

# MITSUBISHI ELECTRIC Inverter

## Sales and Service

No. 858E

### Firmware Update for the FR-E800 Series General-Purpose Inverters

Thank you for your continued patronage of Mitsubishi Electric drive control products.  
The firmware of the FR-E800 series general-purpose inverters will be updated to improve functionality.

#### 1. Products Affected

FR-E800 series

#### 2. Details of Change

##### (1) Enhanced brake sequence function

The following parameter will be added.

| Pr.<br>(Pr. group) | Name                                          | Initial<br>value | Setting range | Description                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------|------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1408<br>(A168)     | Brake opening current<br>for reverse rotation | 9999             | 0% to 400%    | Set the brake opening current level during reverse rotation. Set between 50% and 90% because load slippage is more likely to occur when a start setting is too low.<br><br>The inverter rated current is regarded as 100%, or the rated motor torque is regarded as 100%. (According to Pr.639 (Brake opening current selection) setting) |
|                    |                                               |                  | 9999          | The Pr.279 (Brake opening current) setting is used as the brake opening current level during reverse rotation.                                                                                                                                                                                                                            |

##### (2) Compatibility with the FR-A8AC

(Plug-in option for 120 VAC contact input function / relay output function)

- 1) When the FR-A8AC is installed, the input terminals of the inverter's control circuit terminal block (STF (DI0), STR (DI1), RL, RM, RH, MRS, and RES) are disabled. Instead, the input terminals of the FR-A8AC (X1 to X7) are enabled.

|                                         |        | Valid terminal            |                        |
|-----------------------------------------|--------|---------------------------|------------------------|
|                                         |        | Without FR-A8AC installed | With FR-A8AC installed |
| Input terminal<br>function<br>selection | Pr.178 | STF (DI0)                 | X1                     |
|                                         | Pr.179 | STR (DI1)                 | X2                     |
|                                         | Pr.180 | RL                        | X3                     |
|                                         | Pr.181 | RM                        | X4                     |
|                                         | Pr.182 | RH                        | X5                     |
|                                         | Pr.183 | MRS                       | X6                     |
|                                         | Pr.184 | RES                       | X7                     |

|                     |           |       |                                                                  |                                                                                                                                 |
|---------------------|-----------|-------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Date<br>of<br>issue | July 2026 | Title | Firmware Update for the FR-E800 Series General-Purpose 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) When the FR-A8AC is installed, Pr.320, Pr.321, Pr.418 can be set.

| Pr.<br>(Pr. group) | Name                                | Initial<br>value | Setting range                                                                                                                                                                                                       | Description                                                                                               |
|--------------------|-------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 320<br>(M420)      | RA1 output<br>selection             | 0                | 0, 1, 3, 4, 7, 8, 11 to 16,<br>18 to 20, 23 to 28, 30 to<br>41, 44 to 48, 56, 57, 60<br>to 66, 68, 70, 80, 81, 84,<br>90, 91, 95, 96, 98, 99,<br>206, 211 to 213, 242<br>(FR-E800-E and FR-<br>E800-SCE only), 9999 | Set the signal output from<br>the relay output terminal<br>RA1.                                           |
| 321<br>(M421)      | RA2 output<br>selection             | 1                |                                                                                                                                                                                                                     | Set the signal output from<br>the relay output terminal<br>RA2.                                           |
| 418<br>(M432)      | Extension output<br>terminal filter | 9999             | 5 to 50 ms                                                                                                                                                                                                          | The responsivity of the<br>extension output terminals<br>can be delayed in a range<br>between 5 to 50 ms. |
|                    |                                     |                  | 9999                                                                                                                                                                                                                | Without filter                                                                                            |

3) The input/output status of terminals X1 to X7 and terminals RA1 and RA2 on the FR-A8AC can be monitored as follows.

