

FR-E800

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



FR-E820-0008SCEPC

NEW



► 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.

• Lineup

FR-E820-0008SCEPC

Symbol

Voltage class

1100 V

2200 V

4400 V

6575 V

Symbol

Structure, functionality

0Standard

Symbol

Description

0.1K to 22KApplicable motor capacity (ND) (kW)

0008 to 0900Inverter rated current (ND) (A)*1

Symbol

Voltage specifications

NoneThree-phase

SSingle-phase 200 V input

WSingle-phase 100 V input (double voltage rectification)

Symbol

Circuit board coating*3

Plated conductor

NoneWithout coatingWithout plated conductors

-60With coatingWithout plated conductors

-06*4With coatingWith plated conductors

Released in October 2024

For the details of the lineup, please contact your sales representative.

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

*2: 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

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

*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.

	0.1K	0.2K	0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K
Three-phase 200 V	0008	0015	0030	0050	0080	0110	0175	0240	0330	0470	0600	0760	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
FR-E840-□(E/SCE)	—	—	●	●	●	●	●	●	●	●	●	●	●
FR-E846□(SCE)	—	—	—	—	—	—	—	—	—	—	—	—	—
Three-phase 575 V	—	—	—	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	—	—	—	—
FR-E860-□(E/SCE)	—	—	—	●	●	●	●	●	●	—	—	—	—
Single-phase 200 V	0.1K	0.2K	0.4K	0.75K	1.5K	2.2K	—	—	—	—	—	—	—
FR-E820S-□(E/SCE)	0008	0015	0030	0050	0080	0110	—	—	—	—	—	—	—
Single-phase 100 V	0.1K	0.2K	0.4K	0.75K	—	—	—	—	—	—	—	—	—
FR-E810W-□(E/SCE)	0008	0015	0030	0050	—	—	—	—	—	—	—	—	—

●: Released —: Not applicable

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