

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

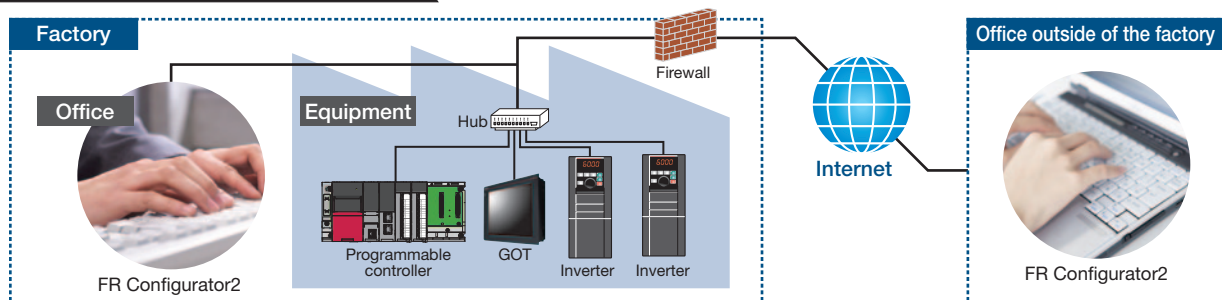
*1 Auto-negotiation is supported.

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

F R - A 8 2 0 - 0.4K - E1 -

Symbol	Voltage class	Symbol	Structure, functionality	Symbol ^{*3}	Description	Symbol	Type ^{*2}	Communication type	Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor
2	200 V class	0	Standard model	0.4K to 280K	Inverter ND rated capacity (kW)	E1	FM	Ethernet	None	Without	Without
4	400 V class					E2	CA		60	With	Without
									06 ^{*3}	With	With

Three-phase 200V class FR-A820-□ ^{*3}	0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K	30K	37K	45K	55K	75K	90K
	00046	00077	00105	00167	00250	00340	00490	00630	00770	00930	01250	01540	01870	02330	03160	03800	04750
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Three-phase 400V class FR-A840-□ ^{*3}	0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K	30K	37K	45K	55K	75K	90K
	00023	00038	00052	00083	00126	00170	00250	00310	00380	00470	00620	00770	00930	01160	01800	02160	02600
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	110K	132K	160K	185K	220K	250K	280K										
03250	03610	04320	04810	05470	06100	06830											
●	●	●	●	●	●	●											

•Separated converter type

[Inverter]

F R - A 8 4 2 - 315K - E1 -

Symbol	Voltage class	Symbol	Structure, functionality	Symbol ^{*3}	Description	Symbol	Type ^{*2}	Communication type	Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor
4	400 V class	2	Separated converter type	315K to 500K	Inverter ND rated capacity (kW)	E1	FM	Ethernet	None	Without	Without
						E2	CA		60	With	Without
									06	With	With

Three-phase 400V class FR-A842-□ ^{*3}	315K	355K	400K	450K	500K
	07700	08660	09620	10940	12120
●	●	●	●	●	

•IP55 compatible model

F R - A 8 4 6 - 7.5K - E1 - 60 C3

Symbol	Voltage class	Symbol ^{*3}	Description	Symbol	Type ^{*2}	Communication type	Symbol	Circuit board coating (IEC60721-3-3 3C2/3S2 compatible)	Plated conductor	Symbol	EMC filter	
4	400 V class		0.4K to 132K Inverter ND rated capacity (kW)		E1	FM	Ethernet	60	With	Without	C2	Built-in C2 filter
		6	IP55 compatible model		E2	CA		06	With	With	C3	Built-in C3 filter

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