y
E79	(Timer)	[5]	N	N	N	Y	Y
E80	Torque Detection 2/Low Torque Detection (Level)	[1]	N	Y	N	Y	Y
E81	(Timer)	[5]	N	Y	N	Y	Y
E98	Terminal [FWD] Function	[1]	Y	Y	Y	Y	Y
E99	[REV] Function	[1]	Y	Y	Y	Y	Y

*2 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

*3 The value of 999 will be treated as $7FFF_H$.

Table 5.19 List of data format numbers (C codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
C01	Jump Frequency 1	[3]	Y	Y	Y	Y	Y
C02	Frequency 2	[3]	Y	Y	Y	Y	Y
C03	Frequency 3	[3]	Y	Y	Y	Y	Y
C04	(Hysteresis width)	[3]	Y	Y	Y	Y	Y
C05	Multi-Frequency 1	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C06	2	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C07	3	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C08	4	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C09	5	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C10	6	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C11	7	[5]	N	Y	Y	N	N
		[22]	Y	N	N	Y	Y
C12	8	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C13	9	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C14	10	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C15	11	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C16	12	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C17	13	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C18	14	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C19	15	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C20	Jogging Frequency	[5]	N	N	Y	N	N
		[22]	Y	N	N	Y	Y
C21	Timer Operation/Pattern Operation Selection	[1]	Y	N	Y	Y	Y
C22	Pattern Operation Selection (Stage1)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C23	(Stage2)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C24	(Stage3)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C25	(Stage4)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C26	(Stage5)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C27	(Stage6)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y
C28	(Stage7)	[84]	N	N	N	Y	N
		[12]	N	N	N	N	Y

Table 5.19 List of data format numbers (C codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
C30	Frequency Command 2	[1]	Y	Y	Y	Y	Y
C31	Analog Input Adjustment for [12] (Offset)	[4]	N	N	Y	Y	Y
C32	(Gain)	[5]	Y	Y	Y	Y	Y
C33	(Filter time constant)	[5]	Y	Y	Y	Y	Y
C34	(Gain base point)	[5]	Y	Y	Y	Y	Y
C35	(Polarity)	[1]	N	N	Y	Y	Y
C36	Analog Input Adjustment for [C1] (Offset)	[4]	N	Y	N	N	Y
	Analog Input Adjustment for [C1] (C1 function) (Offset)	[4]	N	N	Y	Y	N
C37	Analog Input Adjustment for [C1] (Gain)	[5]	Y	Y	N	N	Y
	Analog Input Adjustment for [C1] (C1 function) (Gain)	[5]	N	N	Y	Y	N
C38	Analog Input Adjustment for [C1] (Filter time constant)	[5]	Y	Y	N	N	Y
	Analog Input Adjustment for [C1] (C1 function) (Filter time constant)	[5]	N	N	Y	Y	N
C39	Analog Input Adjustment for [C1] (Gain base point)	[5]	Y	Y	N	N	Y
	Analog Input Adjustment for [C1] (C1 function) (Gain base point)	[5]	N	N	Y	Y	N
C40	Analog Input Adjustment for [C1] (C1 function) (Range selection)	[1]	Y	N	N	Y	Y
C41	Analog Input Adjustment for [V2] (Offset)	[4]	N	Y	N	N	Y
	Analog Input Adjustment for [C1] (V2 function) (Offset)	[4]	N	N	Y	Y	N
C42	Analog Input Adjustment for [V2] (Gain)	[5]	N	Y	N	N	Y
	Analog Input Adjustment for [C1] (V2 function) (Gain)	[5]	N	N	Y	Y	N
C43	Analog Input Adjustment for [V2] (Filter time constant)	[5]	N	Y	N	N	Y
	Analog Input Adjustment for [C1] (V2 function) (Filter time constant)	[5]	N	N	Y	Y	N
C44	Analog Input Adjustment for [V2] (Gain base point)	[5]	N	Y	N	N	Y
	Analog Input Adjustment for [C1] (V2 function) (Gain base point)	[5]	N	N	Y	Y	N
C45	Analog Input Adjustment for [V2] (Polarity)	[1]	N	N	N	Y	Y
C50	Bias (Frequency command 1) (Bias base point)	[5]	Y	Y	Y	Y	Y
C51	Bias (PID command 1) (Bias value)	[6]	Y	Y	Y	N	Y
C52	(Bias base point)	[5]	Y	Y	Y	N	Y
C53	Selection of Normal/Inverse Operation (Frequency command 1)	[1]	N	Y	Y	Y	Y
C55	Analog Input Adjustment for [12] (Bias)	[6]	N	N	N	Y	N
C56	(Bias base point)	[5]	N	N	N	Y	N
C58	(Display unit)	[1]	N	N	N	Y	N
C59	(Maximum scale)	[12]	N	N	N	Y	N
C60	(Minimum scale)	[12]	N	N	N	Y	N
C61	Analog Input Adjustment for [C1](C1 function) (Bias)	[6]	N	N	N	Y	N
C62	(Bias base point)	[5]	N	N	N	Y	N
C64	(Display unit)	[1]	N	N	N	Y	N
C65	(Maximum scale)	[12]	N	N	N	Y	N
C66	(Minimum scale)	[12]	N	N	N	Y	N
C67	Analog Input Adjustment for [V2](V2 function) (Bias)	[6]	N	N	N	Y	N
C68	(Bias base point)	[5]	N	N	N	Y	N
C70	(Display unit)	[1]	N	N	N	Y	N
C71	(Maximum scale)	[12]	N	N	N	Y	N
C72	(Minimum scale)	[12]	N	N	N	Y	N

Table 5.19 List of data format numbers (C codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
C82	Rotatory Direction and Time of Speed Up and Slowing Down (Stage 1)	[1]	N	N	N	N	Y
C83	(Stage 2)	[1]	N	N	N	N	Y
C84	(Stage 3)	[1]	N	N	N	N	Y
C85	(Stage 4)	[1]	N	N	N	N	Y
C86	(Stage 5)	[1]	N	N	N	N	Y
C87	(Stage 6)	[1]	N	N	N	N	Y
C88	(Stage 7)	[1]	N	N	N	N	Y
C89	Frequency Compensation 1 (Numerator)	[2]	N	N	N	Y	N
C90	Frequency Compensation 2 (Denominator)	[2]	N	N	N	Y	N
C94	Jump Frequency 4	[3]	Y	N	N	N	N
C95	Frequency 5	[3]	Y	N	N	N	N
C96	Frequency 6	[3]	Y	N	N	N	N
C99	Multi-requency 1	[22]	Y	N	N	N	N

Table 5.20 List of data format numbers (P codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
P01	Motor 1 (No. of poles)	[1]	N	Y	Y	Y	Y
P02	(Rated Capacity)	[11]	Y	Y	Y	Y	Y
	When P99 = 1(MEGA only)	[25]	N	N	N	N	Y
P03	(Rated current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
P04	(Auto-tuning)	[21]	Y	Y	Y	Y	Y
P05	(Online Tuning)	[1]	N	N	Y	Y	Y
P06	(No-load current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
P07	(%R1)	[5]	Y	Y	Y	Y	Y
P08	(%X)	[5]	Y	Y	Y	Y	Y
P09	(Slip compensation gain for driving)	[3]	Y	N	Y	Y	Y
P10	(Slip compensation response time)	[5]	Y	N	Y	Y	Y
P11	(Slip compensation gain for braking)	[3]	Y	N	Y	Y	Y
P12	(Rated slip frequency)	[5]	Y	N	Y	Y	Y
P13	(Iron loss factor 1)	[5]	N	N	N	Y	Y
P14	(Iron loss factor 2)	[5]	N	N	N	N	Y
P15	(Iron loss factor 3)	[5]	N	N	N	N	Y
P16	(Magnetic saturation factor 1)	[3]	N	N	N	Y	Y
P17	(Magnetic saturation factor 2)	[3]	N	N	N	Y	Y
P18	(Magnetic saturation factor 3)	[3]	N	N	N	Y	Y
P19	(Magnetic saturation factor 4)	[3]	N	N	N	Y	Y
P20	(Magnetic saturation factor 5)	[3]	N	N	N	Y	Y
P21	(Magnetic saturation extension factor a)	[3]	N	N	N	N	Y
P22	(Magnetic saturation extension factor b)	[3]	N	N	N	N	Y
P23	(Magnetic saturation extension factor c)	[3]	N	N	N	N	Y
P30	(PMSM drive Magnetic pole position detection mode)	[1]	N	N	N	Y	N
P53	(%X correction factor 1)	[1]	N	N	N	Y	Y
P54	(%X correction factor 2)	[1]	N	N	N	N	Y
P55	(Torque current under vector control)	[24] (FGI)	N	N	N	Y	Y
		[19] (RTU)	N	N	N	Y	Y
		[24] (BUS) *1	N	N	N	Y	Y
P56	(Induced voltage factor under vector control)	[1]	N	N	N	Y	Y
P57	Reserved	[7]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.20 List of data format numbers (P codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
P60	Motor 1 (PMSM Armature resistance)	[45]	Y	N	N	Y	N
P61	(PMSM d-axis inductance)	[24]	Y	N	N	Y	N
P62	(PMSM q-axis inductance)	[24]	Y	N	N	Y	N
P63	(PMSM Induced voltage)	[1]	Y	N	N	Y	N
P64	(PMSM Iron loss)	[3]	N	N	N	Y	N
P65	(PMSM d-axis inductance magnetic saturation correction)	[3]	N	N	N	Y	N
P74	(PMSM Reference current at starting)	[1]	Y	N	N	Y	N
P83	(PMSM Reserved)	[3]	N	N	N	Y	N
P84	(PMSM Reserved)	[3]	N	N	N	Y	N
P85	(PMSM Flux limitation value)	[3]	N	N	N	Y	N
P86	(PMSM Reserved)	[3]	N	N	N	Y	N
P87	(PMSM Reference current for polarity discrimination)	[1]	N	N	N	Y	N
P88	(PMSM Reserved)	[1]	N	N	N	Y	N
P89	(PMSM Reserved)	[1]	Y	N	N	Y	N
P90	(PMSM Overcurrent protection level)	[24]	Y	N	N	Y	N
P91	(V/f Dumping Control Compensation gain of d-axis)	[5]	Y	N	N	N	N
P92	(V/f Dumping Control Compensation gain of q-axis)	[5]	Y	N	N	N	N
P93	(Control Change Level)	[1]	Y	N	N	N	N
P99	Motor 1 Selection	[1]	Y	Y	Y	Y	Y

Table 5.21 List of data format numbers (H codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
H02	Data Initialization Method	[1]	N	N	N	Y	N
H03	Data Initialization	[1]	Y	Y	Y	Y	Y
H04	Auto-reset (Times)	[1]	Y	Y	Y	Y	Y
H05	(Reset interval)	[3]	Y	Y	Y	Y	Y
H06	Cooling Fan ON/OFF Control	[1]	Y	Y	Y	Y	Y
H07	Acceleration/Deceleration Pattern	[1]	Y	Y	Y	Y	Y
H08	Rotational Direction Limitation	[1]	Y	N	Y	Y	Y
H09	Starting Mode (Auto search)	[1]	N	Y	Y	Y	Y
H11	Deceleration Mode	[1]	Y	Y	Y	Y	Y
H12	Instantaneous Overcurrent Limiting (Mode selection)	[1]	Y	Y	Y	Y	Y
H13	Restart Mode after Momentary Power Failure (Restart time)	[3]	Y	Y	Y	Y	Y
H14	(Frequency fall rate)	[5] *1	Y	Y	Y	Y	Y
H15	(Continuous running level)	[1]	Y	Y	N	Y	Y
H16	(Allowable momentary power failure time)	[3] *1	N	Y	Y	Y	Y
H17	Start Mode (Pick up frequency)	[3] *1	N	Y	N	N	N
H18	Torque Control (Mode selection)	[1]	N	N	N	Y	Y
H26	Thermistor (for motor) (Mode selection)	[1]	Y	Y	Y	Y	Y
H27	(Level)	[5]	Y	Y	Y	Y	Y
H28	Droop Control	[4]	N	N	Y	Y	Y
H30	Communications Link Function (Mode selection)	[1]	Y	Y	Y	Y	Y
H42	Capacitance of DC Link Bus Capacitor	[1]	Y	Y	Y	Y	Y
H43	Cumulative Run Time of Cooling Fan	[1]	N	Y*2	N	N	N
		[74]	Y	Y*3	Y	Y	Y
H44	Startup Counter for Motor 1	[1]	Y	N	Y	Y	Y
H45	Mock Alarm	[1]	Y	N	Y	Y	Y
H46	Starting Mode (Auto search delay time 2)	[3]	N	N	N	Y	Y
H47	Initial Capacitance of DC Link Bus Capacitor	[1]	Y	Y	Y	Y	Y
H48	Cumulative Run Time of Capacitors on Printed Circuit Boards	[1]	N	Y*2	N	N	N
		[74]	Y	Y*3	Y	Y	Y
H49	Starting Mode (Auto search delay time 1)	[3]	N	Y	Y	Y	Y
H50	Non-linear V/f Pattern 1 (Frequency)	[3]	Y	Y	Y	Y	Y
H51	(Voltage)	[1]	Y	Y	Y	Y	Y
H52	Non-linear V/f Pattern 2 (Frequency)	[3]	Y	N	Y	Y	Y
H53	(Voltage)	[1]	Y	N	Y	Y	Y
H54	ACC/DEC Time (Jogging)	[12]	Y	N	Y	N	N
	Acceleration Time (Jogging)	[12]	N	N	N	Y	Y
H55	Deceleration Time (Jogging)	[12]	N	N	N	Y	Y
H56	Deceleration Time for Forced Stop	[12]	N	Y	Y	Y	Y
H57	1st S-curve Acceleration Range (Leading edge)	[1]	N	N	N	Y	Y
H58	2nd S-curve Acceleration Range (Trailing edge)	[1]	N	N	N	Y	Y
H59	1st S-curve Deceleration Range (Leading edge)	[1]	N	N	N	Y	Y
H60	2nd S-curve Deceleration Range (Trailing edge)	[1]	N	N	N	Y	Y
H61	UP/DOWN Control (Initial frequency setting)	[1]	Y	N	Y	Y	Y
H63	Low Limiter (Mode selection)	[1]	Y	Y	Y	Y	Y
H64	(Lower limiting frequency)	[3]	Y	Y	Y	Y	Y
H65	Non-linear V/f Pattern 3 (Frequency)	[3]	N	N	N	Y	Y
H66	(Voltage)	[1]	N	N	N	Y	Y

*1 The value of 999 will be treated as $7FFF_H$.

*2 Applicable with the FRENIC-Eco ROM version 1399 and older.

*3 Applicable with the FRENIC-Eco ROM version 1400 and higher.

