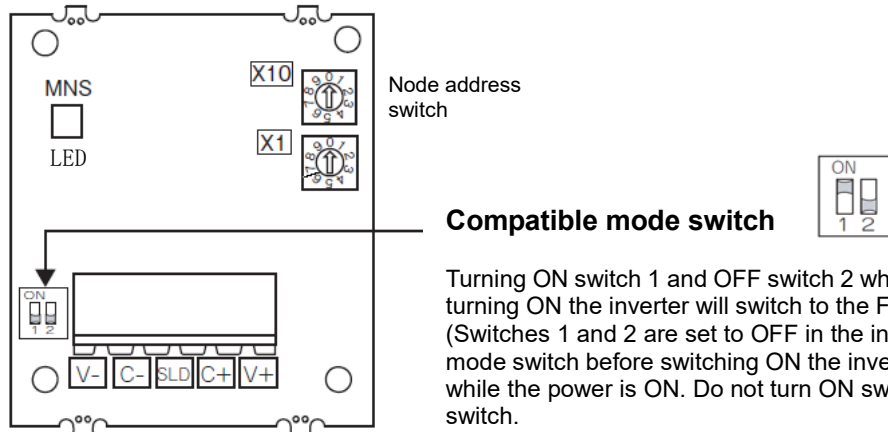


Information for Replacement of **FR-A5ND with FR-A8ND**

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

1. FR-A5ND compatible mode of FR-A8ND

Selecting the FR-A5ND compatible mode of FR-A8ND enables DeviceNet communication in the FR-A5ND specifications.



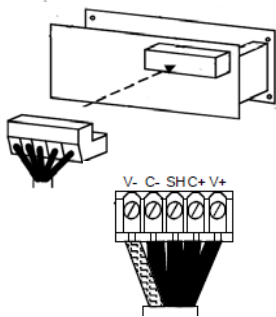
Compatible mode switch

Turning ON switch 1 and OFF switch 2 when the inverter power is OFF, then turning ON the inverter will switch to the FR-A5ND compatible mode. (Switches 1 and 2 are set to OFF in the initial status.) Set the compatible mode switch before switching ON the inverter and do not change the setting while the power is ON. Do not turn ON switch 2 of the compatible mode switch.

Installation of connector for communication

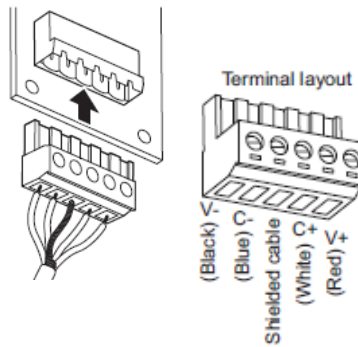
FR-A5ND

Vertical installation



FR-A8ND

Horizontal installation



Refer to the Instruction Manual for information about the installation and wiring.

2. Setting procedure

Install the FR-A8ND to the FR-A800 and connect a drop cable to the connector for communication of the FR-A8ND, referring to the Instruction Manual.

1. Set the baud rate according to the station number.
2. Configure network settings.

When using an EDS file*, use configuration software.

When an EDS file* is not used, refer to the Instruction Manual of the master to configure network settings.

An EDS file* can be downloaded for free at Mitsubishi Electric FA Global Website

www.MitsubishiElectric.co.jp/fa

* An EDS file, which has the information on network devices, is used with configuration software.

3. Use the polling or message communication from the master to the inverter to configure network settings as follows.

When using the polling, output/input instances can be set to 20/70 or 21/71 by setting Pr.346 in the FR-A8ND normal mode, as they are DeviceNet communication common specifications.

As output/input instances 26/76 are extended specifications, they can be set by switching to the FR-A5ND compatible mode and setting Pr.346. When using the message communication, switch to the FR-A5ND compatible mode to use DeviceNet communication in the FR-A5ND specifications. Use the EDS file for the FR-A5ND compatible mode.