- Operation panel main monitor

| Pr.<br>(Pr. group) | Name                                      | Initial<br>value | Setting<br>value | Description                     |
|--------------------|-------------------------------------------|------------------|------------------|---------------------------------|
| 52<br>(M100)       | Operation panel main<br>monitor selection | 0                | 55               | Monitors terminals X1 to X7.    |
|                    |                                           |                  | 57               | Monitors terminals RA1 and RA2. |

- Communication monitor

|                                                      | Monitor code |
|------------------------------------------------------|--------------|
| Input terminal status                                | H0F *1       |
|                                                      | 40215 *2     |
| Option output terminal status<br>(for communication) | H3C *1       |
|                                                      | 40260 *2     |

\*1 The monitor code is used for the Mitsubishi inverter protocol, CC-Link, CC-Link IE TSN, CC-Link IE Field Network Basic, EtherNet/IP, PROFINET, and EtherCAT.

\*2 The monitor code is used for the MODBUS RTU, MODBUS/TCP, BACnet/IP, and BACnet MS/TP.

- PLC function special registers for control

|                               | PLC function device No. |
|-------------------------------|-------------------------|
| Input terminal status         | SD1162                  |
| Option output terminal status | SD1207                  |

- PLC function I/O device map

| FR-A8AC terminal name | Device No. |
|-----------------------|------------|
| X1                    | X00        |
| X2                    | X01        |
| X3                    | X04        |
| X4                    | X03        |
| X5                    | X02        |
| X6                    | X09        |
| X7                    | X0B        |

- 4) When the FR-A8AC is installed to the FR-E800-E/FR-E800-SCE, the setting values in Table 1 can be set in Pr.180 to Pr.184 (Input terminal function selection).  
The availability of the setting values in Table 1 depends on the models. The availability by model (after firmware update) is shown in Table 2.

Table 1. Available setting values when the FR-A8AC is installed to the FR-E800-E/FR-E800-SCE

| Setting value | Signal name | Function                          |
|---------------|-------------|-----------------------------------|
| 5             | JOG         | Jog operation selection           |
| 7             | OH          | External thermal relay input      |
| 10 *1         | X10         | Inverter run enable               |
| 12            | X12         | PU operation external interlock   |
| 16            | X16         | PU/External operation switchover  |
| 25            | STOP        | Start self-holding selection      |
| 62            | RES         | Inverter reset                    |
| 65            | X65         | PU/NET operation switchover       |
| 66            | X66         | External/NET operation switchover |
| 67            | X67         | Command source switchover         |

\*1 Not available for the FR-E800-SCE.

Table 2. Availability of the setting values in Table 1

| Model                     | FR-A8AC       | After firmware update |
|---------------------------|---------------|-----------------------|
| FR-E800-E,<br>FR-E800-SCE | Installed     | Available             |
|                           | Not installed | Not available         |
| FR-E800<br>standard model | Installed     | Available             |
|                           | Not installed | Available             |

\*1 Although the setting values in Table 1 are available, the FR-A8AC compatible functions are not available.

### (3) Enhanced remote setting function

The following setting value will be added for Pr.59 (Remote function selection).

When Pr.59 = "4", turning ON the RH signal performs acceleration and turning OFF the start command performs deceleration.

| Pr.<br>(Pr. group) | Name                         | Initial<br>value | Setting<br>value | Description                                                             |                                 |                                               |
|--------------------|------------------------------|------------------|------------------|-------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|
|                    |                              |                  |                  | Remote setting                                                          | Frequency<br>setting<br>storage | Deceleration<br>to the main<br>speed or lower |
| 59<br>(F101)       | Remote function<br>selection | 0                | 4                | Enabled for the RL<br>and RH signals.<br>Disabled for the<br>RM signal. | Not<br>available                | Not available                                 |

## 3. Date of Change

| Country of origin | Date of change                                                                     |
|-------------------|------------------------------------------------------------------------------------|
| MADE IN JAPAN     | The change will be sequentially applied to the August 2026 production or later.    |
| MADE IN CHINA     | The change will be sequentially applied to the September 2026 production or later. |

#### 4. Product Identification

This change applies to the products having the following SERIAL or later on the rating plate or packaging plate.

SERIAL example on rating plate  
 □□ 26 8 ○○○○○○  
Symbol Year Month Control number

SERIAL

SERIAL example on packaging plate  
 □□ 26 8 ○○○  
Symbol Year Month Control number

SERIAL

The SERIAL consists of two symbols, three 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 two digits of the production year are 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-E800 | 21 or later      |

Firmware can be downloaded from the following website.

[Search for Software for Drive Products Inverters - Firmware - INVERTER - FR-E800 Series](#)

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