



## MATERIAL FACT SHEET

### 577181 FR-E820S-0110SCEPA-60

#### General Data

Product Hierarchy	IAK24801
	INVERTER
	FR-E820
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	C (Non-Stock Material / Make-to-Order)

e-shop: <https://emea.mitsubishielectric.com/fa/shop/material-page/00000000000577181>

#### FA-Inverter: Inverter

Series	FR-E800 SERIES
Type	FR-E800-ETH SAFETY CONTROL
Minimum Rated Voltage (V)	200
Min. Permissible Voltage (V)	170
Maximum Rated Voltage (V)	240
Max. Permissible Voltage (V)	264
Current Type	AC
Phases	3
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	0
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)	2,090
Volume (cdm)	7,854

### Stock Data

Planned Delivery Time (Days)	217
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### Life Cycle

Sales Start	09.11.2020
Predecessor	No Predecessor

### Additional Product Information

Battery included	NO
Product Code	INV(EXCEPT VECTOR INV)

### 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	<a href="#">1067-53-4</a>
REACH Substance CAS Number (2)	<a href="#">108-78-1</a>
REACH Substance CAS Number (3)	<a href="#">115-86-6</a>
REACH Substance CAS Number (4)	<a href="#">119313-12-1</a>
REACH Substance CAS Number (5)	<a href="#">2451-62-9</a>
REACH Substance CAS Number (6)	<a href="#">68-12-2</a>
REACH Substance CAS Number (7)	<a href="#">71868-10-5</a>
REACH Substance CAS Number (8)	<a href="#">7439-92-1</a>
REACH Substance CAS Number (9)	<a href="#">79-94-7</a>
REACH Substance CAS Number (10)	<a href="#">80-05-7</a>
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	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en</a>
Certificates URL Indicator	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en</a>
CAD URL Indicator	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en</a>
Network configuration file URL	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-E820S-0110SCEPA-60&amp;doc-lang=en</a>

### Product Packaging

Cardboard (g)	800
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
<a href="#">611135</a>	FR-E840-SCEPB-60 PCB TA	1	PC
<a href="#">611136</a>	FR-E840-0040-0095 FAN	1	PC
<a href="#">611139</a>	FR-E800-(SC)EPA(B) parameter unit	1	PC
<a href="#">611140</a>	FR-E800-3,7K CBL CA	1	PC
<a href="#">611144</a>	FR-E800 COVER TOP ALL	1	PC
<a href="#">611143</a>	FR-E840-0040-0095 COVER FAN	1	PC
<a href="#">606265</a>	FR-E820-KEPA/EPA PCB CPU	1	PC
<a href="#">606267</a>	FR-E820(S)/E840/E860 PCB TERMINAL	1	PC
<a href="#">611140</a>	FR-E800-3,7K CBL CA	1	PC
<a href="#">591470</a>	FR-A870 CABLE ALL BKO-CA1972H01	1	PC
<a href="#">611144</a>	FR-E800 COVER TOP ALL	1	PC
<a href="#">764268</a>	FR-E860 PRINTED WIRE BOARD TC103A732G51	1	PC

### Compatible products

Material	Description / Price List Text / Classification
<a href="#">70727</a>	FR-A5 CBL 1 Cable for connecting Inverter and Programming panel; 1m Class 100100405: FA-Inverter: Cable
<a href="#">70728</a>	FR-A5 CBL 3 Cable for connecting Inverter and Programming panel; 3m Class 100100405: FA-Inverter: Cable
<a href="#">70729</a>	FR-A5 CBL 5 Cable for connecting Inverter and Programming panel; 5m Class 100100405: FA-Inverter: Cable
<a href="#">130832</a>	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
<a href="#">167613</a>	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
<a href="#">202426</a>	FR-BU2-H7.5K Brake Unit without Brake Resistor for all Inverters with DC-Bus Terminals; 400V Class 100100407: FA-Inverter: Brake Option
<a href="#">221540</a>	USB-CAB-5M USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m Class 100100303: FA-HMI: Cable
<a href="#">238360</a>	FFR-HEL-2.2K-E DC Link choke for 200V Inverter; 2,2kW; 3,1mH; 10,5A Class 100100406: FA-Inverter: Choke
<a href="#">254749</a>	NF63-SV 3P 40A Circuit breaker 3pole. In = 40A; Icu = Ics = 7,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">254785</a>	NF63-HV 3P 40A Circuit breaker 3pole. In = 40A; Icu / Ics = 10 / 8kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">275503</a>	FR Configurator-M+FR-Configurator2 FR-Configurator for 700 series; multi I + FR-Configurator2 for 800 series Class 100101203: FA-Software: Software Inverter
<a href="#">279143</a>	S-T10 AC200V 1A Magnetic contactor. 4kW; 1NO; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279200</a>	S-T10 AC200V 1B Magnetic contactor. 4kW; 1NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279242</a>	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
<a href="#">506377</a>	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
<a href="#">506378</a>	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
<a href="#">506379</a>	FR-A8AR-60 E-KIT Relay output; 3 additional output relays; Coated; E-KIT for FR-E800 Class 100100402: FA-Inverter: Internal Option
<a href="#">572856</a>	FFR-E-CS-110-26A-SF1 Radio Noise Filter for FR-E820S-110; C1: 20m, C2:50m Class 100100404: FA-Inverter: Filter
<a href="#">572857</a>	FFR-E-CS-110-26A-SF1-LL Radio Noise Filter for FR-E820S-110; C1: 10m Class 100100404: FA-Inverter: Filter
<a href="#">573101</a>	FR-A8AP-60 E-KIT Incremental Encoder Feedback; E-KIT for FR-E800; Coated Class 100100402: FA-Inverter: Internal Option
<a href="#">679114</a>	EM-AMF 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679115</a>	EM-AMFW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679116</a>	EM-AMFB 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679117</a>	EM-AMFBW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679118</a>	EM-AMFK 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With key; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679119</a>	EM-AMFKW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With key; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679120</a>	EM-AMFBK 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; With key; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">679121</a>	EM-AMFBKW 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; With brake; With key; IP65; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">703100</a>	EM-AMFT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">703101</a>	EM-AMFBT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; With brake; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">703102</a>	EM-AMFKT 2.2KW 165V 150HZ PM Motor; 2.2kW; Flange type; Terminal Block; With key; 3000r/min Class 100100410: FA-Inverter: Motor
<a href="#">703103</a>	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