

Automating the World

INVERTER

New Product RELEASE

No.24-1E

FACTORY AUTOMATION

FR-E800

Addition of EtherCAT-compatible safety communication model FR-E800-SCEPC





▶ Supporting FSoE, the safety sub-function over EtherCAT

FSoE is supported as the EtherCAT application.

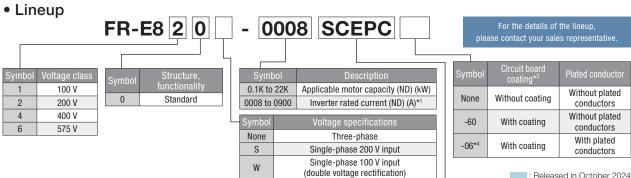
Input and output signals for safety sub-functions can be controlled using FSoE.

Supporting FSoE enables flexible configuration of a system using both standard communication and safety communication in EtherCAT communication.

Communication specifications

Item	Description				
Maximum number of connected units	65535 ^{*1}				
Safety PDO mapping	Fixed mapping				
FSoE slave address specification method	Specification by the safety parameter Pr.S040				
SRA Parameter Set	Not available				
FSoE watchdog time setting range	120 to 65534 ms				

^{*1:} The number varies depending on the specification of the master.



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Symbol	Communication / functional safety specifications	Monitoring/protocol specifications	Rated frequency (initial setting)	Control logic (initial status)			
-1		Pulse (terminal FM)	60 Hz	Sink logic			
-4 *1*5	RS-485 + SIL2/PLd	Voltage (terminal AM)	50 Hz	Source logic			
-5		Voltage (terminal AM)	60 Hz	Sink logic			
EPA		Protocol group A *2	60 Hz	Sink logic			
EPB	Ethernet + SIL2/PLd	Protocol group B *2	50 Hz	Sink logic / Source logic *6			
EPC		Protocol group C *2	50 Hz	Sink logic / Source logic *6			
SCEPA		Protocol group A *2	60 Hz	Source logic *7			
SCEPB	Ethernet + SIL3/PLe	Protocol group B *2	50 Hz	Source logic *7			
SCEPC		Protocol group C *2	50 Hz	Source logic *7			

^{*1:} Models with circuit board coating (-60/-06) only.

1. Models with discussional color and provided in the group.

**E Selectable protocols differ depending on the group.

Protocol group A: CC-Link IE TSN, CC-Link IE Field Network Basic, MODBUS/TCP, EtherNet/IP, and BACnet/IP

Protocol group B: CC-Link IE TSN, CC-Link IE Field Network Basic, MODBUS/TCP, and PROFINET Protocol group C: EtherCAT
*3: Conforming to IEC 60721-3-3:1994 3C2

- *5: The kW indication is not available for models with a suffix "-4". When the kW indication is required. purchase the applicable model with a suffix "-5" and change the initial settings with reference to the Instruction Manual. (Refer to the Instruction Manual (Connection) for the switching of the control logic of the inverter, and the Instruction Manual (Function) for the rated frequency.)
- *6: The initial status of the control logic differs depending on the inverter model. Sink logic for the models indicated with the applicable motor capacity (kW) Source logic for the models indicated with the rated frequency (A)
- *7: The control logic is fixed to the source logic.

Three-phase 200 V	0.1K	0.2K	0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K
Tillee-pliase 200 V	0008	0015		0050	0080	0110	0175		0330	0470	0600		0900
FR-E820-[](E/SCE)	•	•	•	•	•	•	•	•	•	•	•	•	•
Three-phase 400 V	_	-	0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K
	-	-			0040	0060	0095		0170	0230			0440
FR-E840-[](E/SCE)	_	_	•	•					•	•	•		•
FR-E846[](SCE)	-	_	_	_	_	_	_	_	_	_	_	_	_
Three-phase 575 V	_	-	-	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	-	-	-	_
Tillee-pliase 373 V	-	_		0017	0027	0040	0061	0090	0120	-			-
FR-E860-[](E/SCE)	_	_	_	•					•	_	_	_	_
Single-phase 200 V	0.1K	0.2K	0.4K	0.75K	1.5K	2.2K	-	_	-	-	-	-	-
Siligie-pilase 200 v	0008	0015			0080	0110	-		-	-			-
FR-E820S-[](E/SCE)	•	•	•	•			_	_	_	_	_	_	_
Single-phase 100 V	0.1K	0.2K	0.4K	0.75K	-	-	-	-	-	-	-	-	-
	0008	0015	0030	0050	-	_	-	_	-	-	-	-	-
FR-E810W-[](E/SCE)	•	•	•	•	_	_	_	_	_	_	_	_	_

●: Released -: Not applicable

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EtherNet/IP is a trademark of ODVA, Inc.

BACnet is a registered trademark of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

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EtherCAT is a trademark of Beckhoff Automation GmbH.

CC-Link IE TSN and CC-Link IE Field Network Basic are registered trademarks of CC-Link Partner Association.

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^{*4:} Applicable for the FR-E820-0470(11K) or higher, and the FR-E840-0380(18.5K) or higher.