



(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.

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 | |
| F14 | Restart Mode after Momentary Power Failure (Mode selection) | [1] | Y | Y | Y | Y | |
| F15 | Frequency Limiter (High) | [3] | Y | Y | Y | Y | |
| F16 | (Low) | [3] | Y | Y | Y | Y | |
| F18 | Bias (Frequency command 1) | [6] | Y | Y | Y | Y | |
| F20 | DC Braking 1 (Braking starting frequency) | [3] | Y | Y | Y | Y | |
| F21 | (Braking level) | [1] | Y | Y | Y | Y | |
| F22 | (Braking time) | [5] | Y | Y | Y | Y | |
| F23 | Starting Frequency 1 | [3] | Y | Y | Y | Y | |
| F24 | (Holding time) | [5] | Y | N | Y | Y | |
| F25 | Stop Frequency | [3] | Y | Y | Y | Y | |
| F26 | Motor Sound (Carrier frequency) | [1] ^{*2} | Y | Y | Y | Y | |
| F27 | (Tone) | [1] | 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 |
| | (Resistance) | [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 |
| | (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 Frequency 2 Frequency 3 (Hysteresis width) | [3] | Y | Y | Y | Y | Y |
| C02 | | [3] | Y | Y | Y | Y | Y |
| C03 | | [3] | Y | Y | Y | Y | Y |
| C04 | | [3] | Y | Y | Y | Y | Y |
| C05 | Multi-Frequency 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | [5] | N | Y | Y | N | N |
| C06 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C07 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C08 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C09 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C10 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C11 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | Y | Y | N | N |
| C12 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | N | Y | N | N |
| C13 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | N | Y | N | N |
| C14 | | [22] | Y | N | N | Y | Y |
| | | [5] | N | N | Y | N | N |
| C15 | [22] | Y | N | N | Y | Y | |
| | [5] | N | N | Y | N | N | |
| C16 | [22] | Y | N | N | Y | Y | |
| | [5] | N | N | Y | N | N | |
| C17 | [22] | Y | N | N | Y | Y | |
| | [5] | N | N | Y | N | N | |
| C18 | [22] | Y | N | N | Y | Y | |
| | [5] | N | N | Y | N | N | |
| C19 | [22] | Y | N | N | Y | Y | |
| | [5] | N | N | Y | N | N | |
| 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 b39=1 | [11] | N | N | N | N | Y |
| | | [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 r39=1 | [11] | N | N | N | N | Y |
| | | [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) (Speed detection filter) P (Gain) I (Integral time) (Feed forward gain) (Output filter) (Notch filter resonance frequency) (Notch filter attenuation level) | [7] | N | N | N | Y | Y |
| r44 | | [7] | N | N | N | Y | Y |
| r45 | | [3] | N | N | N | Y | Y |
| r46 | | [7] | N | N | N | Y | Y |
| r47 | | [5] | N | N | N | Y | Y |
| r48 | | [7] | N | N | N | N | Y |
| r49 | | [1] | N | N | N | Y | Y |
| r50 | | [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 | Motor 4 (%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 | Built-in CAN Communication (Station address) | [1] | N | N | N | Y | N |
| y24 | Response Error (Timer) | [1] | N | N | N | Y | N |
| y25 | Built-in CAN Communication | [1] | N | N | N | Y ^{*1} | N |
| | (Assign writing function code No. 1) | | | | | | |
| 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 Cspeed | [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 FM1 and 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 FM1 and 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 | |
| X23 | (Torque) | [2] | Y | Y | Y | Y | |
| X24 | (Set frequency) | [22] | Y | Y | Y | Y | |
| X25 | (Running status) | [16] | Y | Y | Y | Y | |
| X26 | (Cumulative ope. time) | [1] | Y | Y | Y | Y | |
| X27 | (Number of startups) | [1] | Y | Y | Y | Y | |
| X28 | (DC link circuit voltage) | [1] | Y | Y | Y | Y | |
| X29 | (Internal air temperature) | [1] | N | Y | N | Y | |
| X30 | (Heat sink temperature) | [1] | Y | Y | Y | Y | |
| X31 | (Input terminal) | [43] | Y | Y | Y | Y | |
| X32 | (Output terminal) | [15] | Y | Y | Y | Y | |
| X33 | (Input terminal(com.)) | [14] | Y | Y | Y | Y | |
| X34 | (Output terminal(com.)) | [15] | Y | Y | Y | Y | |
| X35 | (Input power) | [24] | Y | Y | Y | Y | |
| X36 | (Running status 2) | [76] | Y | N | N | Y | |
| X37 | (Speed detection) | [29] | N | N | N | Y | |
| X38 | (Operation status 3) | [44] | Y | 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 5.34 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.

