MITSUBISHI ELECTRIC
Changes for the Better

Automating the World

FR-E800 SERIES

PRODUCT OVERVIEW

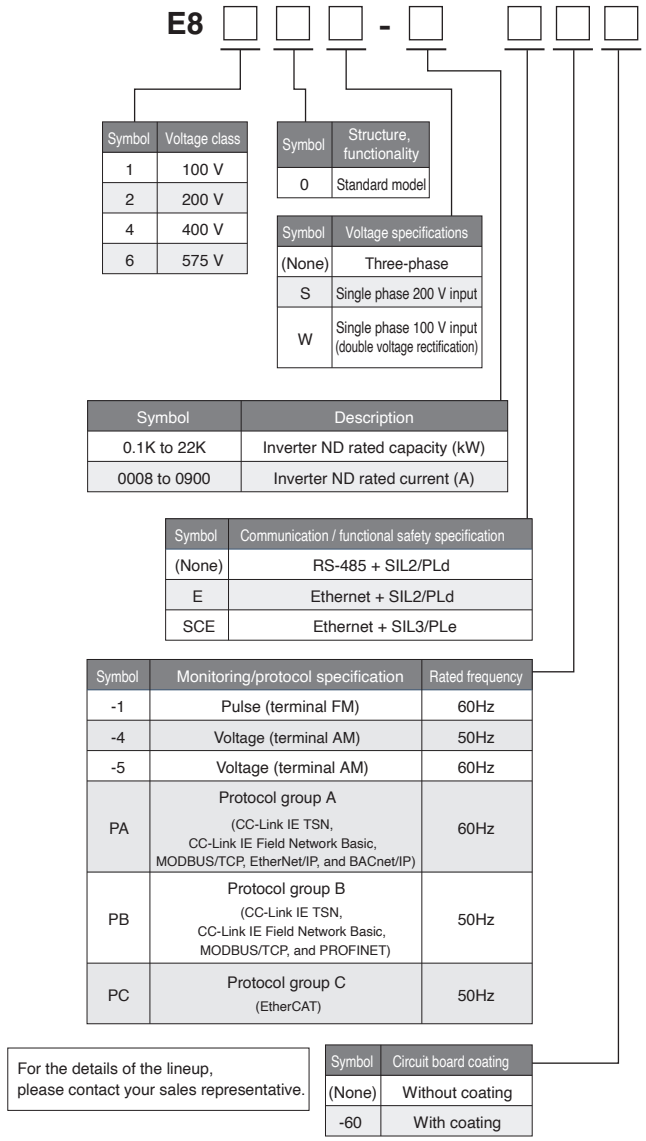
- Compact design
- Designed to save energy and minimize costs
- Proactive maintenance

The FR-E800 Series variable frequency drive is built upon Mitsubishi Electric's proven variable speed control technology throughout years of reliable operation across various constant and variable torque applications. Designed to save energy and minimize cost, the FR-E800 brings together advances in quality, performance, and predictive maintenance capabilities in one multi-purpose inverter.

KEY BENEFITS:

- **Compact design –** Save space with a compact footprint to control 3-phase motors up to 10 HP (with expansion in the future) at 200V, 400V and 600V.
- **Dual overload rating –** Achieve top performance in smaller frame sizes with light duty (LD) and normal duty (ND) overload current ratings.
- **Auto-tune to IM & PM motors –** Setup and commission quickly and easily without time-consuming tuning or the need for on-site support.
- **RS-485 and "dual-port" Ethernet protocol models –** Switch between Ethernet protocols simply by changing internal parameters. The FR-E800 series inverters support a variety of open networks without the need for additional option cards.
- **MELSEC 2K step PLC –** Reduce internal components and save panel space, eliminating wiring time, and reducing system setup times. Operation of the system can be customized by the FR-E800's built-in PLC feature.
- **Inverter-to-inverter linking –** Create small-scale systems by connecting multiple VFDs via Ethernet protocols. The communication between multiple inverters is carried out through the inputs/outputs and built-in PLC.
- **Extended environmental rating –** FR-E800 operates in ambient temperatures from -20°C to 60°C (-5 to 140°F) and the control card is conformal coated to withstand harsh environments.
- **Corrosion alert system –** FR-E800 is the world's first system to identify signs of damage caused by hydrogen sulfide or other corrosive gases. The operator receives a notification when the production environment needs to be improved or risk the possibility of unplanned downtime.
- **Life diagnostics function –** Analyze and determine remaining lifetime of critical components, such as capacitors, contact relays, cooling fan, and inrush current limit resistor.

Nomenclature Chart



Symbol	Voltage class
1	100 V
2	200 V
4	400 V
6	575 V

Symbol	Structure, functionality
0	Standard model

Symbol	Voltage specifications
(None)	Three-phase
S	Single phase 200 V input
W	Single phase 100 V input (double voltage rectification)

Symbol	Description
0.1K to 22K	Inverter ND rated capacity (kW)
0008 to 0900	Inverter ND rated current (A)

Symbol	Communication / functional safety specification
(None)	RS-485 + SIL2/PLd
E	Ethernet + SIL2/PLd
SCE	Ethernet + SIL3/PLe

Symbol	Monitoring/protocol specification	Rated frequency
-1	Pulse (terminal FM)	60Hz
-4	Voltage (terminal AM)	50Hz
-5	Voltage (terminal AM)	60Hz
PA	Protocol group A (CC-Link IE TSN, CC-Link IE Field Network Basic, MODBUS/TCP, EtherNet/IP, and BACnet/IP)	60Hz
PB	Protocol group B (CC-Link IE TSN, CC-Link IE Field Network Basic, MODBUS/TCP, and PROFINET)	50Hz
PC	Protocol group C (EtherCAT)	50Hz

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

Symbol	Circuit board coating
(None)	Without coating
-60	With coating

Support for a Range of Voltages

200-240V	HP (ND)	AMPS (ND)	AMPS (LD)
E820-0008	1/8	0.8	1.3
E820-0015	1/4	1.5	2
E820-0030	1/2	3	3.5
E820-0050	1	5	6
E820-0080	2	8	9.6
E820-0110	3	11	12
E820-0175	5	17.5	19.6
E820-0240	7.5	24	30
E820-0330	10	33	40

380-480V	HP (ND)	AMPS (ND)	AMPS (LD)
E840-0016	1/2	1.6	2.1
E840-0026	1	2.6	3.5
E840-0040	2	4	5.5
E840-0060	3	6	6.9
E840-0095	5	9.5	11.1
E840-0120	7.5	112	17.5
E840-0170	10	17	23

575-600V	HP (ND)	AMPS (ND)	AMPS (LD)
E860-0017	1	1.7	2.5
E860-0027	2	2.7	3.6
E860-0040	3	4	5.6
E860-0061	5	6.1	8.2
E860-0090	7.5	9	11

100-120V 1-Phase	HP (ND)	AMPS (ND)	AMPS (LD)
E810W-0008	1/8	0.8	–
E810W-0015	1/4	1.5	–
E810W-0030	1/2	3	–
E810W-0050	1	5	–

200-240V 1-Phase	HP (ND)	AMPS (ND)	AMPS (LD)
E820S-0008	1/8	0.8	–
E820S-0015	1/4	1.5	–
E820S-0030	1/2	3	–
E820S-0050	1	5	–
E820S-0080	2	8	–
E820S-0110	3	11	–

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