Table 5.21 List of data format numbers (H codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
H67	Auto Energy Saving Operation (Mode selection)	[1]	N	N	N	N	Y
H68	Slip Compensation 1 (Operating conditions)	[1]	N	N	Y	Y	Y
H69	Automatic Deceleration (Mode selection)	[1]	Y	Y	Y	Y	Y
H70	Overload Prevention Control	[5] *1	Y	Y	Y	Y	Y
H71	Deceleration Characteristics	[1]	Y	Y	Y	Y	Y
H72	Main Power Down Detection (Mode selection)	[1]	N	N	N	Y	Y
H73	Torque Limiter (Operating conditions)	[1]	N	N	N	N	Y
H74	(Control target)	[1]	N	N	N	Y	Y
H75	(Target quadrants)	[1]	N	N	N	N	Y
H76	Torque Limiter (Frequency increment limit for braking)	[3]	Y	N	Y	Y	Y
H77	Service Life of DC Link Bus Capacitor (Remaining time)	[74]	N	N	N	Y	Y
H78	Maintenance Interval (M1)	[74]	Y	N	N	Y	Y
H79	Preset Startup Count for Maintenance (M1)	[1]	Y	N	N	Y	Y
H80	Output Current Fluctuation Damping Gain for Motor 1	[5]	Y	Y	Y	Y	Y
H81	Light Alarm Selection 1	[1]	N	N	N	Y	Y
H82	Light Alarm Selection 2	[1]	N	N	N	Y	Y
H84	Pre-excitation (Initial level)	[1]	N	N	N	Y	Y
H85	(Time)	[5]	N	N	N	Y	Y
H86	Reserved.	[1]	N	Y	N	Y	Y
H87		[3]	N	Y	N	N	Y
H88		[1]	N	Y	N	N	Y
H89		[1]	Y	Y	Y	Y	Y
H90		[1]	N	Y	Y	N	Y
H91	PID Feedback Wire Break Detection	[3]	Y	Y	Y	Y	Y
H92	Continuity of Running (P)	[7] *1	Y	Y	N	Y	Y
H93	(I)	[7] *1	Y	Y	N	Y	Y
H94	Cumulative Motor Run Time 1	[1]	N	Y	Y	N	N
		[74]	Y	N	N	Y	Y
H95	DC Braking (Braking response mode)	[1]	Y	Y	Y	Y	Y
H96	STOP Key Priority / Start Check Function	[1]	Y	Y	Y	Y	Y
H97	Clear Alarm Data	[1]	Y	Y	Y	Y	Y
H98	Protection / Maintenance Function (Mode selection)	[1]	Y	Y	Y	Y	Y
H99	Password 2 setting/check	[1]	N	N	N	Y	N
H101	Destination	[1]	N	N	N	Y	N
H111	UPS operation level	[1]	N	N	N	Y	N
H114	Automatic Deceleration (Operation level)	[3]	N	N	N	Y	N
H147	Speed Control (Jogging) FF(Gain)	[5]	N	N	N	Y	N
H154	Torque Bias (Function selection)	[1]	N	N	N	Y	N
H155	(Set level1)	[2]	N	N	N	Y	N
H156	(Set level2)	[2]	N	N	N	Y	N
H157	(Set level3)	[2]	N	N	N	Y	N
H158	(Mechanical loss compensation)	[1]	N	N	N	Y	N
H159	(Startup timer)	[5]	N	N	N	Y	N
H161	(Shutdown timer)	[5]	N	N	N	Y	N
H162	(Limiter)	[1]	N	N	N	Y	N
H173	Magnetic Flux Level at Light Load	[1]	N	N	N	Y	N
H180	Brake Signal (Brake operation check time)	[5]	N	N	N	Y	N

*1 The value of 999 will be treated as $7FFF_H$.

Table 5.21 List of data format numbers (H codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
H193	User initial value (Save)	[1]	N	N	N	Y	N
H194	(Protection)	[1]	N	N	N	Y	N
H195	DC Braking (Braking time at the startup)	[5]	N	N	N	Y	N
H196	Reserved	[7]	N	N	N	Y	N
H197	User password 1 (Selection of protective operation)	[1]	N	N	N	Y	N
H198	(Setting/check)	[1]	N	N	N	Y	N
H199	User password protection valid	[1]	N	N	N	Y	N

Table 5.22 List of data format numbers (A codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
A01	Maximum Frequency 2	[3]	Y	N	Y	Y	Y
A02	Base Frequency 2	[3]	Y	N	Y	Y	Y
A03	Rated Voltage at Base Frequency 2	[1]	Y	N	Y	Y	Y
A04	Maximum Output Voltage 2	[1]	Y	N	Y	Y	Y
A05	Torque Boost 2	[3]	Y	N	Y	Y	Y
A06	Electronic Thermal Overload Protection for Motor 2 (Select motor characteristics)	[1]	Y	N	Y	Y	Y
A07	(Overload detection level)	[24](FGI)	Y	N	Y	Y	Y
		[19](RTU)	Y	N	Y	Y	Y
		[24](BUS) *1	N	N	Y	Y	Y
A08	(Thermal time constant)	[3]	Y	N	Y	Y	Y
A09	DC Braking 2 (Braking starting frequency)	[3]	Y	N	Y	Y	Y
A10	(Braking level)	[1]	Y	N	Y	Y	Y
A11	(Braking time)	[5]	Y	N	Y	Y	Y
A12	Starting Frequency 2	[3]	Y	N	Y	Y	Y
A13	Load Selection/Auto Torque Boost/Auto Energy Saving Operation 2	[1]	Y	N	Y	Y	Y
A14	Drive Control Selection 2	[1]	Y	N	Y	Y	Y
A15	Motor 2 (No. of poles)	[1]	N	N	Y	Y	Y
A16	(Rated Capacity)	[11]	Y	N	Y	Y	Y
	When A39 = 1(MEGA only)	[25]	N	N	N	N	Y
A17	(Rated current)	[24](FGI)	Y	N	Y	Y	Y
		[19](RTU)	Y	N	Y	Y	Y
		[24](BUS) *1	N	N	Y	Y	Y
A18	(Auto-tuning)	[21]	Y	N	Y	Y	Y
A19	(Online Tuning)	[1]	N	N	Y	Y	Y
A20	(No-load current)	[24](FGI)	Y	N	Y	Y	Y
		[19](RTU)	Y	N	Y	Y	Y
		[24](BUS) *1	N	N	Y	Y	Y
A21	(%R1)	[5]	Y	N	Y	Y	Y
A22	(%X)	[5]	Y	N	Y	Y	Y
A23	(Slip compensation gain for driving)	[3]	Y	N	Y	Y	Y
A24	(Slip compensation response time)	[5]	Y	N	Y	Y	Y
A25	(Slip compensation gain for braking)	[3]	Y	N	Y	Y	Y
A26	(Rated slip frequency)	[5]	Y	N	Y	Y	Y
A27	(Iron loss factor 1)	[5]	N	N	N	Y	Y
A28	(Iron loss factor 2)	[5]	N	N	N	N	Y
A29	(Iron loss factor 3)	[5]	N	N	N	N	Y
A30	(Magnetic saturation factor 1)	[3]	N	N	N	Y	Y
A31	(Magnetic saturation factor 2)	[3]	N	N	N	Y	Y
A32	(Magnetic saturation factor 3)	[3]	N	N	N	Y	Y
A33	(Magnetic saturation factor 4)	[3]	N	N	N	Y	Y
A34	(Magnetic saturation factor 5)	[3]	N	N	N	Y	Y
A35	(Magnetic saturation extension factor a)	[3]	N	N	N	N	Y
A36	(Magnetic saturation extension factor b)	[3]	N	N	N	N	Y
A37	(Magnetic saturation extension factor c)	[3]	N	N	N	N	Y
A39	Motor 2 Selection	[1]	Y	N	Y	Y	Y
A40	Slip Compensation 2 (Operating conditions)	[1]	N	N	Y	Y	Y
A41	Output Current Fluctuation Damping Gain for Motor 2	[5]	Y	N	Y	Y	Y
A42	Motor/Parameter Switching 2 (Mode selection)	[1]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.22 List of data format numbers (A codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
A43	Speed Control 2 (Speed command filter)	[7]	N	N	N	Y	Y
A44	(Speed detection filter)	[7]	N	N	N	Y	Y
A45	Cumulative Motor Run Time 2	[1]	N	N	Y	N	N
	Speed Control 2 P(Gain)	[3]	N	N	N	Y	Y
A46	Startup Times of Motor 2	[1]	N	N	Y	N	N
	Speed Control 2 I (Integral time)	[7]	N	N	N	Y	Y
A47	Speed Control 2 (Feed forward gain)	[5]	N	N	N	Y	Y
A48	(Output filter)	[7]	N	N	N	N	Y
A49	(Notch filter resonance frequency)	[1]	N	N	N	Y	Y
A50	(Notch filter attenuation level)	[1]	N	N	N	Y	Y
A51	Cumulative Motor Run Time 2	[74]	Y	N	N	Y	Y
A52	Startup Counter for Motor 2	[1]	Y	N	N	Y	Y
A53	Motor 2 (%X correction factor 1)	[1]	N	N	N	Y	Y
A54	(%X correction factor 2)	[1]	N	N	N	N	Y
A55	(Torque current under vector control)	[24](FGI)	N	N	N	Y	Y
		[19](RTU)	N	N	N	Y	Y
		[24](BUS) *1	N	N	N	Y	Y
A56	(Induced voltage factor under vector control)	[1]	N	N	N	Y	Y
A57	Reserved	[7]	N	N	N	N	Y
A98	Motor 2 (Select function)	[1]	N	N	N	Y	N

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.23 List of data format numbers (b codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
b01	Maximum Frequency 3	[3]	N	N	N	N	Y
b02	Base Frequency 3	[3]	N	N	N	N	Y
b03	Rated Voltage at Base Frequency 3	[1]	N	N	N	N	Y
b04	Maximum Output Voltage 3	[1]	N	N	N	N	Y
b05	Torque Boost 3	[3]	N	N	N	N	Y
b06	Electronic Thermal Overload Protection for Motor 3 (Select motor characteristics)	[1]	N	N	N	N	Y
b07	(Overload detection level)	[24](FGI)	N	N	N	N	Y
		[19](RTU)	N	N	N	N	Y
		[24](BUS) *1	N	N	N	N	Y
b08	(Thermal time constant)	[3]	N	N	N	N	Y
b09	DC Braking 3 (Braking starting frequency)	[3]	N	N	N	N	Y
b10	(Braking level)	[1]	N	N	N	N	Y
b11	(Braking time)	[5]	N	N	N	N	Y
b12	Starting Frequency 3	[3]	N	N	N	N	Y
b13	Load Selection/Auto Torque Boost/Auto Energy Saving Operation 3	[1]	N	N	N	N	Y
b14	Drive Control Selection 3	[1]	N	N	N	N	Y
b15	Motor 3 (No. of poles)	[1]	N	N	N	N	Y
b16	(Rated Capacity) b39=0, 2 to4	[11]	N	N	N	N	Y
	b39=1	[25]	N	N	N	N	Y
b17	(Rated current)	[24](FGI)	N	N	N	N	Y
		[19](RTU)	N	N	N	N	Y
		[24](BUS) *1	N	N	N	N	Y
b18	(Auto-tuning)	[21]	N	N	N	N	Y
b19	(Online Tuning)	[1]	N	N	N	N	Y
b20	(No-load current)	[24](FGI)	N	N	N	N	Y
		[19](RTU)	N	N	N	N	Y
		[24](BUS) *1	N	N	N	N	Y
b21	(%R1)	[5]	N	N	N	N	Y
b22	(%X)	[5]	N	N	N	N	Y
b23	(Slip compensation gain for driving)	[3]	N	N	N	N	Y
b24	(Slip compensation response time)	[5]	N	N	N	N	Y
b25	(Slip compensation gain for braking)	[3]	N	N	N	N	Y
b26	(Rated slip frequency)	[5]	N	N	N	N	Y
b27	(Iron loss factor 1)	[5]	N	N	N	N	Y
b28	(Iron loss factor 2)	[5]	N	N	N	N	Y
b29	(Iron loss factor 3)	[5]	N	N	N	N	Y
b30	(Magnetic saturation factor 1)	[3]	N	N	N	N	Y
b31	(Magnetic saturation factor 2)	[3]	N	N	N	N	Y
b32	(Magnetic saturation factor 3)	[3]	N	N	N	N	Y
b33	(Magnetic saturation factor 4)	[3]	N	N	N	N	Y
b34	(Magnetic saturation factor 5)	[3]	N	N	N	N	Y
b35	(Magnetic saturation extension factor a)	[3]	N	N	N	N	Y
b36	(Magnetic saturation extension factor b)	[3]	N	N	N	N	Y
b37	(Magnetic saturation extension factor c)	[3]	N	N	N	N	Y
b39	Motor 3 Selection	[1]	N	N	N	N	Y
b40	Slip Compensation 3 (Operating conditions)	[1]	N	N	N	N	Y
b41	Output Current Fluctuation Damping Gain for Motor 3	[5]	N	N	N	N	Y
b42	Motor/Parameter Switching 3 (Mode selection)	[1]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.23 List of data format numbers (b codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
b43	Speed Control 3 (Speed command filter)	[7]	N	N	N	Y	Y
b44	(Speed detection filter)	[7]	N	N	N	Y	Y
b45	P (Gain)	[3]	N	N	N	Y	Y
b46	I (Integral time)	[7]	N	N	N	Y	Y
b47	(Feed forward gain)	[5]	N	N	N	Y	Y
b48	(Output filter)	[7]	N	N	N	N	Y
b49	(Notch filter resonance frequency)	[1]	N	N	N	Y	Y
b50	(Notch filter attenuation level)	[1]	N	N	N	Y	Y
b51	Cumulative Motor Run Time 3	[74]	N	N	N	N	Y
b52	Startup Counter for Motor 3	[1]	N	N	N	N	Y
b53	Motor 3 (%X correction factor 1)	[1]	N	N	N	N	Y
b54	(%X correction factor 2)	[1]	N	N	N	N	Y
b55	(Torque current under vector control)	[24] (FGI)	N	N	N	N	Y
		[19] (RTU)	N	N	N	N	Y
		[24](BUS) *1	N	N	N	N	Y
b56	(Induced voltage factor under vector control)	[1]	N	N	N	N	Y
b57	Reserved	[7]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.24 List of data format numbers (r codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
r01	Maximum Frequency 4	[3]	N	N	N	N	Y
r02	Base Frequency 4	[3]	N	N	N	N	Y
r03	Rated Voltage at Base Frequency 4	[1]	N	N	N	N	Y
r04	Maximum Output Voltage 4	[1]	N	N	N	N	Y
r05	Torque Boost 4	[3]	N	N	N	N	Y
r06	Electronic Thermal Overload Protection for Motor 4 (Select motor characteristics)	[1]	N	N	N	N	Y
r07	(Overload detection level)	[24] (FGI)	N	N	N	N	Y
		[19] (RTU)	N	N	N	N	Y
		[24] (BUS) *1	N	N	N	N	Y
r08	(Thermal time constant)	[3]	N	N	N	N	Y
r09	DC Braking 4 (Braking starting frequency)	[3]	N	N	N	N	Y
r10	(Braking level)	[1]	N	N	N	N	Y
r11	(Braking time)	[5]	N	N	N	N	Y
r12	Starting Frequency 4	[3]	N	N	N	N	Y
r13	Load Selection/Auto Torque Boost/Auto Energy Saving Operation 4	[1]	N	N	N	N	Y
r14	Drive Control Selection 4	[1]	N	N	N	N	Y
r15	Motor 4 (No. of poles)	[1]	N	N	N	N	Y
r16	(Rated Capacity) r39=0, 2 to4	[11]	N	N	N	N	Y
	r39=1	[25]	N	N	N	N	Y
r17	(Rated current)	[24] (FGI)	N	N	N	N	Y
		[19] (RTU)	N	N	N	N	Y
		[24] (BUS) *1	N	N	N	N	Y
r18	(Auto-tuning)	[21]	N	N	N	N	Y
r19	(Online Tuning)	[1]	N	N	N	N	Y
r20	(No-load current)	[24] (FGI)	N	N	N	N	Y
		[19] (RTU)	N	N	N	N	Y
		[24] (BUS) *1	N	N	N	N	Y
r21	(%R1)	[5]	N	N	N	N	Y
r22	(%X)	[5]	N	N	N	N	Y
r23	(Slip compensation gain for driving)	[3]	N	N	N	N	Y
r24	(Slip compensation response time)	[5]	N	N	N	N	Y
r25	(Slip compensation gain for braking)	[3]	N	N	N	N	Y
r26	(Rated slip frequency)	[5]	N	N	N	N	Y
r27	(Iron loss factor 1)	[5]	N	N	N	N	Y
r28	(Iron loss factor 2)	[5]	N	N	N	N	Y
r29	(Iron loss factor 3)	[5]	N	N	N	N	Y
r30	(Magnetic saturation factor 1)	[3]	N	N	N	N	Y
r31	(Magnetic saturation factor 2)	[3]	N	N	N	N	Y
r32	(Magnetic saturation factor 3)	[3]	N	N	N	N	Y
r33	(Magnetic saturation factor 4)	[3]	N	N	N	N	Y
r34	(Magnetic saturation factor 5)	[3]	N	N	N	N	Y
r35	(Magnetic saturation extension factor a)	[3]	N	N	N	N	Y
r36	(Magnetic saturation extension factor b)	[3]	N	N	N	N	Y
r37	(Magnetic saturation extension factor c)	[3]	N	N	N	N	Y
r39	Motor 4 Selection	[1]	N	N	N	N	Y
r40	Slip Compensation 4 (Operating conditions)	[1]	N	N	N	N	Y
r41	Output Current Fluctuation Damping Gain for Motor 4	[5]	N	N	N	N	Y
r42	Motor/Parameter Switching 4 (Mode selection)	[1]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.24 List of data format numbers (r codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
r43	Speed Control 4 (Speed command filter)	[7]	N	N	N	Y	Y
r44	(Speed detection filter)	[7]	N	N	N	Y	Y
r45	P (Gain)	[3]	N	N	N	Y	Y
r46	I (Integral time)	[7]	N	N	N	Y	Y
r47	(Feed forward gain)	[5]	N	N	N	Y	Y
r48	(Output filter)	[7]	N	N	N	N	Y
r49	(Notch filter resonance frequency)	[1]	N	N	N	Y	Y
r50	(Notch filter attenuation level)	[1]	N	N	N	Y	Y
r51	Cumulative Motor Run Time 4	[74]	N	N	N	N	Y
r52	Startup Counter for Motor 4	[1]	N	N	N	N	Y
r53	Motor 4 (%X correction factor 1)	[1]	N	N	N	N	Y
r54	(%X correction factor 2)	[1]	N	N	N	N	Y
r55	(Torque current under vector control)	[24] (FGI)	N	N	N	N	Y
		[19] (RTU)	N	N	N	N	Y
		[24](BUS) *1	N	N	N	N	Y
r56	(Induced voltage factor under vector control)	[1]	N	N	N	N	Y
r57	Reserved	[7]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.25 List of data format numbers (J codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
J01	PID Control (Mode selection)	[1]	Y	Y	Y	Y	Y
J02	(Remote command SV)	[1]	Y	Y	Y	Y	Y
J03	P (gain)	[7]	Y	Y	Y	Y	Y
J04	I (Integral time)	[3]	Y	Y	Y	Y	Y
J05	D (Differential time)	[5]	Y	Y	Y	Y	Y
J06	(Feedback filter)	[3]	Y	Y	Y	Y	Y
J08	(Pressurization starting frequency)	[3]	N	N	N	N	Y
J09	(Pressurizing time)	[1]	N	N	N	N	Y
J10	(Anti reset windup)	[1]	N	Y	Y	Y	Y
J11	(Select alarm output)	[1]	N	Y	Y	Y	Y
J12	(Upper level alarm (AH))	[2]	N	Y	Y	Y	Y
J13	(Lower level alarm (AL))	[2]	N	Y	Y	Y	Y
J15	(Stop frequency for slow flowrate)	[1]	N	Y	N	N	N
		[3]	Y	N	N	Y	Y
J16	(Slow flowrate level stop latency)	[1]	Y	Y	N	Y	Y
J17	(Starting frequency)	[1]	N	Y	N	N	N
		[3]	Y	N	N	Y	Y
J18	(Upper limit of PID process output)	[1] *1	N	Y	N	N	N
		[2] *1	N	N	Y	Y	Y
J19	(Lower limit of PID process output)	[1] *1	N	Y	N	N	N
		[2] *1	N	N	Y	Y	Y
J21	Dew Condensation Prevention (Duty)	[1]	N	Y	N	N	Y
J22	Commercial Power Switching Sequence	[1]	N	Y	N	N	Y
J23	PID Control (Starting feedback deviation level)	[3]	Y	N	N	Y	N
J24	(Starting latency from the flow rate stop)	[1]	Y	N	N	Y	N
J56	(Speed command filter)	[5]	N	N	Y	N	Y
J57	(Dancer reference position)	[2]	N	N	Y	Y	Y
J58	(Detection width of dancer position deviation)	[1]	N	N	Y	Y	Y
J59	P (Gain) 2	[7]	N	N	Y	Y	Y
J60	I (Integral time) 2	[3]	N	N	Y	Y	Y
J61	D (Derivative time) 2	[5]	N	N	Y	Y	Y
J62	(PID control block selection)	[1]	N	N	Y	Y	Y
J63	Overload Stop (Detection value)	[1]	N	N	Y	Y	N
J64	(Detection level)	[1]	N	N	Y	Y	N
J65	(Mode selection)	[1]	N	N	Y	Y	N
J66	(Operation condition)	[1]	N	N	Y	Y	N
J67	(Timer)	[5]	N	N	Y	Y	N
J68	Brake Signal (Brake OFF current)	[1]	Y	N	Y	N	Y
		[5]	N	N	N	Y	N
J69	(Brake OFF frequency/speed)	[3]	Y	N	Y	Y	Y
J70	(Brake OFF timer)	[3]	Y	N	Y	N	Y
		[5]	N	N	N	Y	N
J71	(Brake ON frequency/speed)	[3]	Y	N	Y	Y	Y
J72	(Brake ON timer)	[3]	Y	N	Y	N	Y
		[5]	N	N	N	Y	N