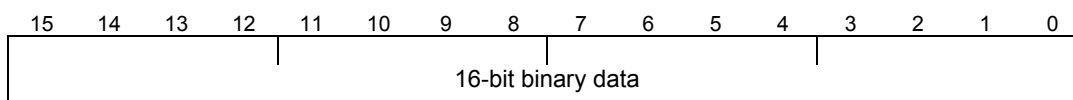
Table 5.35 List of data format numbers (Z codes) (Continued)

| 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.

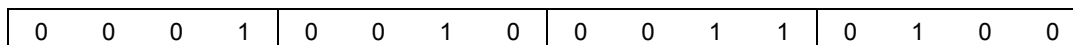


For the convenience of description, 16-bit data is expressed in hexadecimal with one upper-order byte (eight bits from 15 to 8) and one lower-order byte (eight bits from 7 to 0).

For example, the following data is 1234H in hexadecimal and expressed as

| | |
|-----------------|-----------------|
| 12 _H | 34 _H |
|-----------------|-----------------|

.



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 x 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 x 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) | OC1 |
| 2 | Overcurrent (during deceleration) | OC2 |
| 3 | Overcurrent (during constant speed operation) | OC3 |
| 5 | Ground fault | GF |
| 6 | Overvoltage (during acceleration) | OV1 |
| 7 | Overvoltage (during deceleration) | OV2 |
| 8 | Overvoltage (during constant speed operation or stopping) | OV3 |
| 10 | Under voltage | UV |
| 11 | Input phase loss | L in |
| 14 | Fuse blown | FUS |
| 16 | Charging circuit fault | PbF |
| 17 | Heat sink overheat | OH1 |
| 18 | External alarm | OH2 |
| 19 | Internal air overheat | OH3 |
| 20 | Motor protection (PTC/NTC thermistor) | OH4 |
| 22 | Braking resistor overheat | dbH |
| 23 | Motor overload | OL1 |
| 24 | Motor overload: motor 2 | OL2 |
| 25 | Inverter overload | OLU |
| 27 | Over speed protection | OS |
| 28 | PG disconnection | PG |
| 29 | NTC disconnection error | nrb |
| 31 | Memory error | Er1 |
| 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 | Er7 |
| 38 | RS-485 communications error (communications port1) | Er8 |
| 42 | Step-out detection | Er-d |
| 43 | Motor selecting error | Er-L |
| 44 | Motor overload: motor 3 | OL3 |
| 45 | Motor overload: motor 4 | OL4 |
| 46 | Output phase loss | OPL |
| 47 | Following error, excessive speed deviation | Er-E |
| 50 | Position of magnetic pole error | Er-C |
| 51 | Data save error on insufficient voltage | Er-F |
| 53 | RS-485 communications error (Option/Communications port 2) | Er-P |
| 54 | Hardware error | Er-H |
| 55 | CAN communications failure | Er-t |
| 56 | Positioning control error | Er-o |
| 57 | EN circuit error | Er-F |

