

Firmware Upgrade for FR-A800-AWH Inverters (FR-A800 Plus Series)

Thank you for your continued patronage of Mitsubishi Electric drive control products. The firmware of FR-A800-AWH inverters (FR-A800 plus series) will be upgraded to improve functionality.

1. Products Affected

FR-A800-AWH inverters (FR-A800 Plus series)

2. Details of the Change

(1) Addition of the full-closed control test operation

Pr.	Name	Initial value	Setting range	Description
60 W000, W100	A800-AWH mode selection	0	0	A800-AWH mode disabled
			1	A800-AWH mode enabled
			2	Full-closed control test operation

◆ Full-closed control test operation (Pr.60 = "2")

To check the operation of the programmable controller programs, a test operation for full-closed control is available without connecting a motor or distance meter to the inverter.

A virtual speed or a virtual current position is created in the inverter to perform position feed or speed feed operation, and position/speed changes can be checked on the operation panel or by outputting it as analog signals to terminal FM/CA or AM.

All the following conditions must be satisfied to enable the full-closed control test operation.

- Pr.60 A800-AWH mode selection = "2"
- The X108 and RT signals are OFF (full-closed control is enabled and the first motor is selected).
- Vector control test operation is selected ("9999" is not set in Pr.80 Motor capacity and Pr.81 Number of motor poles, and "9" is set in Pr.800 Control method selection).
- Pr.100 Reference travel speed \neq "9999"
- The X113 signal is ON.
- Network operation mode
- Pr.338 Communication operation command source = "0 (initial value)"
- Pr.339 Communication speed command source = "0 (initial value)"

◆ I/O signal status during the test operation

- Input signal

○: Valid

Input terminal function selection (Pr.178 to Pr.189)	Valid/invalid
Limit dog (X107)	○
Fork selecting (X108)	○
Position feed / speed feed switching (X109)	○
Acceleration/deceleration pattern selection under full-closed control (X110)	○
Crane emergency stop (X111)	○
Limit dog 2 (X112)	○
A800-AWH mode selection (X113)	○

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- Output signal ○: Valid, ×: Invalid

Output terminal function selection (Pr.190 to Pr.196)	Valid/invalid
Brake opening request (BOF)	×
System failure (Y231)	○
Crane position detection level notification (Y233)	○
Crane in-position notification (Y234)	○
Crane out-of-position (Y235)	○
Crane in-position (Y236)	○

- ◆ Status of the monitoring during the test operation ○: Enabled, – : Disabled

Monitor item	Monitoring on DU/PU	Output via FM/CA/AM
Crane position data compensation total count	○	–
Speed command (Frequency command after position loop compensation)	○	○
Crane speed	○	○
Model speed	○	○
Speed command (Speed command created to output)	○	○
Speed command (Frequency command after droop compensation)	○	○
Position command (lower digits)	○	–
Position command (upper digits)	○	–
Current position (lower digits)	○	–
Current position (upper digits)	○	–
System failure code	○	–

The monitoring-enabled items differ depending on the output interface (operation panel, parameter unit, terminal FM/CA, or terminal AM).

(2) Addition of droop control

Droop control will be available to support operation by two or more driving devices.

Droop control is enabled under full-closed control.

3. Date of Change

The change will be applied to the products manufactured in November 2020 or later.

4. Product Identification

The SERIAL (determined by date of production) can be checked on the product's rating plate.

□ 0 Y ○○○○○○
Symbol Year Month Control number

SERIAL

The SERIAL consists of one symbol, two characters indicating the production year and month, and six characters indicating the control number.

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).