*1 The value of 999 will be treated as $7FFF_H$

Table 5.25 List of data format numbers (J codes) (Continued)

Code	Name		Format number	Support				
				Mini	Eco	Multi	Ace	MEGA
J73	Positioning Control	(Start timer)	[3]	N	N	Y	Y	N
J74		(Start point; upper digits)	[73]	N	N	Y	Y	N
J75		(Start point; lower digits)	[75]	N	N	Y	Y	N
J76		(Preset point; upper digits)	[73]	N	N	Y	Y	N
J77		(Preset point; lower digits)	[75]	N	N	Y	Y	N
J78		(Creep speed SW point; upper digits)	[1]	N	N	Y	Y	N
J79		(Creep speed SW point; lower digits)	[1]	N	N	Y	Y	N
J80		(Creep speed)	[1]	N	N	Y	Y	N
J81		(End point; upper digits)	[73]	N	N	Y	Y	N
J82		(End point; lower digits)	[1]	N	N	Y	Y	N
J83		(Positioning allowance)	[1]	N	N	Y	Y	N
J84		(End timer)	[3]	N	N	Y	Y	N
J85		(Coasting Compensation)	[1]	N	N	Y	Y	N
J86		(End point command)	[1]	N	N	Y	Y	N
J87		(Preset positioning requirement)	[1]	N	N	Y	Y	N
J88		(Position detection direction)	[1]	N	N	Y	Y	N
J90	Overload Stop Function	P (Gain)	[7]	N	N	Y	Y	N
J91		I (Integral time)	[7]	N	N	Y	Y	N
J92		(Level adjustment)	[3]	N	N	Y	Y	N
J95	Brake Signal	(Brake OFF torque)	[1]	N	N	N	N	Y
			[5]	N	N	N	Y	N
J96		(Speed condition selection)	[1]	N	N	N	Y	Y
J97	Servo-lock	(Gain)	[5]	N	N	N	N	Y
			[7]	N	N	N	Y	N
J98		(Completion timer)	[7]	N	N	N	Y	Y
J99		(Completion width)	[1]	N	N	N	Y	Y
J105	PID Control	(Display unit)	[1]	N	N	N	Y	N
J106		(Maximum scale)	[12]	N	N	N	Y	N
J107		(Minimum scale)	[12]	N	N	N	Y	N
J136	PID Command	(Multistep command 1)	[12]	N	N	N	Y	N
J137		(Multistep command 2)	[12]	N	N	N	Y	N
J138		(Multistep command 3)	[12]	N	N	N	Y	N

Table 5.26 List of data format numbers (d codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
d01	Speed Control 1 (Speed command filter)	[7]	N	N	N	Y	Y
d02	(Speed detection filter)	[7]	N	N	N	Y	Y
d03	P (Gain)	[3]	N	N	N	Y	Y
d04	I (Integral time)	[7]	N	N	N	Y	Y
d05	(Feed Forward Gain)	[5]	N	N	N	Y	Y
d06	(Output filter)	[7]	N	N	N	N	Y
d07	(Notch filter resonance frequency)	[1]	N	N	N	Y	Y
d08	(Notch filter attenuation level)	[1]	N	N	N	Y	Y
d09	Speed Control (Jogging) (Speed command filter)	[7]	N	N	N	Y	Y
d10	(Speed detection filter)	[7]	N	N	N	Y	Y
d11	P (Gain)	[3]	N	N	N	Y	Y
d12	I (Integral time)	[7]	N	N	N	Y	Y
d13	(Output filter)	[7]	N	N	N	N	Y
d14	Feedback Input (Pulse input format)	[1]	N	N	N	Y	Y
d15	(Encoder pulse resolution)	[1]	N	N	N	Y	Y
d16	(Pulse count factor 1)	[1]	N	N	N	Y	Y
d17	(Pulse count factor 2)	[1]	N	N	N	Y	Y
d21	Speed Agreement/PG Error (Hysteresis width)	[3]	N	N	N	Y	Y
d22	(Detection timer)	[5]	N	N	N	Y	Y
d23	PG Error Processing	[1]	N	N	N	Y	Y
d24	Zero Speed Control	[1]	N	N	N	Y	Y
d25	ASR Switching Time	[7]	N	N	N	Y	Y
d27	Servo Lock Time (Gain reshuffling time)	[7]	N	N	N	N	Y
d28	(Gain 2)	[5]	N	N	N	N	Y
d32	Torque Control (Speed limit 1)	[1]	N	N	N	Y	Y
d33	(Speed limit 2)	[1]	N	N	N	Y	Y
d35	Over speed Detection Level	[1]	N	N	N	Y	Y
d41	Application-defined Control	[1]	N	N	N	Y	Y
d51	Reserved	[1]	N	N	N	Y	Y
d52		[1]	N	N	N	Y	Y
d53		[1]	N	N	N	N	Y
d54		[1]	N	N	N	N	Y
d55		[1]	N	N	N	Y	Y
d59	Command (Pulse Rate Input) (Pulse input format)	[1]	N	N	N	Y	Y
d60	(Encoder pulse resolution)	[1]	N	N	N	Y	Y
d61	(Filter time constant)	[7]	N	N	N	Y	Y
d62	(Pulse count factor 1)	[1]	N	N	N	Y	Y
d63	(Pulse count factor 2)	[1]	N	N	N	Y	Y
d67	Starting Mode (Auto search)	[1]	N	N	N	Y	Y
d68	Reserved	[3]	N	N	N	N	Y
d69		[3]	N	N	N	Y	Y
d70	Speed Control Limiter	[5]	N	N	N	Y	Y
d71	Synchronous Control (Main speed regulator gain)	[5]	N	N	N	Y	Y
d72	(APR P gain)	[5]	N	N	N	Y	Y
d73	(APR positive output limiter)	[1]	N	N	N	Y	Y
d74	(APR negative output limiter)	[1]	N	N	N	Y	Y
d75	(Z phase alignment gain)	[5]	N	N	N	Y	Y
d76	(Synchronous offset angle)	[1]	N	N	N	Y	Y
d77	(Synchronization completion detection angle)	[1]	N	N	N	Y	Y
d78	(Excessive deviation detection width)	[1]	N	N	N	Y	Y

Table 5.26 List of data format numbers (d codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
d79	Reserved	[1]	N	N	N	Y	N
d81		[1]	N	N	N	N	Y
d82	Field Weakning Control (PG less vector control)	[1]	N	N	N	N	Y
d83	Field Weakning Lower Limit (PG less vector control)	[1]	N	N	N	N	Y
d84	Reserved	[1]	N	N	N	N	Y
d85		[1]	N	N	N	N	Y
d86	Acceleration and Deceleration Output Filter	[7]	N	N	N	N	Y
d88	Reserved	[5]	N	N	N	Y	N
d90	Magnetic Flux Level During Deceleration (Vector control)	[1]	N	N	N	Y	Y
d91	Reserved	[5]	N	N	N	Y	Y
d92		[5]	N	N	N	Y	Y
d93		[5]	N	N	N	Y	N
d94		[5]	N	N	N	Y	N
d95		[5]	N	N	N	Y	N
d96		[4]	N	N	N	Y	N
d97		[4]	N	N	N	Y	N
d98		[1]	N	N	N	N	Y
d99		[1]	N	N	N	Y	Y

Table 5.27 List of data format numbers (U codes only FRENIC-MEGA)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
U00	Customizable Logic (Mode selection)	[1]	N	N	N	Y	Y
U01	Customizable Logic Step 1 (Input 1)	[1]	N	N	N	N	Y
U02	(Input 2)	[1]	N	N	N	N	Y
U03	(Logic circuit)	[1]	N	N	N	N	Y
U04	(Type of timer)	[1]	N	N	N	N	Y
U05	(Timer)	[5]	N	N	N	N	Y
U06	Customizable Logic Step 2 (Input 1)	[1]	N	N	N	N	Y
U07	(Input 2)	[1]	N	N	N	N	Y
U08	(Logic circuit)	[1]	N	N	N	N	Y
U09	(Type of timer)	[1]	N	N	N	N	Y
U10	(Timer)	[5]	N	N	N	N	Y
U11	Customizable Logic Step 3 (Input 1)	[1]	N	N	N	N	Y
U12	(Input 2)	[1]	N	N	N	N	Y
U13	(Logic circuit)	[1]	N	N	N	N	Y
U14	(Type of timer)	[1]	N	N	N	N	Y
U15	(Timer)	[5]	N	N	N	N	Y
U16	Customizable Logic Step 4 (Input 1)	[1]	N	N	N	N	Y
U17	(Input 2)	[1]	N	N	N	N	Y
U18	(Logic circuit)	[1]	N	N	N	N	Y
U19	(Type of timer)	[1]	N	N	N	N	Y
U20	(Timer)	[5]	N	N	N	N	Y
U21	Customizable Logic Step 5 (Input 1)	[1]	N	N	N	N	Y
U22	(Input 2)	[1]	N	N	N	N	Y
U23	(Logic circuit)	[1]	N	N	N	N	Y
U24	(Type of timer)	[1]	N	N	N	N	Y
U25	(Timer)	[5]	N	N	N	N	Y
U26	Customizable Logic Step 6 (Input 1)	[1]	N	N	N	N	Y
U27	(Input 2)	[1]	N	N	N	N	Y
U28	(Logic circuit)	[1]	N	N	N	N	Y
U29	(Type of timer)	[1]	N	N	N	N	Y
U30	(Timer)	[5]	N	N	N	N	Y
U31	Customizable Logic Step 7 (Input 1)	[1]	N	N	N	N	Y
U32	(Input 2)	[1]	N	N	N	N	Y
U33	(Logic circuit)	[1]	N	N	N	N	Y
U34	(Type of timer)	[1]	N	N	N	N	Y
U35	(Timer)	[5]	N	N	N	N	Y
U36	Customizable Logic Step 8 (Input 1)	[1]	N	N	N	N	Y
U37	(Input 2)	[1]	N	N	N	N	Y
U38	(Logic circuit)	[1]	N	N	N	N	Y
U39	(Type of timer)	[1]	N	N	N	N	Y
U40	(Timer)	[5]	N	N	N	N	Y
U41	Customizable Logic Step 9 (Input 1)	[1]	N	N	N	N	Y
U42	(Input 2)	[1]	N	N	N	N	Y
U43	(Logic circuit)	[1]	N	N	N	N	Y
U44	(Type of timer)	[1]	N	N	N	N	Y
U45	(Timer)	[5]	N	N	N	N	Y
U46	Customizable Logic Step 10 (Input 1)	[1]	N	N	N	N	Y
U47	(Input 2)	[1]	N	N	N	N	Y
U48	(Logic circuit)	[1]	N	N	N	N	Y
U49	(Type of timer)	[1]	N	N	N	N	Y
U50	(Timer)	[5]	N	N	N	N	Y