Table 5.36 List of alarm codes (Continued)

| Code | Description | LED |
|------|---|------------|
| 58 | PID feedback disconnection detected | <i>CoF</i> |
| 59 | DB transistor trouble | <i>dbA</i> |
| 65 | Customizable logic failure | <i>ECL</i> |
| 66 | PID control 1 feedback error detection | <i>PU1</i> |
| 67 | PID control 2 feedback error detection | <i>PU2</i> |
| 68 | USB port transmission error | <i>ErU</i> |
| 70 | Charging resistor overheat | <i>CHR</i> |
| 81 | Drought protection | <i>PdF</i> |
| 82 | Control of maximum starts per hour | <i>roC</i> |
| 83 | End of curve protection | <i>Pol</i> |
| 84 | Anti jam | <i>rLo</i> |
| 85 | Filter clogging error | <i>FoL</i> |
| 91 | External PID control 1 feedback error detection | <i>PUA</i> |
| 92 | External PID control 2 feedback error detection | <i>PUb</i> |
| 93 | External PID control 3 feedback error detection | <i>PUc</i> |
| 100 | DC fan lock detected | <i>FAL</i> |
| 101 | Motor overload warning | <i>OL</i> |
| 102 | Cooling fin overheat warning | <i>OH</i> |
| 103 | Life warning | <i>LIF</i> |
| 104 | Command loss | <i>rEF</i> |
| 105 | PID warning output | <i>Pid</i> |
| 106 | Low torque detected | <i>UL</i> |
| 107 | Thermistor detected (PTC) | <i>PTC</i> |
| 108 | Machine life (accumulated operation hours) | <i>rTE</i> |
| 109 | Machine life (No. of starting times) | <i>CrT</i> |
| 166 | PID control 1 warning output | <i>PA1</i> |
| 167 | PID control 2 warning output | <i>PA2</i> |
| 190 | Mutual operation slave inverter alarm | <i>SLA</i> |
| 191 | External PID control 1 warning output | <i>PAa</i> |
| 192 | External PID control 2 warning output | <i>PAb</i> |
| 193 | External PID control 3 warning output | <i>PAc</i> |
| 252 | Forced operation | <i>Fod</i> |
| 253 | Password protection | <i>LoP</i> |
| 254 | Simulated error | <i>Err</i> |

(Example) In the case of overvoltage (during acceleration) (*OL*)

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 |

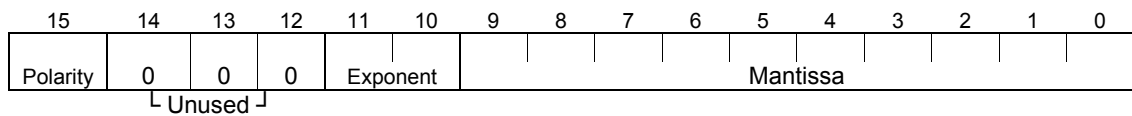
(Example) When the capacity is 2.2 kW

$$2.20 \times 100 = 220 = 00DC_H \text{ Consequently,}$$

⇒

| | |
|-----------------|-----------------|
| 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

$$20.0 = 200 \times 0.1 \Rightarrow 0000\ 0100\ 1100\ 1000_b = 04C8_H$$

⇒

| | |
|-----------------|-----------------|
| 04 _H | C8 _H |
|-----------------|-----------------|

Consequently,

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 |
| ↑ Alarm reset | General-purpose input | | Unused | EN terminal | General-purpose input | | | | | | | | FWD: Forward command 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 |

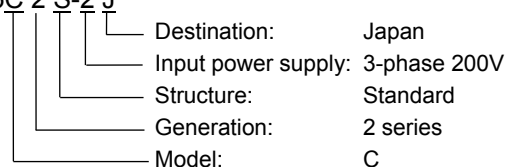
Data format [17] Model code

| | | | | | | | | | | | | | | | |
|-------|----|----|----|------------|----|---|-------------|---|---|--------------------|---|---|---|---|---|
| 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 \Rightarrow

| | |
|-----------------|-----------------|
| 04 _H | 2E _H |
|-----------------|-----------------|

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

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

| | |
|-----------------|-----------------|
| 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)

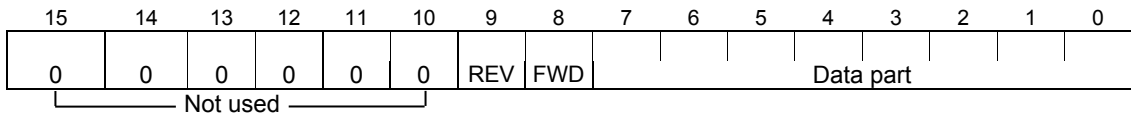
| Code | Description | Code | Description |
|------|--|------|---|
| 1 | Improper 'FC' | 3 | Improper data (range error) |
| 2 | Improper address (function code error) | 7 | NAK (link priority, no right, write disabled) |

