

### Firmware Upgrade for the FR-XC Inverter Option

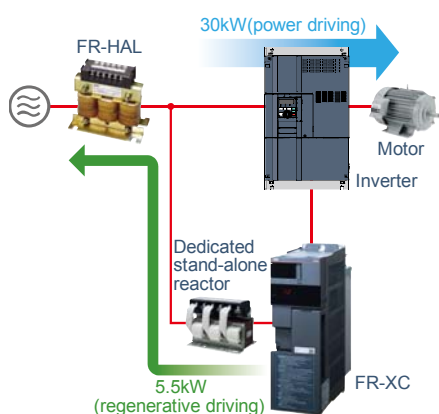
Thank you for your continued patronage of Mitsubishi Electric drive control products. The firmware of the FR-XC inverter option will be upgraded to improve functionality.

#### 1. Products Affected

FR-XC converter

#### 2. Details of the Change

Power regeneration mode 2 will be available in addition to the previous power regeneration mode. The following shows the features of power regeneration mode 2 compared to power regeneration mode 1. Power regeneration mode 2 makes the regenerative system smaller and greatly reduces the total cost.



	Mode 2	Mode 1
FR-HAL	Not required	Required
Dedicated reactor	FR-XCG	FR-XCL
Applicable motor capacity range	Unlimited	Limited

##### (1) Reduction of system equipment

The FR-HAL (AC reactor) and the FR-XCL (FR-XC dedicated reactor) are required in order to use the converter in power regeneration mode 1. In power regeneration mode 2, only the FR-XCG is required.

##### (2) Wider capacity range supported

The applicable motor capacity range is limited in power regeneration mode 1 since the number of connectable FR-HAL reactors is limited. In power regeneration mode 2, the applicable motor capacity range is unlimited.

The setting method of the function selection switch assembly (SW2) will be changed due to the addition of power regeneration mode 2.

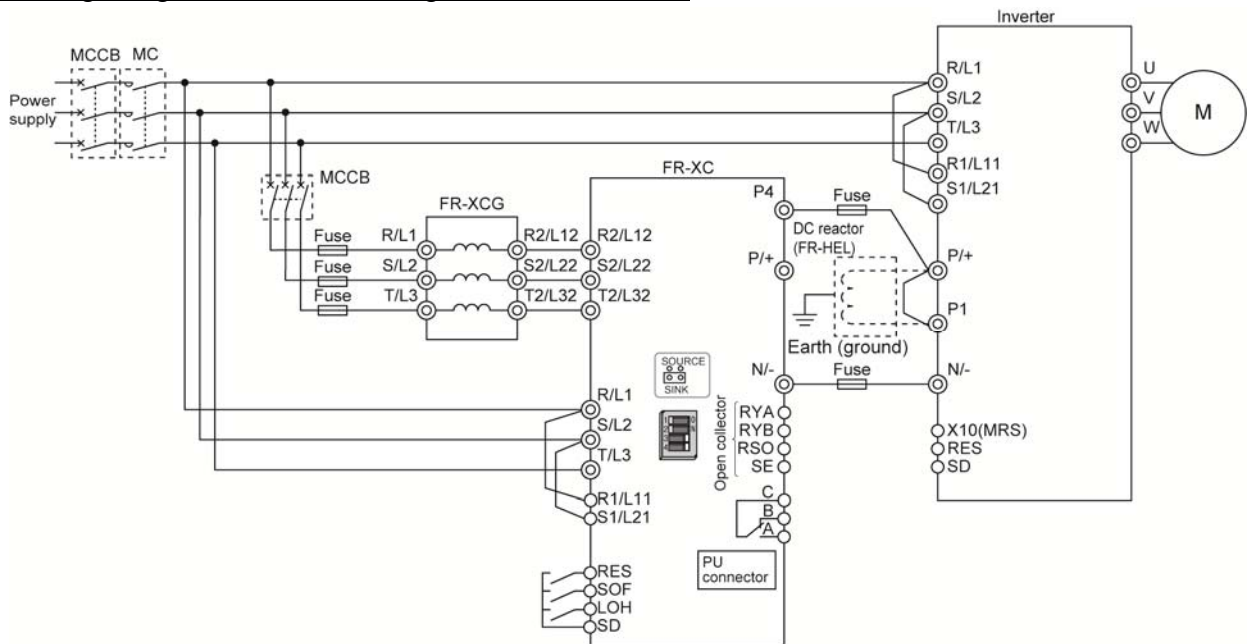
- The converter connection mode can be switched between common bus regeneration mode and power regeneration mode (1 or 2) by changing the positions of switches 1 and 2 in the function selection switch assembly (SW2).
- When using power regeneration mode 2, change the positions of the switches as shown in the following table.

Date of issue	Title		
October 2019	Firmware Upgrade for the FR-XC Inverter Option		Mitsubishi Electric Corp., Nagoya Works 5-1-14 Yada-minami, Higashi-ku, Nagoya 461-8670 Tel.: +81 (52) 721-2111 Main line

Switch 1	Switch 2	Mode
ON	ON	Common bus regeneration mode
ON	OFF	
OFF	ON	Power regeneration mode 1
OFF	OFF	Power regeneration mode 2

\* Switches 1 and 2 are ON in the initial status.

### 3. Wiring Diagram for Power Regeneration Mode 2



\* For details on wiring, refer to the FR-XC Instruction Manual.

### 4. Combination Matrix of FR-XCG and FR-XC (for Power Regeneration Mode 2)

Dedicated stand-alone reactor FR-XCG-(H)□□K	Multifunction regeneration converter	
	FR-XC-(H)□□K	FR-XC-(H)□□K-PWM*
7.5	7.5	-
11	11	-
15	15	-
22	22	18.5
30	30	22
37	37	37
55	55	55

\* The harmonic suppression function is pre-enabled in this model.

To use the converter with the FR-XCG, change the "9999" setting of Pr.416 Function enable/disable selection to "0" (harmonic suppression disabled).

### 5. Date of Change

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

### 6. Product Identification

The FR-XC after the change will have the following SERIAL or later on its rating plate.

□ 9 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).