

## Firmware Update for the FR-A800, FR-A800 Plus, and FR-F800 Series Inverters

Thank you for your continued patronage of Mitsubishi Electric drive control products.  
The firmware of the FR-A800, FR-A800 Plus, and FR-F800 series inverters will be updated to improve functionality.

### 1. Products Affected

FR-A800 series inverters (excluding the FR-A800-P)  
FR-A800 Plus series inverters (excluding the FR-A800-R2R/-AWH)  
FR-F800 series inverters

### 2. Details of Change

#### (1) Enhanced functions for Pr.1018 (Monitor with sign selection)

The setting value "2" will be added to the setting range of Pr.1018 (Monitor with sign selection).  
When Pr.290 (Monitor negative output selection) is set to "Negative numbers indication enabled", setting "2" in Pr.1018 (Monitor with sign selection) enables display of the output power with a minus sign.

When Pr.1018 (Monitor with sign selection) = "2", the monitor items other than the output power are displayed with or without a minus sign in the same way as when Pr.1018 (Monitor with sign selection) = "1".

| Monitor item             | Pr.1018 setting |      |      |      |
|--------------------------|-----------------|------|------|------|
|                          | 9999            | 0    | 1    | 2    |
| Output power             | -               | -    | -    | ○ *4 |
| Output frequency         | -               | ○ *1 | ○ *1 | ○ *1 |
| Motor torque             | ○               | ○    | ○    | ○    |
| Position command (lower) | ○ *2            | ○ *2 | ○ *3 | ○ *3 |

○: Negative numbers displayed with minus sign, -: Negative numbers not displayed (positive only)

\*1 Negative numbers are not displayed on the operation panel. Confirm the rotation direction with the [FWD] or [REV] indicator.

\*2 Negative numbers are displayed only on the FR-DU08 (-9999 to 9999).

Unsigned values (0 to 9999) are displayed on other devices.

\*3 Full 32-bit data (-2147483648 to 2147483647) is displayed during monitoring via the communication option.

\*4 Negative numbers are displayed on the FR-DU08 or via communication option (not applicable for RS-485 communication, FR-A8NL, SLMP communication, and HMS network option).

|                      |                |              |                                                                             |                                                                                                                                 |
|----------------------|----------------|--------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Date of issue</b> | September 2025 | <b>Title</b> | Firmware Update for the FR-A800, FR-A800 Plus, and FR-F800 Series Inverters | Mitsubishi Electric Corp., Nagoya Works<br>5-1-14 Yada-minami, Higashi-ku, Nagoya 461-8670<br>Tel.: +81 (52) 721-2111 Main line |
|----------------------|----------------|--------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|

## (2) Addition of the heat sink temperature monitoring function

By setting "37" in the parameters for monitoring, the temperature of the inverter heat sink can be monitored within the range of 0 to 130°C.

The monitor value can be used to check the change in the temperature of the inverter and prevent the inverter output shutoff due to heat sink overheating.

The parameter setting values will be added as follows.

| Pr.  | Name                                                | Initial value | Setting value | Description                                                                                                                                                                                        |
|------|-----------------------------------------------------|---------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 52   | Operation panel main monitor selection              | 0             | 37            | Select the item monitored on the operation panel or parameter unit.                                                                                                                                |
| 54   | FM/CA terminal function selection                   | 1             | 37            | Select the item monitored via terminal FM or CA.                                                                                                                                                   |
| 158  | AM terminal function selection                      | 1             | 37            | Select the item monitored via terminal AM.                                                                                                                                                         |
| 306  | Analog output signal selection                      | 2             | 37            | The setting is available when the FR-A8AY/FR-A8AN is installed.                                                                                                                                    |
| 310  | Analog meter voltage output selection               | 2             | 37            | Analog signals can be output from the voltage output terminal (AM0) and current output terminal (AM1).                                                                                             |
| 774  | Operation panel monitor selection 1                 | 9999          | 37            | Each of the initial items monitored on the operation panel or parameter unit in the monitor mode (output frequency, output current, and output voltage) can be switched to a user-designated item. |
| 775  | Operation panel monitor selection 2                 |               |               |                                                                                                                                                                                                    |
| 776  | Operation panel monitor selection 3                 |               |               |                                                                                                                                                                                                    |
| 838  | DA1 terminal function selection                     | 2             | 37            | The setting is available when the FR-A8AZ is installed.<br><br>Bipolar analog signal output is available via terminal DA1.                                                                         |
| 992  | Operation panel setting dial push monitor selection | 0             | 37            | Select the monitor item displayed on the operation panel at the time when the setting dial is pressed.                                                                                             |
| 1027 | Analog source selection (1ch)                       | 201           | 37            | Select the analog data (monitor item) for sampling on each channel.                                                                                                                                |
| 1028 | Analog source selection (2ch)                       | 202           |               |                                                                                                                                                                                                    |
| 1029 | Analog source selection (3ch)                       | 203           |               |                                                                                                                                                                                                    |
| 1030 | Analog source selection (4ch)                       | 204           |               |                                                                                                                                                                                                    |
| 1031 | Analog source selection (5ch)                       | 205           |               |                                                                                                                                                                                                    |
| 1032 | Analog source selection (6ch)                       | 206           |               |                                                                                                                                                                                                    |
| 1033 | Analog source selection (7ch)                       | 207           |               |                                                                                                                                                                                                    |
| 1034 | Analog source selection (8ch)                       | 208           |               |                                                                                                                                                                                                    |