(Example) In case of an improper address

2 = 0002_H Consequently, ⇒

| | |
|-----------------|-----------------|
| 00 _H | 02 _H |
|-----------------|-----------------|

Data format [21] Auto tuning



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

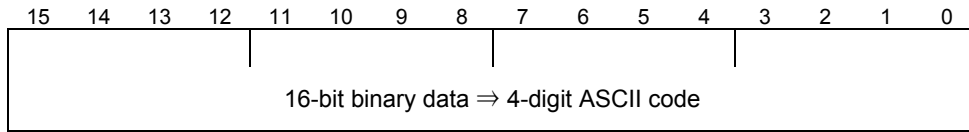
(Ex.) When C05 (multistep frequency 1) = 50.25Hz (MEGA)

50.25×100 = 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).

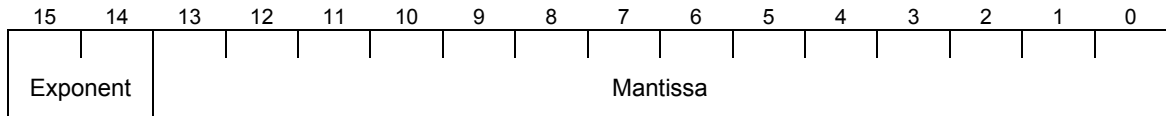
(Example) When maximum frequency = 60Hz and M09 (output frequency) = 60.00Hz (forward rotation)

$60.00 \times 100 = 6000 = 1770_H$ Consequently, \Rightarrow

| | | | | |
|--|---|---|---|---|
| | 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 $\times 10^{(\text{exponent}-2)}$

| Numeric value | Mantissa | Exponent | $10^{(\text{exponent}-2)}$ |
|----------------|--------------|----------|----------------------------|
| 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

$3 \times 100 = 300 = 012C_H$ Consequently, \Rightarrow

| | |
|-----------------|-----------------|
| 01 _H | 2C _H |
|-----------------|-----------------|

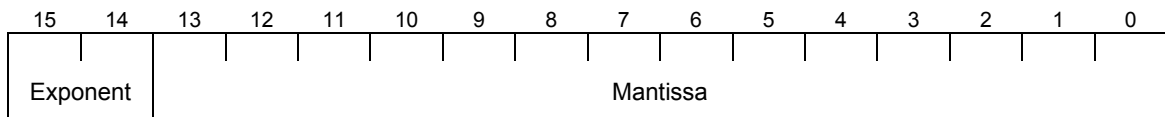
Data format [29] Positive/Negative data of values converted into standard (p.u.) with 20,000

(Example) Speed (frequency) Data of $\pm 20,000/\pm$ 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 $\times 10^{(\text{exponent}-2)}$

| Numeric value | Mantissa | Exponent | $10^{(\text{exponent}-2)}$ |
|----------------|--------------|----------|----------------------------|
| 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.)

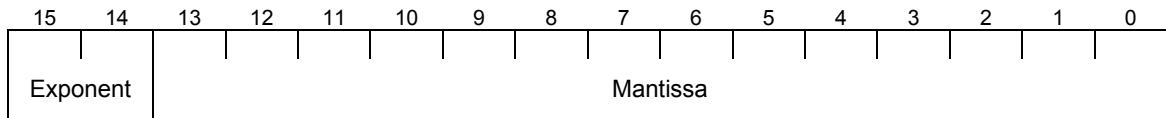
Data format [44] Operation status 2

| | | | | | | | | | | | | | | | |
|----|-----|-----|----|-----|------|----|-----|-----|----|----|-----|------|-----|-----|-----|
| 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^(exponent-3)

| Numeric value | Mantissa | Exponent | 10 ^(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

