Firmware Upgrade for the FR-A800, A800 Plus, F800 Series General-Purpose Inverters, the FR-B, B3 Series Inverters (FR-A800 Specification) for Pressure-Resistant Explosion-Proof Motors, and FR-A8NCG Plug-in Option

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, the FR-B, B3 series inverters (FR-A800 specification) for pressure-resistant explosion-proof motors, and FR-A8NCG plug-in option will be upgraded to improve functionality.

1. Products Affected

FR-A800 (not including the FR-A800-P), FR-A800 Plus (FR-A800-CRN), FR-F800, FR-B, B3 series inverters,
FR-A8NCG

2. Details of the Change

CC-Link IE TSN communication specifications

- Transmission speed of 100 Mbps will be available.
- Ring topology will be available.

Item		Description
Transmission speed		1 Gbps / **100 Mbps (added)***1
Minimum synchronization cycle		125.00 µs
CC-Link IE TSN authentication class		B
Communication method		Time sharing method
Synchronization function		Compliant with IEEE 802.1AS and IEEE 1588v2
Maximum number of connected units		121 units (sum of master and slave stations)
Maximum distance between nodes		100 m
Maximum number of branches		No upper limit within the same Ethernet system
Topology		Line, star, **ring (added)***2, or a combination of line and star
Connection cable		Ethernet cable (IEEE 802.3 1000BASE-T compliant cable or ANSI/TIA/EIA-568-B (Category 5e) compliant shielded 4-pair branched cable)
Connector		Shielded RJ-45
Node type		Slave station
Maximum cyclic size (of one node)	RX	64 bits
	RY	64 bits
	RWr	128 words
	RWw	128 words

*1 Set the speed using Pr.1130 Link speed selection.

Pr.1130 setting	Communication speed
0 (initial value)	1 Gbps
1	100 Mbps

*2 When the MELSEC iQ-R series master/local module RJ71GN11-T2 is the master station, the ring topology is available for the RJ71GN11-T2 whose firmware version is 10 or later.

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3. Date of Change

The change will be sequentially applied to the inverters and the FR-A8NCG manufactured in September 2020 or later.

4. Product Identification

Check the SERIAL on the rating plate of the inverter and on the board of the FR-A8NCG.

- Inverter rating plate example

<u>□</u> <u>0</u> <u>9</u> <u>○○○○○○</u>
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).

- FR-A8NCG SERIAL example

<u>□</u> <u>0</u> <u>9</u> <u>○○○</u>
Symbol Year Month Control number

SERIAL

The SERIAL consists of one symbol, two characters indicating the production year and month, and three 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).

5. Combination of the Inverter and Option

The available communication specifications depend on the SERIAL combination of the inverter (not including the FR-A800-GN) and the FR-A8NCG.

Inverter SERIAL No. / FR-A8NCG SERIAL No.	□ 0 8 ○○○○○○ or earlier (August 2020 or earlier)	□ 0 9 ○○○○○○ or later (September 2020 or later)
□ 0 8 ○○○ or earlier (August 2020 or earlier)	Transmission speed: 1 Gbps Ring topology: unavailable	Transmission speed: 1 Gbps Ring topology: unavailable
□ 0 9 ○○○ or later (September 2020 or later)	Transmission speed: 1 Gbps **Ring topology: available**	**Transmission speed: 1 Gbps/100 Mbps Ring topology: available**