

MITSUBISHI ELECTRIC Inverter

Sales and Service

No. 803E

Firmware Upgrade for the FR-F800 Series General-Purpose Inverters

Thank you for your continued patronage of Mitsubishi Electric drive control products.
The firmware of the FR-F800 series general-purpose inverters will be upgraded to improve functionality.

1. Products Affected

FR-F800 series

2. Details of Change

The pre-heat function will be available.

By using the pre-heat function, DC current is applied to the motor to heat the motor during stop to prevent condensation and heat the lubricant.

(1) Due to the addition of the pre-heat function, the setting value "136" will be added for Pr.178 to Pr.189 as follows. In addition, Pr.623 will be added.

Pr.	Name	Initial value	Setting value	Description
178	STF terminal function selection	60	136	Select the input terminal function. An input signal (X136) will be added to support the pre-heat function.
179	STR terminal function selection	61		
180	RL terminal function selection	0		
181	RM terminal function selection	1		
182	RH terminal function selection	2		
183	RT terminal function selection	3		
184	RL terminal function selection	4		
185	JOG terminal function selection	5		
186	CS terminal function selection	9999		
187	MRS terminal function selection	24		
188	STOP terminal function selection	25		
189	RES terminal function selection	62		
623	Pre-heat current level	9999	0 to 100%	Set the excitation current level when the pre-heat function is enabled (the X136 signal is ON). The rated motor current is regarded as 100%.
			9999	10% of the rated motor current is set as the excitation current level.

Date of issue	December 2024	Title	Firmware Upgrade for the FR-F800 Series General-Purpose Inverters	Mitsubishi Electric Corp., Nagoya Works 5-1-14 Yada-minami, Higashi-ku, Nagoya 461-8670 Tel.: +81 (52) 721-2111 Main line
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(2) The pre-heat function is enabled when all the following conditions are satisfied.

1. PM motor control is selected.
2. The Pre-heat (X136) signal is turned ON during an inverter stop.*

* When the start signal is turned ON during the pre-heat operation and then the start conditions are satisfied, the pre-heat operation will be interrupted and the motor will accelerate. In addition, when a deceleration stop is performed while the Pre-heat (X136) signal is ON, the pre-heat operation starts at the same time as the DC injection brake operation.

(3) When using the pre-heat function, note the following points.

1. The overload protection function may be activated if the setting value of Pr.623 Pre-heat current level is too high. Also, overheating may burn the motor and the inverter.
2. If the pre-heat function is used for a long time, the motor may overheat.
After the pre-heat is completed, turn OFF the Pre-heat (X136) signal to stop the pre-heat function.
3. Set Pr.9 Electronic thermal O/L relay properly according to the motor used.
The electronic thermal O/L relay function may not be enough for protection of a motor from overheating.
4. When the pre-heat function is enabled, DC current flows through the motor even when the motor is stopped. Do not touch motor terminals when the pre-heat function is enabled to prevent an electric shock.

3. Date of Change

Country of origin	Date of change
MADE IN JAPAN	The change will be sequentially applied to the January 2025 production or later.
MADE IN CHINA	The change will be sequentially applied to the February 2025 production 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).

5. Firmware Version

The inverter firmware version to which the change described will be applied is as follows:

Series	Firmware version
FR-F800	342 or later

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