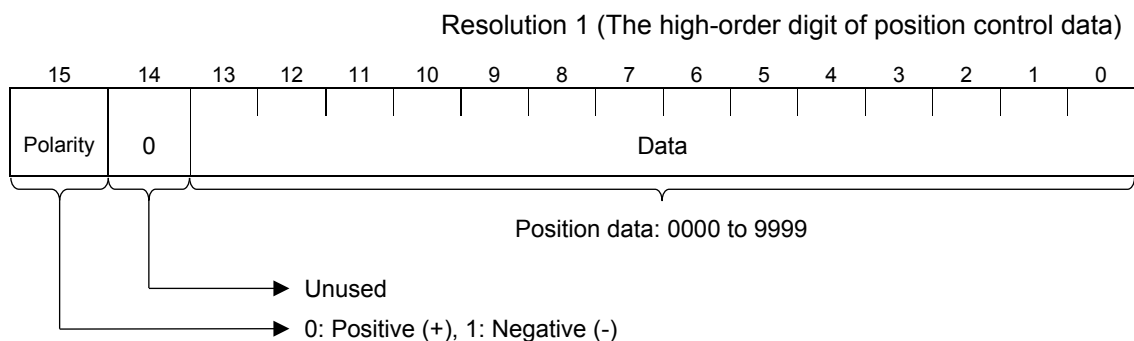
| Code | Description | Remarks |
|---------|---|-------------------------------------|
| 0 | Keypad operation (Rotating direction: Depends on the terminal input) | Same with the selections for F02 |
| 1 | Terminal operation | |
| 2 | Keypad operation (CW) | |
| 3 | Keypad operation (CCW) | |
| 4 | Operation 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)



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 classification | STO circuit check | Spare | Spare | Spare | Spare | Spare | Direction 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 classification | 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

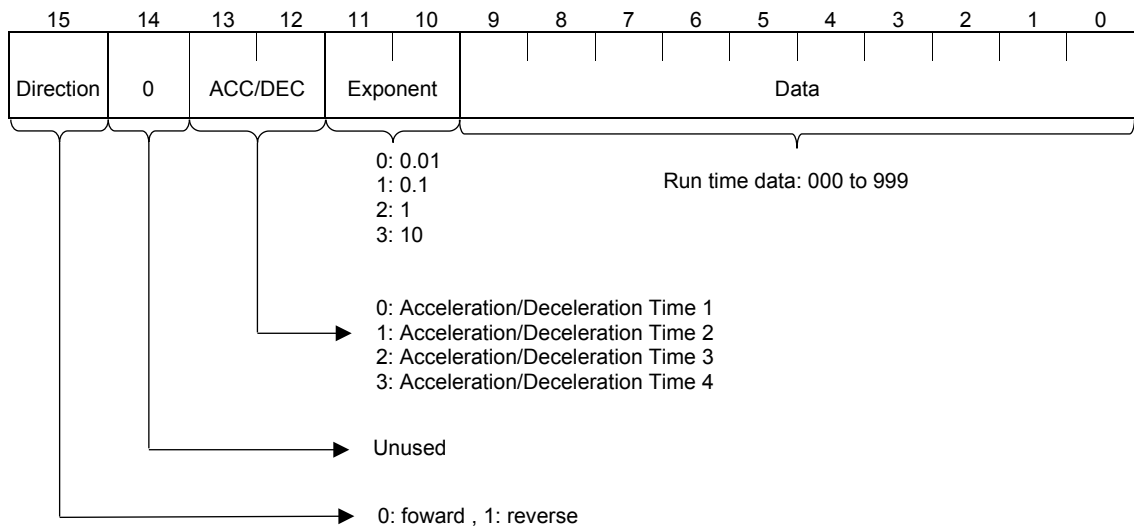
| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| I16 | I15 | I14 | I13 | I12 | I11 | I10 | I9 | I8 | I7 | I6 | I5 | I4 | I3 | I2 | I1 |

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 assigned, =1: Digital, =2: Analog |
| bit7-8 | Input species 2 | =0: No function assigned, =1: Digital, =2: Analog |
| bit11-12 | Output species | =0: No function assigned, =1: Digital, =2: Analog |
| bit15 | Step enable | =0: Disable, =1: Enable |

MEMO

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