

Information for Replacement of **FR-A7ND with FR-A8ND**

Precautions concerning replacement and relevant parameters are stated on the following pages.

Precautions for replacing FR-A7ND with FR-A8ND

1. EDS file

The related EDS file can be downloaded via Internet.

The Mitsubishi Electric FA Global Website
<http://www.MitsubishiElectric.co.jp/fa/>

2. Differences between FR-A7ND and FR-A8ND

Function	FR-A7ND	FR-A8ND	Remarks
Product Name of Class 0x01 Instance 1 Attribute 7	A700/F700/E700	A800/F800	Change the configuration of network devices.
Product code of Class 0x01 Instance 1 Attribute 3	48/51/49	71/73	
Output/Input Instances of the I/O communication	20/70, 21/71, 126/176	20/70, 21/71, 126/176, 127/177	The common instances are available as they are.
Actual-speed area returned value of I/O communication	The speed converted from output frequency (1 r/min increments) is returned.	Running speed monitor is returned.	
Acceleration/deceleration reference of Class 0x2A Instance 1 Attribute 18, 19, and 21	Pr.1	Pr.18	
Setting range of Class 0x2A Instance 1 Attribute 6 (DriveMode)	Fixed to 0	1 to 5	
Returned data of Class 0x2A Instance 1 Attribute 7 (SpeedActual)	The speed converted from output frequency (1 r/min increments) is returned.	Running speed monitor is returned.	
Priority between the node address switch and Pr.345 (node address)	Pr.345 setting has a higher priority. (The node address switch setting has a higher priority when Pr.345 = "63".)	The node address switch setting has a higher priority when any of "0 to 63" is set for the switches. (Pr.345 setting has a higher priority when the node address switch is set to "64" or more value.)	
Writing to Class 0x03 Instance 1 Attribute 1 (MAC ID)	The writing makes the node address switch setting invalid and reflects the setting change to Pr.345.	When the node address switch is set to any value from "0 to 63", an error response is returned.	When the node address switch is set to any value from "0 to 63".
LED status when network power is OFF after the communication is established	OFF	Red (blinking)	
Operation during I/O communication time-out	E.OP3 error	E.OP1 error occurs when the inverter is running while the operation command source or the speed command source is NET.	When Pr.502 setting is not changed from the initial setting.
Operation during PLC switch OFF	E.OP3 error occurs when the inverter operating in NET mode.	No error occurs when the start signal turns OFF and the speed command source is set to "0".	When Pr.502 setting is not changed from the initial setting.
Communication status at error reset by the Fault Reset bit of the DeviceNet communication or by Class 0x29 Instance 1 Attribute 12	Communication stops.	Communication continues.	

Function	FR-A7ND	FR-A8ND	Remarks
Writing to Class 0x29 Instance 1 Attribute 5 (NetCtrl) while the inverter is running	Writing is enabled.	Writing is disabled.	
Operation when both STF and STR are simultaneously turned ON through the DeviceNet communication (the forward rotation command and the reverse rotation command of the I/O communication or Run1 and Run2 of Class 0x29)	Inverter stop by simultaneously turning ON the forward and reverse rotation commands.	The previous status of the start signal is held even though the forward and reverse rotation commands are simultaneously turned ON.	

3. Parameter

The parameter numbers are the same. Refer to the following table to set the parameters.

Setting ◎: Set the FR-A7ND parameter as it is.

△: Change the FR-A7ND parameter and set.

×: Adjust or set the FR-A8ND parameters.

FR-A7ND parameter list				FR-A8ND compatible parameter				Parameter setting	
Pr.	Name	Setting range	Initial value	Pr.	Name	Setting range	Initial value	Setting	Remarks
345	DeviceNet address	0 to 4095	63	345	DeviceNet address	0 to 4095	63	△	Set "0" to reserve bit 12 to bit 15. In the FR-A7ND, the Pr.345 setting has a higher priority. In the FR-A8ND, the node address switch setting has a higher priority when the node address switch is set to any value from "0 to 63". For details, refer to the Instruction Manual.
346	DeviceNet baudrate	0 to 4095	132	346	DeviceNet baudrate	0 to 4095	132	△	Set "0" to reserve bit 12 to bit 15. The setting values "8 and 14" of Pr.346 Output/Input Assembly are for manufacturer setting.
349	Communication reset selection	0, 1	0	349	Communication reset selection	0, 1	0	◎	
500	Communication error execution waiting time	0 to 999.8 s	0	500	Communication error execution waiting time	0 to 999.8 s	0	◎	
501	Communication error occurrence count display	0	0	501	Communication error occurrence count display	0	0	◎	
502	Stop mode selection at communication error	0, 1, 2, 3	0	502	Stop mode selection at communication error	0, 1, 2, 3	0	◎	

(4/4)