INVERTER

New Product RELEASE   No.16-1E

Release of the FR-A800-E Series Inverter Supporting Ethernet Communication

The inverter supporting Ethernet communication is now available in the highly valued FR-A800 series.

Features

The following functions (protocols) are available via general-purpose Ethernet communication.

- Ethernet communication enables monitoring of the inverter status or setting of parameters via Internet.
- The iQ Sensor Solution (iQSS) is supported. The inverters connected on the network are automatically detected. The result of the automatic detection is displayed on the operation screen of the inverter setup software (FR Configurator2). The IP address, subnet mask, or other data required for Ethernet communication can be entered in each parameter. The time required for starting the network connection can be reduced.
- Modbus/TCP is supported. (No plug-in option is required.)

Transmission specifications

| Item	Description
Category	100BASE-TX/10BASE-T
Data transmission speed	100 Mbps (100BASE-TX)/10 Mbps (10BASE-T)[*1]
Interface	RJ-45
Number of interfaces available	1
IP version	IPv4

*1 Auto-negotiation is supported.

Specifications other than the above are the same as those of the FR-A800 series standard inverter.
However, RS-485 terminals are not equipped, and some other restrictions apply.

Network connection example
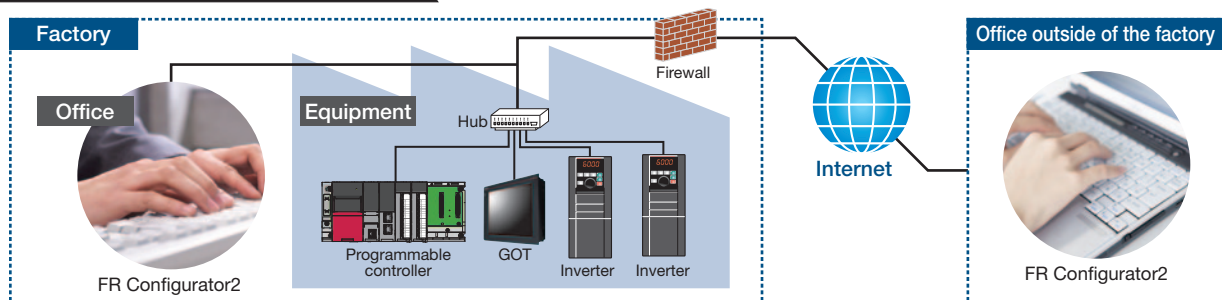
In order to protect the inverter and the system against unauthorized access by external systems via network, take security measures including firewall settings.

Release schedule   April 2016

Lineup
●: Released model

• Standard model

FR - A 8 **2** **0** - **0.4K** - **E1** - ☐

Symbol	Voltage class
2	200 V class
4	400 V class

Symbol	Structure, functionality
0	Standard model

Symbol*1	Description
0.4K to 280K	Inverter ND rated capacity (kW)

Symbol	Type*2	Communication type
E1	FM	Ethernet
E2	CA	

Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor
None	Without	Without
60	With	Without
06*3	With	With

Three-phase 200V class FR-A820-☐*4	0.4K 00046	0.75K 00077	1.5K 00105	2.2K 00167	3.7K 00250	5.5K 00340	7.5K 00490	11K 00630	15K 00770	18.5K 00930	22K 01250	30K 01540	37K 01870	45K 02330	55K 03160	75K 03800	90K 04750
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Three-phase 400V class FR-A840-☐*4	0.4K 00023	0.75K 00038	1.5K 00052	2.2K 00083	3.7K 00126	5.5K 00170	7.5K 00250	11K 00310	15K 00380	18.5K 00470	22K 00620	30K 00770	37K 00930	45K 01160	55K 01800	75K 02160	90K 02600
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	110K 03250	132K 03610	160K 04320	185K 04810	220K 05470	250K 06100	280K 06830										
	●	●	●	●	●	●	●										

• Separated converter type

[Inverter]

FR - A 8 **4** **2** - **315K** - **E1** - ☐

Symbol	Voltage class
4	400 V class

Symbol	Structure, functionality
2	Separated converter type

Symbol*1	Description
315K to 500K	Inverter ND rated capacity (kW)

Symbol	Type*2	Communication type
E1	FM	Ethernet
E2	CA	

Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor
None	Without	Without
60	With	Without
06	With	With

Three-phase 400V class FR-A842-☐*5	315K 07700	355K 08660	400K 09620	450K 10940	500K 12120
	●	●	●	●	●

• IP55 compatible model

FR - A 8 **4** **6** - **7.5K** - **E1** - **60** **C3**

Symbol	Voltage class
4	400 V class

Symbol	Structure, functionality
6	IP55 compatible model

Symbol*1	Description
0.4K to 132K	Inverter ND rated capacity (kW)

Symbol	Type*2	Communication type
E1	FM	Ethernet
E2	CA	

Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor
60	With	Without
06	With	With

Symbol	EMC filter
C2	Built-in C2 filter
C3	Built-in C3 filter

Three-phase 400V class FR-A846-☐ (with a built-in DC reactor)	0.4K 00023	0.75K 00038	1.5K 00052	2.2K 00083	3.7K 00126	5.5K 00170	7.5K 00250	11K 00310	15K 00380	18.5K 00470	22K 00620	30K 00770	37K 00930	45K 01160	55K 01800	75K 02160	90K 02600
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	110K 03250	132K 03610															
	●	●															

*1: Models can be alternatively indicated with the inverter rated current (SLD rating).
  (IP55 compatible models have LD and ND rating types only. However, the SLD rated current of standard models is used to represent the model.)

*2: Specification differs by the type as follows.

Type	Monitor output	Initial setting			
		Built-in EMC filter	Control logic	Rated frequency	Pr.19 Base frequency voltage
FM (terminal FM equipped model)	Terminal FM (pulse train output) / Terminal AM (analog voltage output (0 to ±10 VDC))	OFF	Sink logic	60 Hz	9999 (same as the power supply voltage)
CA (terminal CA equipped model)	Terminal CA (analog current output (0 to 20 mADC)) / Terminal AM (analog voltage output (0 to ±10 VDC))	ON	Source logic	50 Hz	8888 (95% of the power supply voltage)

*3: Available for the 5.5K or higher.

*4: For using the 75K or higher inverter and a 75 kW or higher motor, always install a DC reactor (FR-HEL), which is available as an option.

*5: Always install the converter unit (FR-CC2). (Not required when a high power factor converter (FR-HC2) is used.)

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