Table 5.27 List of data format numbers (U00 to U50 only FRENIC-Ace)

Code	Name		Format number	Support				
				Mini	Eco	Multi	Ace	MEGA
U00	Customizable Logic	(Mode selection)	[1]	N	N	N	Y	Y
U01	Customizable Logic Step 1	(Logic circuit)	[1]	N	N	N	Y	N
U02		(Input 1)	[1]	N	N	N	Y	N
U03		(Input 2)	[1]	N	N	N	Y	N
U04		(Type of timer)	[12]	N	N	N	Y	N
U05		(Timer)	[12]	N	N	N	Y	N
U06	Customizable Logic Step 2	(Logic circuit)	[1]	N	N	N	Y	N
U07		(Input 1)	[1]	N	N	N	Y	N
U08		(Input 2)	[1]	N	N	N	Y	N
U09		(Type of timer)	[12]	N	N	N	Y	N
U10		(Timer)	[12]	N	N	N	Y	N
U11	Customizable Logic Step 3	(Logic circuit)	[1]	N	N	N	Y	N
U12		(Input 1)	[1]	N	N	N	Y	N
U13		(Input 2)	[1]	N	N	N	Y	N
U14		(Type of timer)	[12]	N	N	N	Y	N
U15		(Timer)	[12]	N	N	N	Y	N
U16	Customizable Logic Step 4	(Logic circuit)	[1]	N	N	N	Y	N
U17		(Input 1)	[1]	N	N	N	Y	N
U18		(Input 2)	[1]	N	N	N	Y	N
U19		(Type of timer)	[12]	N	N	N	Y	N
U20		(Timer)	[12]	N	N	N	Y	N
U21	Customizable Logic Step 5	(Logic circuit)	[1]	N	N	N	Y	N
U22		(Input 1)	[1]	N	N	N	Y	N
U23		(Input 2)	[1]	N	N	N	Y	N
U24		(Type of timer)	[12]	N	N	N	Y	N
U25		(Timer)	[12]	N	N	N	Y	N
U26	Customizable Logic Step 6	(Logic circuit)	[1]	N	N	N	Y	N
U27		(Input 1)	[1]	N	N	N	Y	N
U28		(Input 2)	[1]	N	N	N	Y	N
U29		(Type of timer)	[12]	N	N	N	Y	N
U30		(Timer)	[12]	N	N	N	Y	N
U31	Customizable Logic Step 7	(Logic circuit)	[1]	N	N	N	Y	N
U32		(Input 1)	[1]	N	N	N	Y	N
U33		(Input 2)	[1]	N	N	N	Y	N
U34		(Type of timer)	[12]	N	N	N	Y	N
U35		(Timer)	[12]	N	N	N	Y	N
U36	Customizable Logic Step 8	(Logic circuit)	[1]	N	N	N	Y	N
U37		(Input 1)	[1]	N	N	N	Y	N
U38		(Input 2)	[1]	N	N	N	Y	N
U39		(Type of timer)	[12]	N	N	N	Y	N
U40		(Timer)	[12]	N	N	N	Y	N
U41	Customizable Logic Step 9	(Logic circuit)	[1]	N	N	N	Y	N
U42		(Input 1)	[1]	N	N	N	Y	N
U43		(Input 2)	[1]	N	N	N	Y	N
U44		(Type of timer)	[12]	N	N	N	Y	N
U45		(Timer)	[12]	N	N	N	Y	N
U46	Customizable Logic Step 10	(Logic circuit)	[1]	N	N	N	Y	N
U47		(Input 1)	[1]	N	N	N	Y	N
U48		(Input 2)	[1]	N	N	N	Y	N
U49		(Type of timer)	[12]	N	N	N	Y	N
U50		(Timer)	[12]	N	N	N	Y	N

Table 5.27 List of data format numbers (U codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
U51	Customizable Logic Step 11 (Logic circuit)	[1]	N	N	N	Y	N
U52	(Input 1)	[1]	N	N	N	Y	N
U53	(Input 2)	[1]	N	N	N	Y	N
U54	(Type of timer)	[12]	N	N	N	Y	N
U55	(Timer)	[12]	N	N	N	Y	N
U56	Customizable Logic Step 12 (Logic circuit)	[1]	N	N	N	Y	N
U57	(Input 1)	[1]	N	N	N	Y	N
U58	(Input 2)	[1]	N	N	N	Y	N
U59	(Type of timer)	[12]	N	N	N	Y	N
U60	(Timer)	[12]	N	N	N	Y	N
U61	Customizable Logic Step 13 (Logic circuit)	[1]	N	N	N	Y	N
U62	(Input 1)	[1]	N	N	N	Y	N
U63	(Input 2)	[1]	N	N	N	Y	N
U64	(Type of timer)	[12]	N	N	N	Y	N
U65	(Timer)	[12]	N	N	N	Y	N
U66	Customizable Logic Step 14 (Logic circuit)	[1]	N	N	N	Y	N
U67	(Input 1)	[1]	N	N	N	Y	N
U68	(Input 2)	[1]	N	N	N	Y	N
U69	(Type of timer)	[12]	N	N	N	Y	N
U70	(Timer)	[12]	N	N	N	Y	N
U71	Customizable Logic Output Signal 1 (Output selection)	[1]	N	N	N	Y	Y
U72	2 (Output selection)	[1]	N	N	N	Y	Y
U73	3 (Output selection)	[1]	N	N	N	Y	Y
U74	4 (Output selection)	[1]	N	N	N	Y	Y
U75	5 (Output selection)	[1]	N	N	N	Y	Y
U76	6 (Output selection)	[1]	N	N	N	Y	N
U77	7 (Output selection)	[1]	N	N	N	Y	N
U78	8 (Output selection)	[1]	N	N	N	Y	N
U79	9 (Output selection)	[1]	N	N	N	Y	N
U80	10 (Output selection)	[1]	N	N	N	Y	N
U81	Customizable Logic Output Signal 1 (Function selection)	[1]	N	N	N	Y	Y
U82	2 (Function selection)	[1]	N	N	N	Y	Y
U83	3 (Function selection)	[1]	N	N	N	Y	Y
U84	4 (Function selection)	[1]	N	N	N	Y	Y
U85	5 (Function selection)	[1]	N	N	N	Y	Y
U86	6 (Function selection)	[1]	N	N	N	Y	N
U87	7 (Function selection)	[1]	N	N	N	Y	N
U88	8 (Function selection)	[1]	N	N	N	Y	N
U89	9 (Function selection)	[1]	N	N	N	Y	N
U90	10 (Function selection)	[1]	N	N	N	Y	N
U91	Customizable Logic Timer Monitor (Step selection)	[1]	N	N	N	Y	Y
U92	Customizable Logic Calculation Coefficient (Mantissa of calculation coefficient KA1)	[8]	N	N	N	Y	N
U93	(Exponent of calculation coefficient KA1)	[2]	N	N	N	Y	N
U94	(Mantissa of calculation coefficient KB1)	[8]	N	N	N	Y	N
U95	(Exponent of calculation coefficient KB1)	[2]	N	N	N	Y	N
U96	(Mantissa of calculation coefficient KC1)	[8]	N	N	N	Y	N
U97	(Exponent of calculation coefficient KC1)	[2]	N	N	N	Y	N

Table 5.27 List of data format numbers (U100 to U199 only FRENIC-Ace)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
U100	Customizable Logic (Task process cycle setting)	[1]	N	N	N	Y	N
U101	Customizable Logic Conversion point 1 (X1)	[12]	N	N	N	Y	N
U102	(Y1)	[12]	N	N	N	Y	N
U103	(X2)	[12]	N	N	N	Y	N
U104	(Y2)	[12]	N	N	N	Y	N
U105	(X3)	[12]	N	N	N	Y	N
U106	(Y3)	[12]	N	N	N	Y	N
U107	Automatic Calculation of Conversion Coefficients	[1]	N	N	N	Y	N
U121	Customizable Logic User Parameter 1	[12]	N	N	N	Y	N
U122	2	[12]	N	N	N	Y	N
U123	3	[12]	N	N	N	Y	N
U124	4	[12]	N	N	N	Y	N
U125	5	[12]	N	N	N	Y	N
U126	6	[12]	N	N	N	Y	N
U127	7	[12]	N	N	N	Y	N
U128	8	[12]	N	N	N	Y	N
U129	9	[12]	N	N	N	Y	N
U130	10	[12]	N	N	N	Y	N
U131	11	[12]	N	N	N	Y	N
U132	12	[12]	N	N	N	Y	N
U133	13	[12]	N	N	N	Y	N
U134	14	[12]	N	N	N	Y	N
U135	15	[12]	N	N	N	Y	N
U136	16	[12]	N	N	N	Y	N
U137	17	[12]	N	N	N	Y	N
U138	18	[12]	N	N	N	Y	N
U139	19	[12]	N	N	N	Y	N
U140	20	[12]	N	N	N	Y	N
U171	Customizable Logic Strage Area 1	[12]	N	N	N	Y	N
U172	2	[12]	N	N	N	Y	N
U173	3	[12]	N	N	N	Y	N
U174	4	[12]	N	N	N	Y	N
U175	5	[12]	N	N	N	Y	N
U190	Customizable Logic Step No. Selection	[1]	N	N	N	Y	N
U191	Customizable Logic Step n (Logic circuit)	[1]	N	N	N	Y	N
U192	(Input 1)	[1]	N	N	N	Y	N
U193	(Input 2)	[1]	N	N	N	Y	N
U194	(Type of timer)	[12]	N	N	N	Y	N
U195	(Timer)	[12]	N	N	N	Y	N
U196	Customizable logic ROM version Upper digit (Monitor)	[1]	N	N	N	Y	N
U197	(For User setting)	[1]	N	N	N	Y	N
U198	Customizable Logic ROM version Lower digit (Monitor)	[1]	N	N	N	Y	N
U199	(For User setting)	[1]	N	N	N	Y	N

Table 5.28 List of data format numbers (y codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
y01	RS-485 Communications 1 (Station address)	[1]	Y	Y	Y	Y	Y
y02	(Communications error processing)	[1]	Y	Y	Y	Y	Y
y03	(Timer)	[3]	Y	Y	Y	Y	Y
y04	(Baud rate)	[1]	Y	Y	Y	Y	Y
y05	(Data length)	[1]	Y	Y	Y	Y	Y
y06	(Parity check)	[1]	Y	Y	Y	Y	Y
y07	(Stop bits)	[1]	Y	Y	Y	Y	Y
y08	(No response error detection time)	[1]	Y	Y	Y	Y	Y
y09	(Response interval)	[5]	Y	Y	Y	Y	Y
y10	(Protocol selection)	[1]	Y	Y	Y	Y	Y
y11	RS-485 Communications 2 (Station address)	[1]	N	Y	Y	Y	Y
y12	(Communications error processing)	[1]	N	Y	Y	Y	Y
y13	(Timer)	[3]	N	Y	Y	Y	Y
y14	(Baud rate)	[1]	N	Y	Y	Y	Y
y15	(Data length)	[1]	N	Y	Y	Y	Y
y16	(Parity check)	[1]	N	Y	Y	Y	Y
y17	(Stop bits)	[1]	N	Y	Y	Y	Y
y18	(No response error detection time)	[1]	N	Y	Y	Y	Y
y19	(Response interval)	[5]	N	Y	Y	Y	Y
y20	(Protocol selection)	[1]	N	Y	Y	Y	Y
y21	Bulit-in CAN Communication (Station address)	[1]	N	N	N	Y	N
y24	Response Error (Timer)	[1]	N	N	N	Y	N
y25	Bulit-in CAN Communication (Assign writing function code No. 1)	[1]	N	N	N	Y*1	N
y26	(Assign writing function code No. 2)	[1]	N	N	N	Y*1	N
y27	(Assign writing function code No. 3)	[1]	N	N	N	Y*1	N
y28	(Assign writing function code No. 4)	[1]	N	N	N	Y*1	N
y29	(Assign writing function code No. 5)	[1]	N	N	N	Y*1	N
y30	(Assign writing function code No. 6)	[1]	N	N	N	Y*1	N
y31	(Assign writing function code No. 7)	[1]	N	N	N	Y*1	N
y32	(Assign writing function code No. 8)	[1]	N	N	N	Y*1	N
y33	(Operation selection)	[1]	N	N	N	Y*1	N
y34	(Communications error processing)	[1]	N	N	N	Y*1	N
y35	(No response error detection time)	[3]	N	N	N	Y*1	N
y36	(Operation Selection in abort status)	[1]	N	N	N	Y*1	N
y95	Data Clear Processing for Communications Error	[1]	N	N	N	Y	N
y96	Reserved	[1]	N	N	N	N	Y
y97	Communications Data Storage Selection	[1]	Y	N	N	Y	Y
y98	Bus Link Function (Mode selection)	[1]	N	Y	Y	Y	Y
y99	Loader Link Function (Mode selection)	[1]	Y	Y	Y	Y	Y

*1 Not applicable with FRN□□E2□-□C, FRN□□E2□-□GB

Table 5.29 List of data format numbers (o codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
o01	Terminal [O1] Function	[1]	N	N	N	Y	N
o02	Terminal [O2] Function	[1]	N	N	N	Y	N
o03	Terminal [O3] Function	[1]	N	N	N	Y	N
o04	Terminal [O4] Function	[1]	N	N	N	Y	N
o05	Terminal [O5] Function	[1]	N	N	N	Y	N
o06	Terminal [O6] Function	[1]	N	N	N	Y	N
o07	Terminal [O7] Function	[1]	N	N	N	Y	N
o08	Terminal [O8] Function	[1]	N	N	N	Y	N
o19	DI Option	[1]	N	N	N	Y	Y
o20	DI Option(DI function selection)	[1]	N	N	N	Y	Y
o21	DO Option (DO function selection)	[1]	N	N	Y	Y	Y
o27	Response Error (Operation mode selection)	[1]	N	Y	Y	Y	Y
o28	(Timer)	[3]	N	Y	Y	Y	Y
o30	Bus Setting Parameter 01	[1]	N	Y	Y	Y	Y
o31	02	[1]	N	Y	Y	Y	Y
o32	03	[1]	N	Y	Y	Y	Y
o33	04	[1]	N	Y	Y	Y	Y
o34	05	[1]	N	Y	Y	Y	Y
o35	06	[1]	N	Y	Y	Y	Y
o36	07	[1]	N	Y	Y	Y	Y
o37	08	[1]	N	Y	Y	Y	Y
o38	09	[1]	N	Y	Y	Y	Y
o39	10	[1]	N	Y	Y	Y	Y
o40	Write Code Assignment 1	[1]	N	Y	Y	Y	Y
o41	2	[1]	N	Y	Y	Y	Y
o42	3	[1]	N	Y	Y	Y	Y
o43	4	[1]	N	Y	Y	Y	Y
o44	5	[1]	N	Y	Y	Y	Y
o45	6	[1]	N	Y	Y	Y	Y
o46	7	[1]	N	Y	Y	Y	Y
o47	8	[1]	N	Y	Y	Y	Y
o48	Read Code Assignment 1	[1]	N	Y	Y	Y	Y
o49	2	[1]	N	Y	Y	Y	Y
o50	3	[1]	N	Y	Y	Y	Y
o51	4	[1]	N	Y	Y	Y	Y
o52	5	[1]	N	Y	Y	Y	Y
o53	6	[1]	N	Y	Y	Y	Y
o54	7	[1]	N	Y	Y	Y	Y
o55	8	[1]	N	Y	Y	Y	Y
o56	9	[1]	N	Y	Y	Y	Y
o57	10	[1]	N	Y	Y	Y	Y
o58	11	[1]	N	Y	Y	Y	Y
o59	12	[1]	N	Y	Y	Y	Y
o60	Terminal [32] Extended Function	[1]	N	N	N	Y	Y
o61	(Offset)	[4]	N	N	N	Y	Y
o62	(Gain)	[5]	N	N	N	Y	Y
o63	(Filter time constant)	[5]	N	N	N	Y	Y
o64	(Gain base point)	[5]	N	N	N	Y	Y
o65	(Polarity)	[1]	N	N	N	Y	Y
o66	(Bias value)	[6]	N	N	N	Y	*1