When selecting the heat sink temperature monitor for a special register for control, set device No. SD1232.

| Device No. | Name                  | Description                                                          |
|------------|-----------------------|----------------------------------------------------------------------|
| SD1232     | Heat sink temperature | Stores the heat sink temperature. The value is in increments of 1°C. |

## (3) Addition of SD devices for analog terminals

Special registers for control used for the PLC function will be added.

The normalized analog input values of terminals are stored.

| Device No. | Name                                                 | Description                                                                                                                                                                                                                         |
|------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SD1330     | Terminal 1 input                                     | The normalized analog value input via terminal 1 is stored.<br><br>The analog input is voltage input.<br>Monitor range: -4095 to 4095                                                                                               |
| SD1331     | Terminal 2 input                                     | The normalized analog value input via terminal 2 is stored.<br><br>Voltage/current input switch<br>Monitor range when switch 1 is ON (current input): 0 to 4095<br>Monitor range when switch 1 is OFF (voltage input): 0 to 4095    |
|            | (When the FR-A8AN is installed)<br>Terminal 40 input | The normalized analog value input via terminal 40 is stored.<br><br>The analog input is current input.<br>Monitor range: 0 to 4095                                                                                                  |
| SD1332     | Terminal 4 input                                     | The normalized analog value input via terminal 4 is stored.<br><br>Voltage/current input switch<br>Monitor range when switch 2 is ON (current input): 0 to 4095 *1<br>Monitor range when switch 2 is OFF (voltage input): 0 to 4095 |

\*1 The range is 818 to 4095 for 4 to 20 mA.

## (4) Enhanced functions for Pr.571 (Holding time at a start)

The setting range of Pr.571 will be changed.

| Pr. | Name                    | Initial value | Setting range | Description                                         |
|-----|-------------------------|---------------|---------------|-----------------------------------------------------|
| 571 | Holding time at a start | 9999          | 0 to 60 s     | Set the holding time of the frequency set in Pr.13. |
|     |                         |               | 9999          | The holding function at start is disabled.          |

### 3. Date of Change

| Country of origin | Date of change                                                                    |
|-------------------|-----------------------------------------------------------------------------------|
| MADE IN JAPAN     | The change will be sequentially applied to the October 2025 production or later.  |
| MADE IN CHINA     | The change will be sequentially applied to the November 2025 production or later. |

### 4. Product Identification

The SERIAL (determined by date of production) can be checked on the rating plate or packaging plate.

|                                                                                                |                                                                                             |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| SERIAL example on rating plate                                                                 | SERIAL example on packaging plate                                                           |
|  5 X 000000 |  5 X 000 |
| Symbol Year Month Control number                                                               | Symbol Year Month Control number                                                            |
| SERIAL                                                                                         | SERIAL                                                                                      |

The SERIAL consists of one symbol, two characters indicating the production year and month, and the control number (six characters for the rating plate, three characters for the packaging plate).

The last digit of the production year is indicated as the Year, and the Month is indicated by 1 to 9, X (October), Y (November), or Z (December).

## 5. Firmware Version

The inverter firmware version to which the change described will be applied is as follows:

| Series                  | Firmware version |
|-------------------------|------------------|
| FR-A800<br>FR-A800 Plus | 45 or later      |
| FR-F800                 | 345 or later     |

For how to install the firmware, refer to the FR Configurator2 (SW1DND-FRC2-E) Instruction Manual (IB-0600516ENG).