3. Compatible mode specification

(1) FR-A5ND/FR-A8ND

Class ID	Instance ID	Attribute ID	Name	FR-A8ND FR-A5ND Compatible Mode	FR-A8ND Normal Mode	Remarks
01	1	7	Product Name	A800[]/F800[]	A800/F800	Change the configuration of network devices. ([] means the ASCII code for space (0x20).)
01	1	3	Product Code	72/74	71/73	
03	1	1	Node address setting (MAC ID)	The value can be written to Pr.345 regardless of the set values of the node address switches.	The value cannot be written to Pr.345 when "0 to 63" is set for the node address switches.	
03	1	3	Bus-off interrupt	○	×	
03	1	4	Bus-off counter	○	×	
04	26	—	Output instance 26	○	×	
04	76	—	Input instance 76	○	×	
28	1	6	Rated current (Pr.9)	0.01 A/0.1 A increments*1	0.1 A increments	
28	1	7	Rated voltage	Read from / write to Pr.83 0.1 V increments	Read from / write to Pr.19 1 V increments	
28	1	8	Motor capacity (Pr.80)	○	×	
28	1	9	Rated frequency (Pr.84)	○	×	
28	1	12	Number of motor poles (Pr.144)	○	×	
28	1	15	Base speed (Pr.3)	○	×	
29	1	5	NetCtrl (operation command source)	The value can be written while the inverter is running.	When the operation command source is set to communication, the values cannot be written while the inverter is running.	
29	1	16	DeviceNet error mode	○	×	
29	1	40	Input assembly	○	×	Attribute ID 140 in the normal mode
29	1	41	Output assembly	○	×	Attribute ID 141 in the normal mode
2A	1	4	NetRef (speed command source)	The value can be written while the inverter is running.	When the speed command source is set to communication, the values cannot be written while the inverter is running.	
2A	1	9	Actual current	0.01 A/0.1 A increments*1	0.1 A increments	
2A	1	17	Output voltage	0.1 V increments	1 V increments	
2A	1	18	Acceleration time	Time set in Pr.7/Pr.8 used to change the frequency between 0 Hz and the frequency set in Pr.20 Acceleration/deceleration reference frequency, 0.1 s increments	Time used to change the frequency between 0 Hz and the frequency set in Pr.18 High speed maximum frequency, 1 ms increments	
2A	1	19	Deceleration time			
2A	1	114	Run command (Set)	STOP and RES are not available.	STOP and RES are available.	
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.	
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 rotation command and reverse rotation command.	The previous status of the start signal is held even though the forward rotation command and reverse rotation command are simultaneously turned ON.	
Output/Input instances for I/O communication				20/70, 21/71, 26/76	20/70, 21/71, 126/176, 127/177	The common instances (20/70, 21/71) are available as they are.
Priority between the node address switches 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 switches are set to "64" or larger.)	

*1 Differs according to the inverter capacity.

Refer to the Instruction Manual for details of each function of compatible mode.

(○: Available, ×: Not available)

4. PARAMETER

Some parameter numbers and the setting values differ. Please refer to the remarks in the following table to set the parameters.

Setting ◎: Set the FR-A5ND parameter as it is.

△: Change the FR-A5ND parameter and set.

×: Adjust or set the FR-A8ND parameters.

FR-A5ND 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 Startup data (low byte)	0 to 255	63	345	DeviceNet address	0 to 4095	63	△	High and low byte data is set by batch in FR-A8ND. Set "0" for the address key (AKey) when setting the data using the DeviceNet address (Pr.345). In this case, use the master device or DeviceNet Connection Object (0x05 Instance 2 Attribute 12) to change Watchdog timeout action (WDA) setting.
346	DeviceNet baud rate Startup data (low byte)	0 to 255	132	346	DeviceNet baud rate	0 to 4095	132	△	High and low byte data is set by batch in FR-A8ND. Set "0" for the baud rate key when setting the data using the DeviceNet baud rate (Pr.346).
347	DeviceNet address Startup data (high byte)	0 to 255	160	—					
348	DeviceNet baud rate Startup data (high byte)	0 to 255	80	—					

(4/4)