Table 5.29 List of data format numbers (o codes) (Continued)

Code	Name		Format number	Support				
				Mini	Eco	Multi	Ace	MEGA
o67	Terminal [32] Extended Function	(Bias base point)	[5]	N	N	N	Y	*1
o69		(Display unit)	[1]	N	N	N	Y	*1
o70		(Maximum scale)	[12]	N	N	N	Y	*1
o71		(Minimum scale)	[12]	N	N	N	Y	*1
o75	Terminal [C2] Extended Function	(Range selection)	[1]	N	N	N	Y	*1
o76		(Function)	[1]	N	N	N	Y	N
o77		(Offset)	[4]	N	N	N	Y	N
o78		(Gain)	[5]	N	N	N	Y	N
o79		(Filter time constant)	[5]	N	N	N	Y	N
o81		(Gain base point)	[5]	N	N	N	Y	N
o82		(Bias value)	[6]	N	N	N	Y	N
o83		(Bias base point)	[5]	N	N	N	Y	N
o85		(Display unit)	[1]	N	N	N	Y	N
o86		(Maximum scale)	[12]	N	N	N	Y	N
o87		(Minimum scale)	[12]	N	N	N	Y	N
o90	Terminal [Ao/CS2]	(Function)	[1]	N	N	N	Y	N
o91		(Voltage adjustment)	[1]	N	N	N	Y	N
o93		(Polarity)	[1]	N	N	N	Y	N
o96	Terminal [CS/CS1]	(Function)	[1]	N	N	N	Y	N
o97		(Voltage adjustment)	[1]	N	N	N	Y	N
o101	Terminal [I1] Function		[1]	N	N	N	Y	N
o102	Terminal [I2] Function		[1]	N	N	N	Y	N
o103	Terminal [I3] Function		[1]	N	N	N	Y	N
o104	Terminal [I4] Function		[1]	N	N	N	Y	N
o105	Terminal [I5] Function		[1]	N	N	N	Y	N
o106	Terminal [I6] Function		[1]	N	N	N	Y	N
o107	Terminal [I7] Function		[1]	N	N	N	Y	N
o108	Terminal [I8] Function		[1]	N	N	N	Y	N
o109	Terminal [I9] Function		[1]	N	N	N	Y	N
o110	Terminal [I10] Function		[1]	N	N	N	Y	N
o111	Terminal [I11] Function		[1]	N	N	N	Y	N
o112	Terminal [I12] Function		[1]	N	N	N	Y	N
o113	Terminal [I13] Function		[1]	N	N	N	Y	N

*1 is as follows.

Code	Name		Format number	Support				
				Mini	Eco	Multi	Ace	MEGA
o66	Terminal [C2]	(Function)	[1]	N	N	N	N	Y
o67		(Offset)	[4]	N	N	N	N	Y
o68		(Gain)	[5]	N	N	N	N	Y
o69		(Filter time constant)	[5]	N	N	N	N	Y
o70		(Gain base point)	[5]	N	N	N	N	Y
o71	Terminal [Ao/CS2]	(Function)	[1]	N	N	N	N	Y
o72		(Voltage adjustment)	[1]	N	N	N	N	Y
o73		(Polarity)	[1]	N	N	N	N	Y
o74	Terminal [CS/CS1]	(Function)	[1]	N	N	N	N	Y
o75		(Voltage adjustment)	[1]	N	N	N	N	Y

Table 5.30 List of data format numbers (K codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
K01	LCD Monitor TP-A1 (Language selection)	[1]	N	N	N	Y	N
K02	(Backlight OFF Time)	[1]	N	N	N	Y	N
K03	(Backlight brightness control)	[1]	N	N	N	Y	N
K04	(Contrast control)	[1]	N	N	N	Y	N
K08	(LCD Monitor Status Display/Hide Selection)	[1]	N	N	N	Y	N
K15	(Sub Monitor)	[1]	N	N	N	Y	N
K16	(Sub Monitor 1)	[1]	N	N	N	Y	N
K17	(Sub Monitor 2)	[1]	N	N	N	Y	N
K20	(Bar Graph 1)	[1]	N	N	N	Y	N
K21	(Bar Graph 2)	[1]	N	N	N	Y	N
K22	(Bar Graph 3)	[1]	N	N	N	Y	N
K91	(Drive Mode < Shortcut Function)	[1]	N	N	N	Y	N
K92	(Drive Mode > Shortcut Function)	[1]	N	N	N	Y	N

Table 5.31 List of data format numbers (S codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
S01	Frequency Reference (p.u.)	[29]	Y	Y	Y	Y	Y
S02	Torque Command	[6]	N	N	N	Y	Y
S03	Torque Current Command	[6]	N	N	N	Y	Y
S05	Frequency Reference	[22]	Y	Y	Y	Y	Y
S06	Operation Command	[14]	Y	Y	Y	Y	Y
S07	Universal DO	[15]	N	Y	Y*1	Y	Y
S08	Acceleration Time F07	[3]	Y	Y	Y	Y	Y
S09	Deceleration Time F08	[3]	Y	Y	Y	Y	Y
S10	Torque Limiter 1 (Drive)	[1]	N	N	Y	N	N
	Torque Limiter 1-1	[6]	N	N	N	Y	Y
S11	Torque Limiter 1 (Brake)	[1]	N	N	Y	N	N
	Torque Limiter 1-2	[6]	N	N	N	Y	Y
S12	Universal Ao	[29]	N	Y	Y	Y	Y
S13	PID Command	[29]	Y	Y	Y	Y	Y
S14	Alarm Reset Command	[1]	Y	Y	Y	Y	Y
S19	Speed Command	[2]	N	N	N	Y	Y

*1 Not applicable with the FRENIC-Multi ROM version 0799 or older.

Table 5.32 List of data format numbers (M codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
M01	Frequency Reference (p.u.) (Final command)	[29]	Y	Y	Y	Y	Y
M02	Torque Command (Final command)	[6]	N	N	N	Y	Y
M03	Torque Current Command (Final command)	[6]	N	N	N	Y	Y
M04	Flux Command	[6]	N	N	N	Y	Y
M05	Frequency Reference (Final command)	[22]	Y	Y	Y	Y	Y
M06	Output Frequency 1(p.u.)	[29]	Y	Y	Y	Y	Y
M07	Torque Value	[6]	N	Y	Y	Y	Y
M08	Torque Current Value	[6]	N	N	N	Y	Y
M09	Output Frequency	[23](FGI)	Y	Y	Y	Y	Y
		[22](RTU)	Y	Y	Y	Y	Y
		[22](BUS) *1	N	Y	Y	Y	Y
M10	Input Power	[5]	Y	Y	Y	Y	Y
M11	Output Current Effective Value	[5]	Y	Y	Y	Y	Y
M12	Output Voltage Effective Value	[3]	Y	Y	Y	Y	Y
M13	Operation Command (Final command)	[14]	Y	Y	Y	Y	Y
M14	Operation Status	[16]	Y	Y	Y	Y	Y
M15	General-purpose Output Terminal Information	[15]	Y	Y	Y	Y	Y
M16	Alarm Contents (Latest)	[10]	Y	Y	Y	Y	Y
M17	(Last)	[10]	Y	Y	Y	Y	Y
M18	(2nd last)	[10]	Y	Y	Y	Y	Y
M19	(3rd last)	[10]	Y	Y	Y	Y	Y
M20	Cumulative Operation Time	[1]	Y	Y	Y	Y	Y
M21	DC link Circuit Voltage	[1]	Y	Y	Y	Y	Y
M22	Motor Temperature	[2]	N	N	N	N	Y
M23	Model Code	[17]	Y	Y	Y	Y	Y
M24	Capacity Code	[11]	Y	Y	Y	Y	Y
M25	ROM Version	[35]	Y	Y	Y	Y	Y
M26	Transmission Error Transaction Code	[20]	Y	Y	Y	Y	Y
M27	Frequency Reference on Alarm (p.u.) (Final Command)	[29]	Y	Y	Y	Y	Y
M28	Torque Command on Alarm (Final Command)	[6]	N	N	N	Y	Y
M29	Torque Current Command on Alarm (Final Command)	[6]	N	N	N	Y	Y
M30	Flux Command on Alarm (Final Command)	[6]	N	N	N	Y	Y
M31	Frequency Reference on Alarm (Final Command)	[22]	Y	Y	Y	Y	Y
M32	Output Frequency 1 on Alarm (p.u.)	[29]	Y	Y	Y	Y	Y
M33	Torque Value on Alarm	[6]	Y	Y	Y	Y	Y
M34	Torque Current Value on Alarm	[6]	N	N	N	Y	Y
M35	Output Frequency on Alarm	[23](FGI)	Y	Y	Y	Y	Y
		[22](RTU)	Y	Y	Y	Y	Y
		[22](BUS) *1	N	Y	Y	Y	Y
M36	Input Power on Alarm	[5]	Y	Y	Y	Y	Y
M37	Output Current Effective Value on Alarm	[5]	Y	Y	Y	Y	Y
M38	Output Voltage Effective Value on Alarm	[3]	Y	Y	Y	Y	Y
M39	Operation Command on Alarm	[14]	Y	Y	Y	Y	Y
M40	Operation Status on Alarm	[16]	Y	Y	Y	Y	Y
M41	Output terminal Information on Alarm	[15]	Y	Y	Y	Y	Y
M42	Cumulative Operation Time on Alarm	[1]	Y	Y	Y	Y	Y
M43	DC Link Circuit Voltage on Alarm	[1]	Y	Y	Y	Y	Y
M44	Inverter Internal Air Temperature on Alarm	[1]	N	Y	N	Y	Y
M45	Heat Sink Temperature on Alarm	[1]	Y	Y	Y	Y	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.32 List of data format numbers (M codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
M46	Life of Main Circuit Capacitor	[3]	Y	Y	Y	Y	Y
M47	Life of PC Board Electrolytic Capacitor	[1]	Y	Y	Y	N	N
		[74]	N	N	N	Y	Y
M48	Life of Cooling Fan	[1]	Y	Y	Y	N	N
		[74]	N	N	N	Y	Y
M49	Input Terminal Voltage[12] (p.u.)	[29]	Y	Y	Y	Y	Y
M50	Input Terminal Current[C1] (p.u.)	[29]	Y	Y	Y	Y	Y
M52	Input Terminal Voltage[32] (p.u.)	[29]	N	N	N	Y	Y
M53	Input Terminal Voltage[C2] (p.u.)	[29]	N	N	N	Y	Y
M54	Input Terminal Voltage[V2] (p.u.)	[29]	N	Y	Y	Y	Y
M61	Inverter Internal Air Temperature	[1]	N	Y	N	Y	Y
M62	Heat Sink Temperature	[1]	Y	Y	Y	Y	Y
M63	Load Factor	[6]	N	Y	Y	Y	Y
M64	Motor Output	[6]	N	Y	Y	Y	Y
M65	Motor Output on Alarm	[29]	N	Y	Y	Y	Y
M66	Speed Detection	[29]	N	N	N	Y	Y
M67	Transmission Error Transaction Code (RS-485 port2)	[20]	N	N	N	Y	Y
M68	PID Final Command	[29]	Y	Y	Y	Y	Y
M69	Inverter Rated Current	[24](FGI)	Y	Y	Y	Y	Y
		[19](RTU)	Y	Y	Y	Y	Y
		[24](BUS) *1	N	Y	Y	Y	Y
M70	Operation Status 2	[44]	Y	Y	Y	Y	Y
M71	Input Terminal Information	[14]	Y	Y	Y	Y	Y
M72	PID Feedback Value	[29]	Y	Y	Y	Y	Y
M73	PID Output	[29]	Y	Y	Y	Y	Y
M74	Running Status 2	[76]	Y	N	N	Y	Y
M76	Service Life of DC Link Bus Capacitor (Elapsed time)	[74]	N	N	N	Y	Y
M77	(Remaining time)	[74]	N	N	N	Y	Y
M78	Rotation Speed Command	[2]	N	N	N	Y	Y
M79	Rotation Cpeed	[2]	N	N	N	Y	Y
M81	Remaining Time Before The Next Motor 1 Maintenance	[74]	Y	N	N	Y	Y
M85	Remaining Startup Times Before The Next Maintenance	[1]	Y	N	N	Y	Y
M86	Light Alarm Contents (Latest)	[10]	N	N	N	N	Y
		[41]	N	N	N	Y	N
M87	(Last)	[10]	N	N	N	N	Y
		[41]	N	N	N	Y	N
M88	(2nd last)	[10]	N	N	N	N	Y
		[41]	N	N	N	Y	N
M89	(3rd last)	[10]	N	N	N	N	Y
		[41]	N	N	N	Y	N

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.33 List of data format numbers (W codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
W01	Running Status	[16]	Y	Y	Y	Y	Y
W02	Frequency Reference	[22]	Y	Y	Y	Y	Y
W03	Output Frequency (Before slip compensation)	[22]	Y	Y	Y	Y	Y
W04	Output Frequency (After slip compensation)	[22]	Y	N	Y	Y	Y
W05	Output Current	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24](BUS) *1	N	Y	Y	Y	Y
W06	Output Voltage	[3]	Y	Y	Y	Y	Y
W07	Torque	[2]	N	Y	Y	Y	Y
W08	Motor Speed	[37]	N	Y	Y	Y	Y
W09	Load Shaft Speed	[37]	Y	Y	Y	Y	Y
W10	Line Speed	[37]	Y	N	Y	Y	Y
W11	PID Process Command	[12]	Y	Y	Y	Y	Y
W12	PID Feedback Value	[12]	Y	Y	Y	Y	Y
W13	Level of Torque Value A	[1]	N	N	Y	N	N
		[2]	N	N	N	Y	Y
W14	Level of Torque Value B	[1]	N	N	Y	N	N
		[2]	N	N	N	Y	Y
W15	Ratio Value	[5]	N	N	N	Y	Y
W16	Motor Speed Set Value	[37]	N	Y	Y	Y	Y
W17	Load Shaft Set Value	[37]	Y	Y	Y	Y	Y
W18	Line Speed Set Value	[37]	Y	N	Y	Y	Y
W19	Constant Feed Time Set Value	[37]	Y	N	Y	Y	N
W20	Constant Feed Time	[37]	Y	N	Y	Y	N
W21	Input Power	[24]	Y	Y	Y	Y	Y
W22	Motor Output	[24]	N	Y	Y	Y	Y
W23	Load Rate	[2]	N	Y	Y	Y	Y
W24	Torque Current	[2]	N	N	N	Y	Y
W26	Flux Command Value	[2]	N	N	N	Y	Y
W27	Timer Operation Remaining Time	[1]	Y	N	Y	Y	N
W28	Operation Command Source	[67]	Y	Y	Y	Y	Y
W29	Frequency and PID Command Source	[68]	Y	Y	Y	Y	Y
W30	Speed at Percentage	[5]	N	Y	Y	Y	Y
W31	Speed Set Value at Percentage	[5]	N	Y	Y	Y	Y
W32	PID Output	[4]	Y	Y	Y	Y	Y
W33	Analog Input Monitor	[12]	N	Y	N	Y	Y
W35	Terminal [32] Input Voltage	[4]	N	N	N	Y	Y
W36	Terminal [C2] Input Current	[3]	N	N	N	N	Y
		[4]	N	N	N	Y	N
W37	Terminal [AO] Output Voltage	[4]	N	N	N	Y	Y
W38	Terminal [CS] Output Current	[3]	N	N	N	Y	Y
W39	Terminal [X7] Pulse Input Monitor	[6]	N	N	N	Y	Y
W40	Control Circuit Terminal (Input)	[43]	Y	Y	Y	Y	Y
W41	(Output)	[15]	Y	Y	Y	Y	Y
W42	Communications Control Signal (Input)	[14]	Y	Y	Y	Y	Y
W43	(Output)	[15]	Y	Y	Y	Y	Y
W44	Terminal [12] Input Voltage	[4]	Y	Y	Y	Y	Y
W45	Terminal [C1] Input Current	[3]	N	Y	Y	N	N
		[4]	Y	N	N	Y	Y
W46	Terminal [FMA*3] Output Voltage	[3]	Y	Y	Y	Y	Y
W47	Terminal [FMP*3] Output Voltage	[3]	N	Y	N	Y	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.
*3 As for FRN□□G1□-□A, E and U the terminal name changes from FMA to FM1and FMP to FM2 respectively.

