Firmware Upgrade for the FR-A800, A800 Plus, F800 Series General-Purpose Inverters and the FR-B, B3 Series Inverters (FR-A800 Specification) for Pressure-Resistant Explosion-Proof Motors

Thank you for your continued patronage of Mitsubishi Electric drive control products.
The firmware of the FR-A800, A800 Plus, F800 series general-purpose inverters and the FR-B, B3 series inverters (FR-A800 specification) for pressure-resistant explosion-proof motors will be upgraded to improve functionality.

1. Products Affected

FR-A800 series inverters (excluding the FR-A800-P),

FR-A800 Plus series inverters (FR-A800-CRN and FR-A800-LC),

FR-F800, FR-B, B3 series inverters

2. Details of the Change

(1) Support for CC-Link IE TSN

Using the plug-in option FR-A8NCG enables CC-Link IE TSN communication.

(2) Addition of the main circuit capacitor residual-life estimation function

Even when the power supply cannot be turned OFF, the remaining life of the main circuit capacitor can be estimated without stopping the operation.

Note that the remaining life of the main circuit capacitor estimated by this function is theoretical, and should be used as a guideline only.

The estimated residual life can be checked with Pr.506 Display estimated main circuit capacitor residual life and the Life alarm (Y90) signal.

Pr.	Name	Initial value	Setting range	Operation
255 E700	Life alarm status display	0	(0 to 15, **32 to 47**)*1	Displays whether or not the parts of the control circuit capacitor, main circuit capacitor, cooling fan, and inrush current limit circuit have reached the life alarm output level. Read-only.
506 E705*2	Display estimated main circuit capacitor residual life	100%	(0% to 100%)	Displays the estimated residual life of the main circuit capacitor. Read-only.

*1 Valid values (read only) for separated converter type inverters are "0, 1, 4, and 5". Valid values (read only) for IP55 rated models are "0 to 63".

*2 The setting is available only for standard models and IP55 compatible models.

The Life alarm (Y90) signal turns ON when either the control circuit capacitor life, main circuit capacitor life, cooling fan life, inrush current limit circuit life, internal air circulation fan life or the estimated residual life of the main circuit capacitor reaches the level set to output the life alarm. (IP55 rated models have internal air-circulation fans.)

(3) Stroke limit signals

The Upper stroke limit (LSP) signal and the Lower stroke limit (LSN) signal can be used in any operation mode other than the SSCNET III(/H) operation mode.

The rotation direction indicators on the LCD operation panel (FR-LU08) and the parameter unit (FR-PU07) during position control differ depending on the ON/OFF state of the stroke limit signals as shown in the table below.

Upper stroke limit signal	Lower stroke limit signal	Operation panel indication
OFF	OFF	---
ON	OFF	STF
OFF	ON	STR
ON	ON	---

(4) Reset selection after inverter faults are cleared (with the HMS network option installed)

It is possible to select whether the inverter is reset after the "Fault reset" command is executed.

Pr.	Name	Initial value	Setting range	Operation
349	Communication reset selection/Ready bit status selection/Reset selection at inverter error clear	0	0, 1, 100, 101, **1000 (added), 1001 (added), 1100 (added), 1101 (added)**	When "1000, 1001, 1100, or 1101" is set, inverter faults are cleared without the inverter being reset.
N241	Reset selection after inverter faults are cleared	0	0	Inverter faults are cleared when the inverter is reset.
			1	Inverter faults are cleared without the inverter being reset.

Parameter setting		Description
Pr.349	N241	Reset after inverter faults are cleared ("Fault reset" command)
0, 1, 100, 101	0	Enabled
1000, 1001, 1100, 1101	1	Disabled

(5) Compliance with the latest BACnet standard (only for FR-F800)

Properties have been added to comply with the latest BACnet standard.

Property	Object support condition						
	Analog Input	Analog Output	Analog Value	Binary Input	Binary Output	Binary Value	Device
Property List	R	R	R	R	R	R	R
Current Command Priority		R			R		

R: Read-only

3. Date of Change

The change will be sequentially applied to the products manufactured in June 2019 or later.

4. Product Identification

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

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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).