



## MATERIAL FACT SHEET

### 504757 FR-E820S-0110EPB-60

#### General Data

|                     |                          |
|---------------------|--------------------------|
| Product Hierarchy   | IAK24801                 |
|                     | INVERTER                 |
|                     | FR-E820                  |
| Ext. Material Group | 10 STANDARD ITEM         |
| ABC Indicator       | A (Available from Stock) |

e-shop: [https://mitsubishi-electric-eshop.mee.com/mee/FA\\_IA/EUR/en/p/000000000000504757](https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000504757)

#### 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              | CC-LINK IE FIELD BASIC         |
| Built-In Network (2)          | CC-LINK IE TSN                 |
| Built-In Network (3)          | MODBUS/TCP                     |
| Built-In Network (4)          | PROFINET                       |
| 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)        | 16,5  |
| Height (cm)       | 21,0  |
| Gross Weight (kg) | 2,148 |
| Volume (cdm)      | 7,277 |

#### Stock Data

|                              |    |
|------------------------------|----|
| Planned Delivery Time (Days) | 79 |
|------------------------------|----|

#### Life Cycle

|             |                             |
|-------------|-----------------------------|
| Sales Start | 09.11.2020                  |
| Predecessor | 316596 / FR-E720S-110SC-ENE |

#### Additional Product Information

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

#### Export Data

|                                          |            |
|------------------------------------------|------------|
| Legal Control (Dual Use List)            | Not Listed |
| Country of Origin                        | China (CN) |
| Preference Status (Supplier Declaration) | Non EU     |

#### Environmental

|                            |           |
|----------------------------|-----------|
| 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-0110EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-E820S-0110EPB-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-0110EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-E820S-0110EPB-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-0110EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-E820S-0110EPB-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-0110EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-E820S-0110EPB-60&amp;doc-lang=en</a> |

#### 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 |
|------------------------|--------------------------------------|----------|------|
| <a href="#">600707</a> | FR-E840-0016-0170EPB-60 PCB CPU      | 1        | PC   |
| <a href="#">606267</a> | FR-E840-0.4K-7.5KEPA-60 PCB TERMINAL | 1        | PC   |
| <a href="#">611136</a> | FR-E840-0040-0095 FAN                | 1        | PC   |
| <a href="#">611139</a> | FR-E800-(SC)EPA(B) UNIT DU           | 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="#">611143</a> | FR-E840-0040-0095 COVER FAN          | 1        | PC   |

## Compatible products

| Material               | Description / Price List Text / Classification                                                                                                |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">70727</a>  | FR-A5 CBL 1<br>Cable for connecting Inverter and Programming panel; 1m<br>Class 100100405: FA-Inverter: Cable                                 |
| <a href="#">70728</a>  | FR-A5 CBL 2,5<br>Cable for connecting Inverter and Programming panel; 2,5m<br>Class 100100405: FA-Inverter: Cable                             |
| <a href="#">70729</a>  | FR-A5 CBL 5<br>Cable for connecting Inverter and Programming panel; 5m<br>Class 100100405: FA-Inverter: Cable                                 |
| <a href="#">130832</a> | FR-UDA02<br>DIN-Rail Adaptor for FR-D720S-1,5k; FR-D740-0,4k-3,7k<br>Class 100100403: FA-Inverter: External Option                            |
| <a href="#">202426</a> | FR-BU2-H7.5K<br>Brake Unit without Brake Resistor for all Inverters with DC-Bus Terminals; 400V<br>Class 100100407: FA-Inverter: Brake Option |
| <a href="#">238360</a> | FFR-HEL-2.2K-E<br>DC Link choke for 200V Inverter; 2,2kW; 3,1mH; 10,5A<br>Class 100100406: FA-Inverter: Choke                                 |
| <a href="#">254749</a> | NF63-SV 3P 40A<br>Circuit breaker 3pole. In = 40A; Icu = Ics = 7,5kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker     |
| <a href="#">254785</a> | NF63-HV 3P 40A<br>Circuit breaker 3pole. In = 40A; Icu / Ics = 10 / 8kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker  |
| <a href="#">279143</a> | S-T10 AC200V 1A<br>Magnetic contactor. 4kW; 1NO; Us = AC 200V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                             |
| <a href="#">279200</a> | S-T10 AC200V 1B<br>Magnetic contactor. 4kW; 1NC; Us = AC 200V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                             |
| <a href="#">279242</a> | S-T21 AC200V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 200V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                    |
| <a href="#">572856</a> | FFR-E-CS-110-26A-SF1<br>Radio Noise Filter for FR-E820S-110; C1: 20m, C2:50m<br>Class 100100404: FA-Inverter: Filter                          |
| <a href="#">572857</a> | FFR-E-CS-110-26A-SF1-LL<br>Radio Noise Filter for FR-E820S-110; C1: 10m<br>Class 100100404: FA-Inverter: Filter                               |
| <a href="#">679114</a> | EM-AMF 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; 3000r/min<br>Class 100100410: FA-Inverter: Motor                                     |
| <a href="#">679115</a> | EM-AMFW 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; IP65; 3000r/min<br>Class 100100410: FA-Inverter: Motor                              |
| <a href="#">679116</a> | EM-AMFB 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With brake; 3000r/min<br>Class 100100410: FA-Inverter: Motor                        |
| <a href="#">679117</a> | EM-AMFBW 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With brake; IP65; 3000r/min<br>Class 100100410: FA-Inverter: Motor                 |
| <a href="#">679118</a> | EM-AMFK 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With key; 3000r/min<br>Class 100100410: FA-Inverter: Motor                          |
| <a href="#">679119</a> | EM-AMFKW 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With key; IP65; 3000r/min<br>Class 100100410: FA-Inverter: Motor                   |
| <a href="#">679120</a> | EM-AMFBK 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With brake; With key; 3000r/min<br>Class 100100410: FA-Inverter: Motor             |
| <a href="#">679121</a> | EM-AMFBKW 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; With brake; With key; IP65; 3000r/min<br>Class 100100410: FA-Inverter: Motor      |
| <a href="#">703100</a> | EM-AMFT 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; Terminal Block; 3000r/min<br>Class 100100410: FA-Inverter: Motor                    |
| <a href="#">703101</a> | EM-AMFBT 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; Terminal Block; With brake; 3000r/min<br>Class 100100410: FA-Inverter: Motor       |

| Material               | Description / Price List Text / Classification                                                                                                     |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">703102</a> | EM-AMFKT 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; Terminal Block; With key; 3000r/min<br>Class 100100410: FA-Inverter: Motor              |
| <a href="#">703103</a> | EM-AMFBKT 2.2KW 165V 150HZ<br>PM Motor; 2.2kW; Flange type; Terminal Block; With brake; With key; 3000r/min<br>Class 100100410: FA-Inverter: Motor |