Table 5.33 List of data format numbers (W codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
W48*4	Terminal [FMP] Output Frequency	[1]	N	Y	Y	Y	Y
W49	Terminal [V2] Input Voltage	[4]	N	Y	Y	Y	Y
W50	Terminal [FMA*3] Output Current	[3]	N	Y	N	Y	Y
W51	Situation of Input Terminals on DIO Option	[1]	N	N	Y	N	N
		[77]	N	N	N	Y	Y
W52	Situation of Output Terminals on DIO Option	[1]	N	N	Y	N	N
		[78]	N	N	N	Y	Y
W53	Pulse Input (Master - side A/B phase)	[6]	N	N	Y	Y	Y
W54	(Master - side Z phase)	[1]	N	N	Y	Y	Y
W55	(Slave - side A/B phase)	[6]	N	N	Y	Y	Y
W56	(Slave - side Z phase)	[1]	N	N	Y	Y	Y
W57	Current Position Pulse (Upper column)	[73]	N	N	Y	Y	Y
W58	(Lower column)	[1]	N	N	Y	Y	Y
W59	Stop Position Pulse (Upper column)	[73]	N	N	Y	Y	Y
W60	(Lower column)	[1]	N	N	Y	Y	Y
W61	Difference Pulse of Position (Upper column)	[73]	N	N	Y	Y	Y
W62	(Lower column)	[1]	N	N	Y	Y	Y
W63	Positioning Status	[1]	N	N	Y	Y	Y
W64	Difference Pulse of Servo Lock Control	[2]	N	N	N	N	Y
W65	Terminal [FMI] Output Current	[3]	N	Y*2	N	N	N
	Terminal [FM2] Output Current	[3]	N	N	N	Y*4	N
	Terminal [FMA2] Output Current	[3]	N	N	N	N	Y*4
W66	Difference Pulse of Synchronous Operation	[4]	N	N	N	Y	Y
W67	Cumulative Run Time of Capacitors on Printed Circuit Boards	[74]	Y	Y	Y	Y	Y
W68	Cumulative Run Time of Cooling Fan	[74]	Y	Y	Y	Y	Y
W69	Surface Speed Monitor	[37]	N	N	N	N	Y
W70	Cumulative Operation Time	[1]	Y	Y	Y	Y	Y
W71	DC link Circuit Voltage	[1]	Y	Y	Y	Y	Y
W72	Internal Air Highest Temperature	[1]	N	Y	N	Y	Y
W73	Heat Sink Maximum Temperature	[1]	Y	Y	Y	Y	Y
W74	Maximum Effective Current Value	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
W75	Main Circuit Capacitor's Capacitor	[3]	Y	Y	Y	Y	Y
W76	Cumulative Ope. Time of Capacitor on PC Board	[1]	Y	Y	Y	Y	N
W77	Cumulative Ope. Time of Cooling Fan	[1]	Y	Y	Y	Y	N
W78	Number of Startups	[1]	Y	Y	Y	Y	Y
W79	Cumulative Ope. Time of Motor Driving	[1]	Y	Y	Y	N	N
W80	Standard Fan Life	[1]	N	Y	N	N	N
W81	Integrating Electric Power	[45]	Y	Y	Y	N	Y
		[93]	N	N	N	Y	N
W82	Data Used Integrating Electric Power	[45]	Y	Y	Y	Y	Y
W83	Number of RS-485 Ch1 Errors	[1]	Y	Y	Y	Y	Y
W84	Contents of RS-485 Ch1 Error	[20]	Y	Y	Y	Y	Y
W85	Number of RS-485 Ch2 Errors	[1]	N	Y	Y	Y	Y
W86	Number of Option Errors 2	[1]	N	N	N	N	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.
*2 Applicable only with FRN□□F1□-□A, E and U
*3 As for FRN□□G1□-□A, E and U the terminal name changes from FMA to FM1and FMP to FM2 respectively.
*4 Not applicable with FRN□□G1□-□A, E and U.

Table 5.33 List of data format numbers (W codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
W87	Inverter's ROM Version	[35]	Y	Y	Y	Y	Y
W88	Inverter`s ROM Version (CPU2)	[35]	N	N	N	Y	N
W89	Remote Keypad's ROM Version	[35]	Y	Y	Y	Y	Y
W90	Option 1 ROM Version	[35]	N	Y	Y	Y	Y
W91	Option 2 ROM Version	[35]	N	N	N	N	Y
W92	Option 3 ROM Version	[35]	N	N	N	N	Y
W94	Contents of RS-485 Ch2 Error	[20]	N	Y	Y	Y	Y
W95	Number of Option Errors 1	[1]	N	Y	Y	Y	Y
W96	Option Error Factor 1	[1]	N	Y	Y	Y	Y
W97	Option Error Factor 2	[1]	N	N	N	N	Y
W98	Number of Option Errors 3	[1]	N	N	N	N	Y
W99	Option Error Factor 3	[1]	N	N	N	N	Y

Table 5.34 List of data format numbers (X codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
X00	Alarm History / The No. of The Serial Occurrences of an Identical Alarm (Latest)	[41]	Y	Y	Y	Y	Y
X01	Multiple Alarm1 (Latest)	[40]	Y	Y	Y	Y	Y
X02	Multiple Alarm2 (Latest)	[40]	Y	Y	Y	Y	Y
X03	Sub Code (Latest)	[1]	Y	Y	Y	Y	Y
X04	Multiple Alarm Sub Code (Latest)	[1]	N	N	N	Y	N
X05	Alarm History / The No. of The Serial Occurrences of an Identical Alarm (Last)	[41]	Y	Y	Y	Y	Y
X06	Multiple Alarm1 (Last)	[40]	Y	Y	Y	Y	Y
X07	Multiple Alarm2 (Last)	[40]	Y	Y	Y	Y	Y
X08	Sub Code (Last)	[1]	Y	Y	Y	Y	Y
X09	Multiple Alarm Sub Code (Last)	[1]	N	N	N	Y	N
X10	Alarm History / The No. of The Serial Occurrences of an Identical Alarm (2nd last)	[41]	Y	Y	Y	Y	Y
X11	Multiple Alarm1 (2nd last)	[40]	Y	Y	Y	Y	Y
X12	Multiple Alarm2 (2nd last)	[40]	Y	Y	Y	Y	Y
X13	Sub Code (2nd last)	[1]	Y	Y	Y	Y	Y
X14	Multiple Alarm Sub Code (2nd last)	[1]	N	N	N	Y	N
X15	Alarm History / The No. of The Serial Occurrences of an Identical Alarm (3rd last)	[41]	Y	Y	Y	Y	Y
X16	Multiple Alarm1 (3rd last)	[40]	Y	Y	Y	Y	Y
X17	Multiple Alarm2 (3rd last)	[40]	Y	Y	Y	Y	Y
X18	Sub Code (3rd last)	[1]	Y	Y	Y	Y	Y
X19	Multiple Alarm Sub Code (3rd last)	[1]	N	N	N	Y	N
X20	Latest Info. on Alarm (Output frequency)	[22]	Y	Y	Y	Y	Y
X21	(Output current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
X22	(Output voltage)	[1]	Y	Y	Y	Y	Y
X23	(Torque)	[2]	Y	Y	Y	Y	Y
X24	(Set frequency)	[22]	Y	Y	Y	Y	Y
X25	(Running status)	[16]	Y	Y	Y	Y	Y
X26	(Cumulative ope. time)	[1]	Y	Y	Y	Y	Y
X27	(Number of startups)	[1]	Y	Y	Y	Y	Y
X28	(DC link circuit voltage)	[1]	Y	Y	Y	Y	Y
X29	(Internal air temperature)	[1]	N	Y	N	Y	Y
X30	(Heat sink temperature)	[1]	Y	Y	Y	Y	Y
X31	(Input terminal)	[43]	Y	Y	Y	Y	Y
X32	(Output terminal)	[15]	Y	Y	Y	Y	Y
X33	(Input terminal(com.))	[14]	Y	Y	Y	Y	Y
X34	(Output terminal(com.))	[15]	Y	Y	Y	Y	Y
X35	(Input power)	[24]	Y	Y	Y	Y	Y
X36	(Running status 2)	[76]	Y	N	N	Y	Y
X37	(Speed detection)	[29]	N	N	N	Y	Y
X38	(Operation status 3)	[44]	Y	N	N	Y	N

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.34 List of data format numbers (X codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
X60	Last Info. on Alarm (Output frequency)	[22]	Y	Y	Y	Y	Y
X61	(Output current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
X62	(Output voltage)	[1]	Y	Y	Y	Y	Y
X63	(Torque)	[2]	Y	Y	Y	Y	Y
X64	(Set frequency)	[22]	Y	Y	Y	Y	Y
X65	(Running status)	[16]	Y	Y	Y	Y	Y
X66	(Cumulative ope. time)	[1]	Y	Y	Y	Y	Y
X67	(Number of startups)	[1]	Y	Y	Y	Y	Y
X68	(DC link circuit voltage)	[1]	Y	Y	Y	Y	Y
X69	(Internal air temperature)	[1]	N	Y	N	Y	Y
X70	(Heat sink temperature)	[1]	Y	Y	Y	Y	Y
X71	(Input terminal)	[43]	Y	Y	Y	Y	Y
X72	(Output terminal)	[15]	Y	Y	Y	Y	Y
X73	(Input terminal(com.))	[14]	Y	Y	Y	Y	Y
X74	(Output terminal(com.))	[15]	Y	Y	Y	Y	Y
X76	(Running status 2)	[76]	Y	N	N	Y	Y
X77	(Speed detection)	[29]	N	N	N	Y	Y
X78	(Running status 3)	[44]	Y	N	N	Y	N
X89	Customizable Logic (Digital input-output)	[95]	N	N	N	Y	N
X90	(Timer monitor)	[5]	N	N	N	Y	Y
X91	(Analog input 1)	[12]	N	N	N	Y	N
X92	(Analog input 2)	[12]	N	N	N	Y	N
X93	(Analog output)	[12]	N	N	N	Y	N
X94	Relay Out Put Data	[91]	N	N	N	Y	N
X97	Terminal [PTC] Input Voltage	[4]	N	N	N	Y	N

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

Table 5.35 List of data format numbers (Z codes)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
Z00	Info. on Alarm (2nd last) (Output frequency)	[22]	Y	Y	Y	Y	Y
Z01	(Output current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
Z02	(Output voltage)	[1]	Y	Y	Y	Y	Y
Z03	(Torque)	[2]	Y	Y	Y	Y	Y
Z04	(Set frequency)	[22]	Y	Y	Y	Y	Y
Z05	(Running status)	[16]	Y	Y	Y	Y	Y
Z06	(Cumulative ope. time)	[1]	Y	Y	Y	Y	Y
Z07	(Number of startups)	[1]	Y	Y	Y	Y	Y
Z08	(DC link circuit voltage)	[1]	Y	Y	Y	Y	Y
Z09	(Internal air temperature)	[1]	N	Y	N	Y	Y
Z10	(Heat sink temperature)	[1]	Y	Y	Y	Y	Y
Z11	(Input terminal)	[43]	Y	Y	Y	Y	Y
Z12	(Output terminal)	[15]	Y	Y	Y	Y	Y
Z13	(Input terminal(com.))	[14]	Y	Y	Y	Y	Y
Z14	(Output terminal(com.))	[15]	Y	Y	Y	Y	Y
Z16	(Running status 2)	[76]	Y	N	N	Y	Y
Z17	(Speed detection)	[29]	N	N	N	Y	Y
Z18	(Running status 3)	[44]	Y	N	N	Y	N
Z40	Cumulative Run Time of Motor 1	[74]	Y	N	N	Y	Y
Z41	2	[74]	Y	N	N	Y	Y
Z42	3	[74]	N	N	N	N	Y
Z43	4	[74]	N	N	N	N	Y
Z44	Number of Startups 2	[1]	Y	N	N	Y	Y
Z45	3	[1]	N	N	N	N	Y
Z46	4	[1]	N	N	N	N	Y
Z48	Retry History (Latest)	[41]	N	N	N	Y	N
Z49	Retry History (Last)	[41]	N	N	N	Y	N
Z50	Info. on Alarm (3rd last) (Output frequency)	[22]	Y	Y	Y	Y	Y
Z51	(Output current)	[24] (FGI)	Y	Y	Y	Y	Y
		[19] (RTU)	Y	Y	Y	Y	Y
		[24] (BUS) *1	N	Y	Y	Y	Y
Z52	(Output voltage)	[1]	Y	Y	Y	Y	Y
Z53	(Torque)	[2]	Y	Y	Y	Y	Y
Z54	(Set frequency)	[22]	Y	Y	Y	Y	Y
Z55	(Running status)	[16]	Y	Y	Y	Y	Y
Z56	(Cumulative ope. time)	[1]	Y	Y	Y	Y	Y
Z57	(Number of startups)	[1]	Y	Y	Y	Y	Y
Z58	(DC link circuit voltage)	[1]	Y	Y	Y	Y	Y
Z59	(Internal air temperature)	[1]	N	Y	N	Y	Y
Z60	(Heat sink temperature)	[1]	Y	Y	Y	Y	Y
Z61	(Input terminal)	[43]	Y	Y	Y	Y	Y
Z62	(Output terminal)	[15]	Y	Y	Y	Y	Y
Z63	(Input terminal(com.))	[14]	Y	Y	Y	Y	Y
Z64	(Output terminal(com.))	[15]	Y	Y	Y	Y	Y
Z66	(Running status 2)	[76]	Y	N	N	Y	Y
Z67	(Speed detection)	[29]	N	N	N	Y	Y
Z68	(Running status 3)	[44]	Y	N	N	Y	N

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

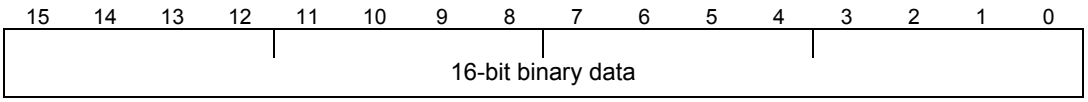
Table 5.35 List of data format numbers (Z codes) (Continued)

Code	Name	Format number	Support				
			Mini	Eco	Multi	Ace	MEGA
Z78	Reserved	[2]	N	N	N	Y	N
Z79		[2]	N	N	N	Y	N
Z80	Speed Detection	[2]	N	N	N	Y	Y
Z81	Torque Real Value	[6]	N	N	N	Y	Y
Z82	Load Factor	[6]	N	N	N	Y	Y
Z83	Motor Output	[6]	N	N	N	Y	Y
Z84	Output Current	[24] (FGI)	Y	N	N	Y	Y
		[19] (RTU)	Y	N	N	Y	Y
		[24] (BUS)*1	N	N	N	Y	Y
Z85	PID Feedback Value	[12]	Y	N	N	Y	Y
Z86	Input Power	[24]	Y	N	N	Y	Y
Z87	PID Output	[4]	Y	N	N	Y	Y
Z88	Integrating Electric Power	[45]	Y	N	N	N	Y
		[93]	N	N	N	Y	N
Z89	Control Circuit Terminal (Input,EN2-terminal)	[43]	N	N	N	N	Y
Z90	Current Position Pulse (Upper column)	[73]	N	N	N	Y	Y
Z91	(Lower column)	[1]	N	N	N	Y	Y
Z92	Stop Position Pulse (Upper column)	[73]	N	N	N	Y	Y
Z93	(Lower column)	[1]	N	N	N	Y	Y
Z94	Difference Pulse of Position (Upper column)	[73]	N	N	N	Y	Y
Z95	(Lower column)	[1]	N	N	N	Y	Y

*1 BUS: The field bus option format is selected. For details about the field bus option, see the instruction manual for each field bus option.

