



MATERIAL FACT SHEET

523668 FR-E820S-0110EPA-60

General Data

Product Hierarchy	IAK24801
	INVERTER
	FR-E820
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	B (Limited Availability from Stock)

e-shop: https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000703103

FA-Inverter: Inverter

Series	FR-E800 SERIES
Type	FR-E800-ETH INVERTER
Minimum Rated Voltage (V)	200
Min. Permissible Voltage (V)	170
Maximum Rated Voltage (V)	240
Max. Permissible Voltage (V)	264
Current Type	AC
Phases	1
Rated Output Current ND (A)	11
Rated Motor Capacity ND (kW)	2.2
Frequency Range (Hz)	0.2-590
Control Method	MAGNETIC FLUX VECTOR CONTROL
Control Method (2)	PM SENSORLESS VECTOR CONTROL
Control Method (3)	REAL SENSORLESS VECTOR CONTROL
Control Method (4)	V/F CONTROL
Motor Type	INDUCTION MOTOR, PM MOTOR
Brake Chopper ED (%)	100
Integrated EMC Filter	NO
Safe Torque Off (STO)	YES
Regenerative (4Q)	NO
Integrated DC Choke	NO
Display	BUILT-IN
Display Type	4 DIGITS LED
PLC Function	YES
Program Memory	2K
Program Memory Unit	STEPS
Integrated Digital Inputs	2
Digital Outputs (Transistor)	0
Digital Outputs (Relay)	1
Integrated Analogue Inputs	2
Integrated Analogue Outputs	0
IO Type of Terminal Block	SPRING CLAMP
Expandable	YES
RS-485	NO
USB	1 (MINI B)
Ethernet Port	2
Built-In Network	BACNET/IP
Built-In Network (2)	CC-LINK IE FIELD BASIC
Built-In Network (3)	CC-LINK IE TSN
Built-In Network (4)	ETHERNET/IP
Built-In Network (5)	MODBUS/TCP
Leakage Current (mA)	1.2
Power Loss LD (W)	-
Power Loss ND (W)	96
Standby Power Consumption (W)	-
Protection Class	IP20

Product Dimensions & Weight

Width (mm)	140
Height (mm)	128
Depth (mm)	142,5
Weight (kg)	1,9

Logistic Dimensions & Gross Weight

Length (cm)	21,0
Width (cm)	17,0
Height (cm)	22,0
Gross Weight (kg)	2,128
Volume (cdm)	7,854

Stock Data

Planned Delivery Time (Days)	217
------------------------------	-----

Life Cycle

Sales Start	09.11.2020
Predecessor	No Predecessor

Additional Product Information

Battery included	NO
------------------	----

Export Data

Commodity Code	85044095
Legal Control (Dual Use List)	Not Listed
Country of Origin	Japan (JP)
Preference Status (Supplier Declaration)	Non EU

Environmental

REACH Limit Exceeded	YES
REACH Substance CAS Number	108-78-1
REACH Substance CAS Number (2)	540-97-6
REACH Substance CAS Number (3)	541-02-6
REACH Substance CAS Number (4)	556-67-2
REACH Substance CAS Number (5)	71868-10-5
REACH Substance CAS Number (6)	7439-92-1
REACH Substance CAS Number (7)	79-94-7
Dangerous Goods Class	NO
Dangerous Goods Identifier	NO
RoHS Compliance	COMPLIANT
WEEE	B2B

Conformity

CE	COMPLIANT
UL/cUL	COMPLIANT
EAC	COMPLIANT
UKCA	COMPLIANT

Documentation & Media Data

Manual URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=bltdae25c2bd5f2ff94&q=FR-E820S-0110EPA-60&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-E820S-0110EPA-60&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-E820S-0110EPA-60&doc-lang=en
Network configuration file URL	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blte8cf990c7c524b4e&q=FR-E820S-0110EPA-60&doc-lang=en

Product Packaging

Cardboard (g)	290
Other paper (g)	0
Aluminum (g)	0
Steel (g)	0
Styrofoam (g)	0
Other plastic (g)	10
Wood (g)	0
Glass (g)	0
Others (g)	0

Spare parts

Material	Description	Quantity	Unit
606265	FR-E820-KEPA/EPA PCB CPU	1	PC
606267	FR-E820(S)/E840/E860 PCB TERMINAL	1	PC
611136	FR-E840-0040-0095 FAN	1	PC
611139	FR-E800-(SC)EPA(B) parameter unit	1	PC
611140	FR-E800-3,7K CBL CA	1	PC
591470	FR-A870 CABLE ALL BKO-CA1972H01	1	PC
611144	FR-E800 COVER TOP ALL	1	PC
611143	FR-E840-0040-0095 COVER FAN	1	PC
591280	FR-A800-E1-60 PCB CPU	1	PC
282932	FR-A840/842/846-ALL TERMINAL BLOCK A80TA	1	PC
591470	FR-A870 CABLE ALL BKO-CA1972H01	1	PC
591471	FR-A870 CABLE ALL BKO-CA1972H02	1	PC
283481	FR-A840-00023-00126-2-60 CBL MA-CPU	1	PC
283660	FR-A840-00023-00126-2-60 COVER LOWER FR.	1	PC
283662	FR-A840-00083/00126-2-60 COVER FAN	1	PC
591486	FR-A870 COVER INTERFACE ALL	1	PC
591494	FR-A870 GROUND WIRE ETH ALL	1	PC

Compatible products

Material	Description / Price List Text / Classification
70727	FR-A5 CBL 1 Cable for connecting Inverter and Programming panel; 1m Class 100100405: FA-Inverter: Cable
70728	FR-A5 CBL 3 Cable for connecting Inverter and Programming panel; 3m Class 100100405: FA-Inverter: Cable
70729	FR-A5 CBL 5 Cable for connecting Inverter and Programming panel; 5m Class 100100405: FA-Inverter: Cable
130832	FR-UDA02 DIN-Rail Adaptor for FR-D720S-1,5k; FR-D740-0,4k-3,7k Class 100100403: FA-Inverter: External Option
167612	FR-RJ45-HUB10 Distribution Module for RJ45; 10 way Class 100100403: FA-Inverter: External Option
167613	FR-RJ45-HUB4 Distribution Module for RJ45; 4 way Class 100100403: FA-Inverter: External Option
167614	FR-RJ45-TR Terminal Resistor Plug RJ45 Class 100100403: FA-Inverter: External Option
202426	FR-BU2-H7.5K Brake Unit without Brake Resistor for all Inverters with DC-Bus Terminals; 400V Class 100100407: FA-Inverter: Brake Option
221540	USB-CAB-5M USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m Class 100100303: FA-HMI: Cable
238360	FFR-HEL-2.2K-E DC Link choke for 200V Inverter; 2,2kW; 3,1mH; 10,5A Class 100100406: FA-Inverter: Choke
254749	NF63-SV 3P 40A Circuit breaker 3pole. In = 40A; Icu = Ics = 7,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
254785	NF63-HV 3P 40A Circuit breaker 3pole. In = 40A; Icu / Ics = 10 / 8kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
275503	FR Configurator-M+FR-Configurator2 FR-Configurator for 700 series; multi I + FR-Configurator2 for 800 series Class 100101203: FA-Software: Software Inverter
279143	S-T10 AC200V 1A Magnetic contactor. 4kW; 1NO; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
279200	S-T10 AC200V 1B Magnetic contactor. 4kW; 1NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
279242	S-T21 AC200V 2A2B Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor

Material	Description / Price List Text / Classification
506377	FR-A8AX-60 E-KIT 16-Bit-Digital-Input; BCD/Binary-Code; 24V DC; 5mA; Coated; E-KIT for FR-E800 Class 100100402: FA-Inverter: Internal Option
506378	FR-A8AY-60 E-KIT Digital-/Analog Output; Output load: 24V DC; 0,1A; Coated; E-KIT for FR-E800 Class 100100402: FA-Inverter: Internal Option
506379	FR-A8AR-60 E-KIT Relay output; 3 additional output relays; Coated; E-KIT for FR-E800 Class 100100402: FA-Inverter: Internal Option
572856	FFR-E-CS-110-26A-SF1 Radio Noise Filter for FR-E820S-110; C1: 20m, C2:50m Class 100100404: FA-Inverter: Filter
572857	FFR-E-CS-110-26A-SF1-LL Radio Noise Filter for FR-E820S-110; C1: 10m Class 100100404: FA-Inverter: Filter
573101	FR-A8AP-60 E-KIT Incremental Encoder Feedback; E-KIT for FR-E800; Coated Class 100100402: FA-Inverter: Internal Option
679114	EM-AMF 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; 3000r/min Class 100100410: FA-Inverter: Motor
679115	EM-AMFW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
679116	EM-AMFB 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; 3000r/min Class 100100410: FA-Inverter: Motor
679117	EM-AMFBW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
679118	EM-AMFK 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With key; 3000r/min Class 100100410: FA-Inverter: Motor
679119	EM-AMFKW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With key; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
679120	EM-AMFBK 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; With key; 3000r/min Class 100100410: FA-Inverter: Motor
679121	EM-AMFBKW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; With key; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
703100	EM-AMFT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; 3000r/min Class 100100410: FA-Inverter: Motor
703101	EM-AMFBT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; With brake; 3000r/min Class 100100410: FA-Inverter: Motor
703102	EM-AMFKT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; With key; 3000r/min Class 100100410: FA-Inverter: Motor
703103	EM-AMFBKT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; With brake; With key; 3000r/min Class 100100410: FA-Inverter: Motor