5.2.2 Data format specifications

The data in the data fields of a communications frame are 16 bits long, binary data, as shown below.



For the convenience of description, 16-bit data is expressed in hexadecimal with one upper-order byte (eight bits from 15 to 8) and one lower-order byte (eight bits from 7 to 0).

For example, the following data is 1234H in hexadecimal and expressed as | 12_H | 34_H | .

0	0	0	1	0	0	1	0	0	0	1	1	0	1	0	0

Data format [1] Integer data (positive): Minimum step 1

(Example) When F05 (base) frequency voltage = 200V

200 = $00C8_H$ Consequently ⇒ | 00_H | $C8_H$ |

Data format [2] Integer data (positive/negative): Minimum step 1

(Example) When the value is -20

-20 = $FFEC_H$ Consequently, ⇒ | FF_H | EC_H |

Data format [3] Decimal data (positive): Minimum step 0.1

(Example) When F17 (gain frequency set signal) = 100.0%

100.0 x 10 = 1000 = $03E8_H$ Consequently, ⇒ | 03_H | $E8_H$ |

Data format [4] Decimal data (positive/negative): Minimum step 0.1

(Example) When C31 (analog input offset adjustment) = -5.0%

-5.0 x 10 = -50 = $FFCE_H$ Consequently, ⇒ | FF_H | CE_H |

Data format [5] Decimal data (positive): Minimum step 0.01

(Example) C05 (multistep frequency) = 50.25Hz （Mini,Eco,Multi）

50.25 x 100 =5025 =$13A1_H$ Consequently, ⇒ | 13_H | $A1_H$ |

Data format [6] Decimal data (positive/negative): Minimum step 0.01

(Example) When M07 (actual torque value) = -85.38%

-85.38 x 100 =-8538 = $DEA6_H$ Consequently, ⇒ | DE_H | $A6_H$ |

Data format [7] Decimal data (positive): Minimum step 0.001

(Example) When F51(electronic thermal (permissible loss)) = 0.105kW

$0.105 \times 1000 = 105 = 0069_H$ Consequently, ⇒

00_H	69_H

Data format [8] Decimal data (positive/negative): Minimum step 0.001

(Example) When the data is -1.234

$-1.234 \times 1000 = -1234 = FB2E_H$ Consequently, ⇒

FB_H	$2E_H$

Data format [10] Alarm codes

Table 5.36 List of alarm codes

Code	Description	LED
0	No alarm	---
1	Overcurrent (during acceleration)	OC 1
2	Overcurrent (during deceleration)	OC2
3	Overcurrent (during constant speed operation)	OC3
5	Ground fault	EF
6	Overvoltage (during acceleration)	OU 1
7	Overvoltage (during deceleration)	OU2
8	Overvoltage (during constant speed operation or stopping)	OU3
10	Under voltage	LU
11	Input phase loss	L in
14	Fuse blown	FUS
16	Charging circuit fault	PbF
17	Heat sink overheat	OH 1
18	External alarm	OH2
19	Internal air overheat	OH3
20	Motor protection (PTC/NTC thermistor)	OH4
22	Braking resistor overheat	dbH
23	Motor overload	OL 1
24	Motor overload: motor 2	OL2
25	Inverter overload	OLU
27	Over speed protection	OS
28	PG disconnection	PG
29	NTC disconnection error	nr-b
31	Memory error	Er 1
32	Keypad communications error	Er2
33	CPU error	Er3
34	Option communications error	Er4
35	Option error	Er5
36	Run operation error	Er6
37	Tuning error	Er 7
38	RS-485 communications error (communications port1)	Er8
42	Step-out detection	Erd
43	Motor selecting error	ErL
44	Motor overload: motor 3	OL3
45	Motor overload: motor 4	OL4
46	Output phase loss	OPL
47	Following error, excessive speed deviation	ErE
50	Position of magnetic pole error	ErC
51	Data save error on insufficient voltage	ErF
53	RS-485 communications error (Option/Communications port 2)	ErP
54	Hardware error	ErH
55	CAN communications failure	Erb
56	Positioning control error	Ero
57	EN circuit error	ECF

Table 5.36 List of alarm codes (Continued)

Code	Description	LED
58	PID feedback disconnection detected	CoF
59	DB transistor trouble	dbA
65	Customizable logic failure	ECL
66	PID control 1 feedback error detection	PU1
67	PID control 2 feedback error detection	PU2
68	USB port transmittion error	Er-U
70	Charging resistor overheat	OH6
81	Drought protection	Pdr
82	Control of maximum starts per hour	rnC
83	End of curve protection	PnL
84	Anti jam	rLo
85	Filter clogging error	FnL
91	External PID control 1 feedback error detection	PUA
92	External PID control 2 feedback error detection	PUb
93	External PID control 3 feedback error detection	PUC
100	DC fan lock detected	FAL
101	Motor overload warning	OL
102	Cooling fin overheat warning	OH
103	Life warning	L iF
104	Command loss	rEF
105	PID warning output	P id
106	Low torque detected	UtL
107	Thermistor detected (PTC)	PtC
108	Machine life (accumulated operation hours)	rtE
109	Machine life (No. of starting times)	Cnt
166	PID control 1 warning output	PA1
167	PID control 2 warning output	PA2
190	Mutual operation slave inverter alarm	SLA
191	External PID control 1 warning output	PAA
192	External PID control 2 warning output	PAb
193	External PID control 3 warning output	PAC
252	Forced operation	Fod
253	Password protection	LoC
254	Simulated error	Err

(Example) In the case of overvoltage (during acceleration) (OU1)

$6 = 0006_H$ Consequently, ⇒

00_H	06_H

Data format [11] Capacity code (unit: kW)

As shown in the table below, the capacity (kW) is multiplied by 100.

Table 5.37 Capacities and data

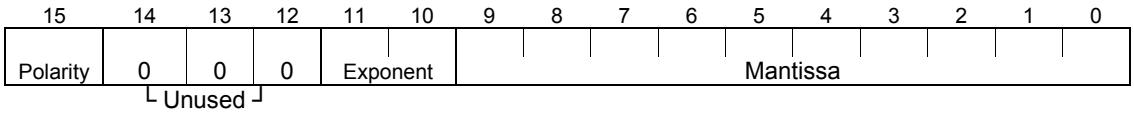
Capacity (kW)	Data	Capacity (kW)	Data	Capacity (kW)	Data
0.06	6	22	2200	280	28000
0.1	10	30	3000	315	31500
0.2	20	37	3700	355	35500
0.4	40	45	4500	400	40000
0.75	75	55	5500	450	45000
1.5	150	75	7500	500	50000
2.2	220	90	9000	550	55000
3.7	370	110	11000	600	60000
5.5	550	132	13200	650	60650
7.5	750	160	16000	700	60700
11	1100	200	20000	750	60750
15	1500	220	22000	800	60800
18.5	1850	250	25000	1000	61000

(Example) When the capacity is 2.2 kW

2.20 x 100 = 220 = $00DC_H$ Consequently, ⇒

00_H	DC_H

Data format [12] Floating point data (accel./decal. time, PID display coefficient)



Polarity: 0 → Positive (+), 1 → Negative (-) Exponent: 0 to 3 Mantissa: 1 to 999

Value expressed in this form = (polarity) Mantissa x (Exponent - 2) power of 10

Value	Mantissa	Exponent	(Exponent - 2) power of 10
0.01 to 9.99	1 to 999	0	0.01
10.0 to 99.9	100 to 999	1	0.1
100 to 999	100 to 999	2	1
1000 to 9990	100 to 999	3	10

(Example) When F07 (acceleration time 1) = 20.0 seconds

20.0 = 200 x 0.1 => 0000 0100 1100 1000_b = $04C8_H$ ⇒ Consequently,

04_H	$C8_H$

Data format [14] Operation command

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
RST	XR (REV)	XF (FWD)	0	EN	X9	X8	X7	X6	X5	X4	X3	X2	X1	REV	FWD
↑	General-purpose input		Unused	EN terminal	General-purpose input									FWD: Forward command	
Alarm reset														REV: Reverse command	

(All bits are turned ON when set to 1.)

(Example) When S06 (operation command) = FWD, X1 = ON

$0000\ 0000\ 0000\ 0101_b = 0005_H$ Consequently, ⇒

00_H	05_H

Data format [15] General-purpose output terminal

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	Y3A	Y2A	Y1A	0	0	0	30	0	0	0	Y5	Y4	Y3	Y2	Y1
Unused	Relay option output (Eco only)			Unused			↑	Unused			General-purpose output				
							Alarm (general-purpose output)								

(All bits are turned ON when set to 1.)

(Example) When M15 (general-purpose output terminal) = Y1 = ON

$0000\ 0000\ 0000\ 0001_b = 0001_H$ Consequently, ⇒

00_H	01_H

Data format [16] Operation status

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BUSY	0	0	RL	ALM	DEC	ACC	IL	VL	0	NUV	BRK	INT	EXT	REV	FWD

(All bits are turned ON or become active when set to 1.)

Bit	Symbol	Description	Support					Bit	Symbol	Description	Support				
			Mini	Eco	Multi	Ace	MEGA				Mini	Eco	Multi	Ace	MEGA
0	FWD	During forward rotation	Y	Y	Y	Y	Y	8	IL	During current limiting	Y	Y	Y	Y	Y
1	REV	During reverse rotation	Y	Y	Y	Y	Y	9	ACC	During acceleration	Y	Y	Y	Y	Y
2	EXT	During DC braking (or during pre-exciting)	Y	Y	Y	Y	Y	10	DEC	During deceleration	Y	Y	Y	Y	Y
3	INT	Inverter shut down	Y	Y	Y	Y	Y	11	ALM	Alarm relay (for any fault)	Y	Y	Y	Y	Y
4	BRK	During braking (fixed to 0 for FRENIC-Mini)	N	Y	Y	Y	Y	12	RL	Communications effective	Y	Y	Y	Y	Y
5	NUV	DC link circuit voltage established (0 = undervoltage)	Y	Y	Y	Y	Y	13	0	–	N	N	N	N	N
6	TL	During torque limiting	N	N	Y	Y	Y	14	0	–	N	N	N	N	N
7	VL	During voltage limiting	Y	Y	Y	Y	Y	15	BUSY	During function code data writing	Y	Y	Y	Y	Y

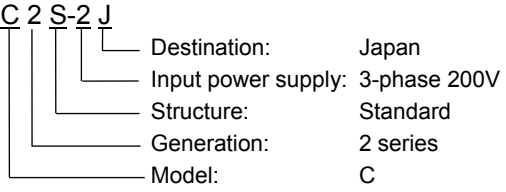
Data format [17] Model code

15 14 13 12	11 10 9 8	7 6 5 4	3 2 1 0
Model	Generation	Destination	Input power supply

Table 5.38 List of model codes

Code	1	2	3	4	5	6	7	8	9	A	B	C	D	E
Model	VG	G	P AR	E	C	S	DPS GX	DGS AQ	H (1667Hz)	H (3000Hz)	F	RHC	RHR	Lift
Generation	11 series	7 series	1 series RHR A series RHC C series	Eco PLUS series	2 series									
Destination	Japan (standard)	Asia	China	Europe	USA	Taiwan								
Input power supply	Single-phase 100V	Single-phase 200V	Three-phase 200V	Three-phase 400V	Three-phase 575V									

(Example) When the inverter type is FRN1.5C 2 S-2 J



Since "model ":C is represented by code 5, "generation": 2 series by code 5, "destination": Japan (standard) by 1, and "input power supply": 3-phase 200V by 3, the model code is 5513_H.

Data format [19] Current value

Current values are decimal data (positive). The minimum step is 0.01 for an inverter capacity of 22kW (30HP) or less and 0.1 for an inverter capacity of 30kW (40HP) or more.

When inverter capacity is 22kW (30HP) or less, any data higher than 655A cannot be written. No correct value can be read out when a direction for write data higher than 655A is issued.

Current data is rounded down on and after the fifth digit inside the inverter. (Ex.: When a writing direction of 107.54A is issued to an inverter with a capacity of 22kW (30HP), 107.5A is written.)

(Ex.) When F11 (electronic thermal operation level) = 107.0A (40HP)

$107.0 \times 10 = 1070 = 042E_H$, consequently ⇒

04_H	$2E_H$

(Ex.) When F11 (electronic thermal operation level) = 3.60A (1HP)

$3.60 \times 10 = 360 = 0168_H$, consequently ⇒

01_H	68_H

Data format [20] Communications error

Table 5.39 Communications error codes (common to both protocols)

Code	Description	Code	Description
71	Checksum error, CRC error ⇒ No response	73	Framing error, overrun error, buffer full ⇒ No response
72	Parity error ⇒ No response		

Table 5.40 Communications error codes (for Fuji general-purpose inverter protocol)

Code	Description	Code	Description
74	Format error	78	Function code error
75	Command error	79	Write disabled
76	Link priority error	80	Data error
77	Function code data write right error	81	Error during writing

Table 5.41 Communications error codes (for RTU protocol)

Code	Description	Code	Description
1	Improper 'FC'	3	Improper data (range error)
2	Improper address (function code error)	7	NAK (link priority, no right, write disabled)

(Example) In case of an improper address

$2 = 0002_H$ Consequently, ⇒

00_H	02_H

Data format [21] Auto tuning

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	0	0	0	REV	FWD	Data part							
Not used															

When FWD is 1, this data is the forward rotation command. When REV is 1, this data is the reverse rotation command. However, if both FWD and REV are 1, the command is not effective. Both FWD and REV are 0 for reading.

(Ex.) When P04 (motor 1 automatic tuning) = 1 (forward rotation),

$0000\ 0001\ 0000\ 0001_b = 0101_H$ Consequently, ⇒

01_H	01_H

Data format [22] Frequency data

Decimal data (positive): Resolution 0.01Hz

(Ex.) When C05 (multistep frequency 1) = 50.25Hz (MEGA)

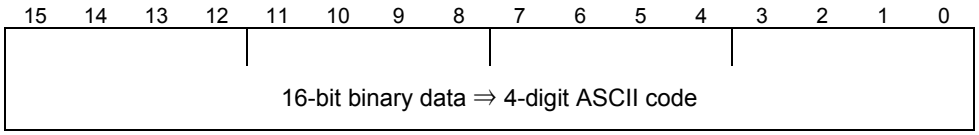
$50.25 \times 100 = 5025 = 13A1_H$, consequently ⇒

13_H	$A1_H$

Data format [23] Polarity + decimal data (positive)

(for Fuji general-purpose inverter protocol)

Decimal data (positive): Resolution 0.01Hz



For reverse rotation, add a negative sign (-) (ASCII) to the special additional data in the standard frame, or for forward rotation, enter a space (ASCII).

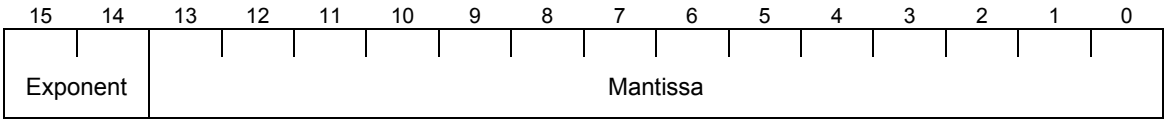
(Example) When maximum frequency = 60Hz and M09 (output frequency) = 60.00Hz (forward rotation)

60.00 x 100 = 6000 = 1770_H Consequently, ⇒

	1	7	7	0

(Positive data is in the same data format as data format [5].)

Data format [24] Floating point data



Exponent: 0-3 Mantissa: 1 to 9999

The value expressed by this format = the mantissa × $10^{(exponent-2)}$

Numeric value	Mantissa	Exponent	$10^{(exponent-2)}$
0.00 to 99.99	0 to 9999	0	0.01
100.0 to 999.9	1000 to 9999	1	0.1
1000 to 9999	1000 to 9999	2	1
10000 to 99990	1000 to 9999	3	10

Data format [25] Capacity code (for HP)

As shown in the table below, the capacity (HP) is multiplied by 100.

Table 5.42 Capacities and data (for HP)

Code	Capacity (HP)	Code	Capacity (HP)	Code	Capacity (HP)
7	0.07 (reserved)	3000	30	40000	400
15	0.15 (reserved)	4000	40	45000	450
25	0.25	5000	50	50000	500
50	0.5	6000	60	60000	600
100	1	7500	75	60700	700
200	2	10000	100	60750	750
300	3	12500	125	60800	800
500	5	15000	150	60850	850
750	7.5	17500	175	60900	900
1000	10	20000	200	60950	950
1500	15	25000	250	61000	1000
2000	20	30000	300	61050	1050
2500	25	35000	350		

(Example) When the capacity is 3HP

3 x 100 = 300 = $012C_H$ Consequently, ⇒

01_H	$2C_H$

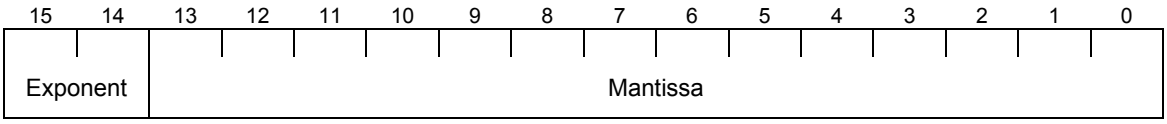
Data format [29] Positive/Negative data of values converted into standard (p.u.) with 20,000

(Example) Speed (frequency) Data of ±20,000/±maximum speed (frequency)

Data format [35] ROM version

Range: 0 to 9999

Data format [37] Floating point data (load rotation speed, etc.)



Exponent: 0-3 Mantissa: 1 to 9999

The value expressed by this format = the mantissa × $10^{(exponent-2)}$

Numeric value	Mantissa	Exponent	$10^{(exponent-2)}$
0.01 to 99.99	1 to 9999	0	0.01
100.0 to 999.9	1000 to 9999	1	0.1
1000 to 9999	1000 to 9999	2	1
10000 to 99990	1000 to 9999	3	10

Data format [40] Alarm factor

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Alarm caused by multiple factors (1 to 5)				Order of alarm occurrences (1 to 5)				Alarm code (See Table 5.36.)							

Data format [41] Alarm history

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Number of serial occurrences of same alarm								Alarm code (See Table 5.36.)							

Indicates the content of an alarm that has occurred and the number of serial occurrence times of the alarm.

Data format [43] Operation command (for I/O check)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	EN2	EN1	X9	X8	X7	X6	X5	X4	X3	X2	X1	REV	FWD
Unused			EN input		General-purpose input										

(All bits are turned ON when set to 1.)

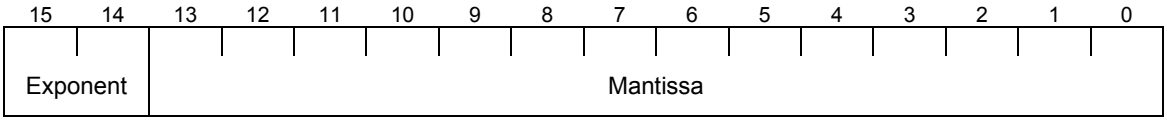
Data format [44] Operation status 2

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	ID2	IDL	ID	OLP	LIFE	OH	TRY	FAN	KP	OL	IPF	SWM2	RDY	FDT	FAR

(All bits are turned ON or become active when set to 1.)

Bit	Symbol	Description	Support					Bit	Symbol	Description	Support				
			Mini	Eco	Multi	Ace	MEGA				Mini	Eco	Multi	Ace	MEGA
0	FAR	Frequency arrival signal	Y	Y	Y	Y	Y	8	TRY	Retry in operation	Y	Y	Y	Y	Y
1	FDT	Frequency level detection	Y	Y	Y	Y	Y	9	OH	Heat sink overheat early warning	N	Y	Y	Y	Y
2	RDY	Inverter ready to run	N	Y	Y	Y	Y	10	LIFE	Lifetime alarm	Y	Y	Y	Y	Y
3	SWM2	2nd motor is selected	Y	N	Y	Y	Y	11	OLP	Overload prevention control	Y	Y	Y	Y	Y
4	IPF	Auto-restarting after recovery of power	Y	Y	Y	Y	Y	12	ID	Current detection	Y	Y	Y	Y	Y
5	OL	Motor overload early warning	Y	Y	Y	Y	Y	13	IDL	Low level current detection	Y	N	N	N	Y
6	KP	Running per keypad	N	N	N	N	Y	14	ID2	Current detection 2	Y	N	Y	Y	Y
7	FAN	Cooling fan in operation	N	Y	N	N	Y	15	0	–	N	N	N	N	N

Data format [45] Floating point data



Exponent: 0-3 Mantissa: 0 to 9999

The value expressed by this format = the mantissa × $10^{(\text{exponent-3})}$

Numeric value	Mantissa	Exponent	$10^{(\text{exponent-3})}$
0.000 to 9.999	0 to 9999	0	0.001
10.0 to 99.9	1000 to 9999	1	0.01
100.0 to 999.9	1000 to 9999	2	0.1
1000 to 9999	1000 to 9999	3	1

Data format [67] Operation command source codes

Code	Description	Remarks
0	Keypad operation (Rotating direction: Depends on the terminal input)	Same with the selections for F02
1	Terminal operation	
2	Keypad operation (CW)	
3	Keypad operation (CCW)	
4	Operation command 2	
5	Forced operation	
6 to 19	Reserved	
20	RS-485 channel1	
21	RS-485 channel2	
22	Bus option	
23	FRENIC Loader	

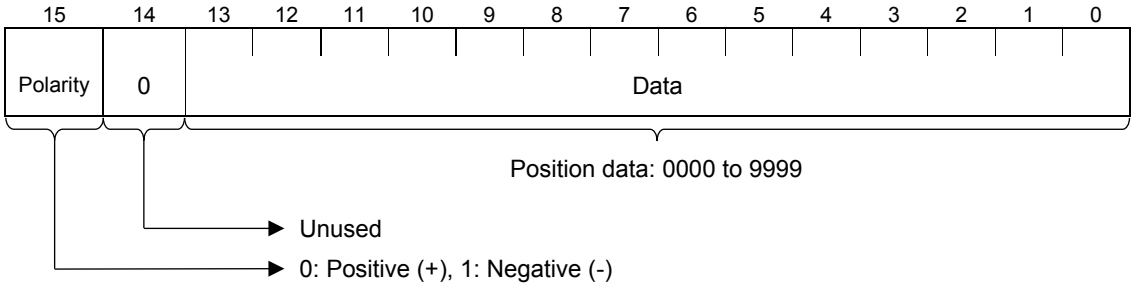
Data format [68] Frequency command source codes

Code	Description	Remarks
0	Keypad key operation	Same with the selections for F01
1	Voltage input (Terminal [12])	
2	Current input (Terminal [C1])	
3	Voltage input (Terminal [12]) + Current input (Terminal [C1])	
4	Inverter body volume	
5	Voltage input (Terminal [V2])	
7	UP/DOWN	
8	Keypad key operation (Balanceless, bumpless functions are activated.)	
11	Digital input (option)	
12	Pulse train input	
20	RS-485 channel1	
21	RS-485 channel2	
22	Bus option	
23	FENIC Loader	
24	Multi-step	
25	JOG	
30 *1	PID TP	
31 *1	PID analog 1	
32 *1	PID analog 2	
33 *1	PID UP/DOWN	
34 *1	PID communications command	
36 *1	PID multi-step	
39	Forced operation	

*1 Under the PID dancer control, the inverter monitors the PID command source although the frequency command becomes effective as the main setting.

Data format [73] Integer data (positive/negative sign bit)

Resolution 1 (The high-order digit of position control data)



Data format [74] Integer data (positive): by 10 hours

(Example) M81 (Maintenance remaining hours-M1) = 12340 hours

12340 ÷10 =04D2$_H$ Consequently =>

04$_H$	D2$_H$

Data format [75] Integer data (positive) + [P] Exception for position control

Based on the positive integer data, setting of “-1” is permitted exceptionally. When “-1” is set on the touch probe or the loader, [P] is displayed.

Data format [76] Operating status 2

15	14	13	12	11	10	9	8	7	6	5 4	3 2 1 0
Motor classfi -cation	STO circuit check	Spare	Spare	Spare	Spare	Spare	Directi on limit ON	Speed limit ON	Spare	Select motor	Control method

(Spares are always set to “0.”)

Signal name	Description	Mini	Eco	Multi	Ace	MEGA
Control method	The final control method including set values and terminal conditions are shown below. 0 : V/f control without slip compensation 1 : Dynamic torque-vector control 2: V/f control with slip compensation 3: V/f control with speed sensor 4: Dynamic torque-vector control with speed sensor 5: Vector control without speed sensor 6: Vector control with speed sensor 10: Torque control (vector control without speed sensor) 11: Torque control (vector control with speed sensor) Other than the above: Reserved	Y	N	N	Y	Y
Motor selection	Selected motor is shown 00_b: Motor1 01_b: Motor2 10_b: Motor3 11_b: Motor4	Y	N	N	Y	Y
Speed limit ON	“1” is set during speed limit.	N	N	N	Y	Y
Direction limit OM	“1” is set during direction limit.	Y	N	Y	Y	Y
Motor class-fication	0 : Induction motor 1 : Synchronous motor	Y	N	N	Y	Y
STO circuit check	0: Check disable 1: Check	N	N	N	Y	N

Data format [77] Optional input terminals

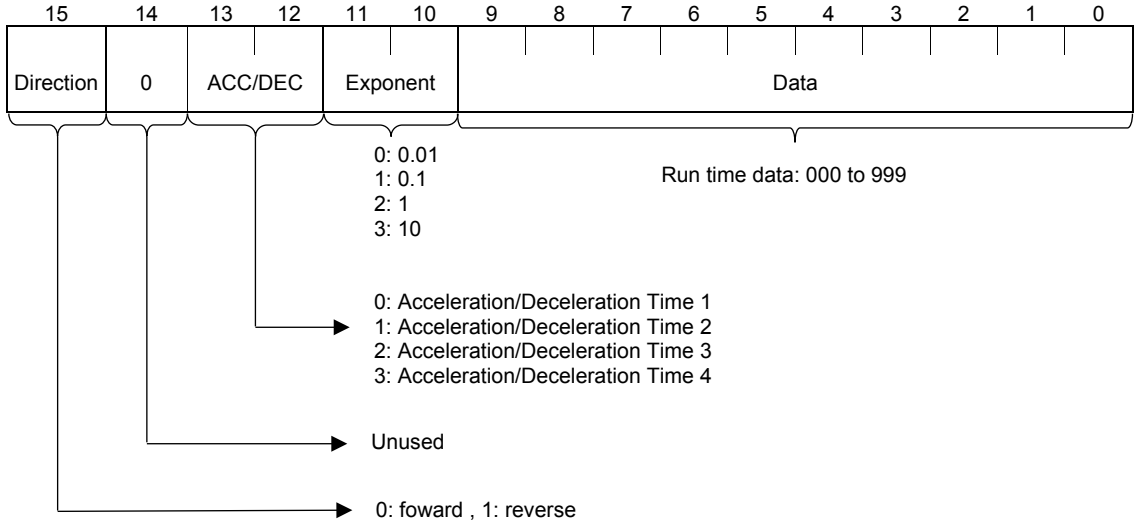
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
I16	I15	I14	I13	I12	I11	I10	I9	I8	I7	I6	I5	I4	I3	I2	I1

Data format [78] Optional output terminals

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	0	0	0	0	0	08	07	06	05	04	03	02	01

Unused

Data format [84] Paturn operation



(Example) C22 (Stage1) = Run time:10.0s, Rotation direction:Reverse, Acc/dec time: Time2

Rotation direction: Reverse: bit15=1
Acc/dec time: Time2: bit13=0, bit12=1
Exponent: 0.1: bit11=0, bit10=1
Run time data: 100: 64_H

$9000_H + 0400_H + 0064_H = 9464_H$ Consequently =>

94_H	64_H

Data format [91] Relay output signals

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	0	Y12A	Y11A	Y10A	Y9A	Y8A	Y7A	Y6A	0	Y4A	Y3A	Y2A	Y1A

Data format [93] Floating point data

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Exponent		Mantissa													

Exponent: 0-3 Mantissa: 0 to 9999

The value expressed by this format = the mantissa × $10^{(exponent-1)}$

Numeric value	Mantissa	Exponent	$10^{(exponent-3)}$
000.0 to 999.9	0 to 9999	0	0.1
1000 to 9999	1000 to 9999	1	1
10000 to 99990	1000 to 9999	2	10
100000 to 999900	1000 to 9999	3	100

Data format [95] Custmizable logic status

15	14 13	12 11	10 9	8 7	6 5	4 3	2	1	0
Step enable	Reserve	Output species	Reserve	Input species2	Reserve	Input species2	Digital output	Digital input 2	Digital input 1

bit0	Digital input 1	=0: OFF, =1: ON
bit1	Digital input 2	=0: OFF, =1: ON
bit2	Digital output	=0: OFF, =1: ON
bit3-4	Input species 1	=0: No function assgined, =1: Digital, =2: Analog
bit7-8	Input species 2	=0: No function assgined, =1: Digital, =2: Analog
bit11-12	Output species	=0: No function assgined, =1: Digital, =2: Analog
bit15	Step enable	=0: Disable, =1: Enable

MEMO

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