



## MATERIAL FACT SHEET

### 500097 FR-E840-0060EPB-60

#### General Data

|                      |   |
|----------------------|---|
| Price List Text (EN) | Inverter; Pn:2,2-3kW;3x380-480V;In max:6,9A;(2,2kW;6A);PROFINET;IP20  |
| Price List Text (DE) | Umrichter; Pn:2,2-3kW;3x380-480V;In max:6,9A;(2,2kW;6A);PROFINET;IP20 |
| Product Hierarchy    | IAK24802  |
|                      | INVERTER  |
|                      | FR-E840   |
| 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/000000000000500097](https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000500097)

#### FA-Inverter: Inverter

|                               |                                |
|-------------------------------|--------------------------------|
| Series                        | FR-E800 SERIES                 |
| Type                          | FR-E800-ETH INVERTER           |
| Minimum Rated Voltage (V)     | 380                            |
| Min. Permissible Voltage (V)  | 323                            |
| Maximum Rated Voltage (V)     | 480                            |
| Max. Permissible Voltage (V)  | 528                            |
| Current Type                  | AC                             |
| Phases                        | 3                              |
| Rated Output Current LD (A)   | 6,9                            |
| Rated Output Current ND (A)   | 6                              |
| Rated Motor Capacity LD (kW)  | 3                              |
| 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-DIGIT 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)             | 89                             |
| Power Loss ND (W)             | 76                             |
| Standby Power Consumption (W) | -                              |

|                  |      |
|------------------|------|
| Protection Class | IP20 |
|------------------|------|

### Product Dimensions & Weight

|             |     |
|-------------|-----|
| Width (mm)  | 140 |
| Height (mm) | 150 |
| Depth (mm)  | 135 |
| Weight (kg) | 1,8 |

### Logistic Dimensions & Gross Weight

|                   |       |
|-------------------|-------|
| Length (cm)       | 23,5  |
| Width (cm)        | 16,5  |
| Height (cm)       | 20,0  |
| Gross Weight (kg) | 2,165 |
| Volume (cdm)      | 7,755 |

### Stock Data

|                              |     |
|------------------------------|-----|
| Planned Delivery Time (Days) | 300 |
|------------------------------|-----|

### Life Cycle

|             |  |
|-------------|--|
| Sales Start | 09.11.2020                                 |
| Predecessor | <a href="#">316585 / FR-E740-060SC-ENE</a> |

### Export Data

|  |            |
|--|------------|
| Commodity Code                           | 85044095   |
| 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=bltdae25c2bd5f2f94&amp;q=FR-E840-0060EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2f94&amp;q=FR-E840-0060EPB-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-E840-0060EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-E840-0060EPB-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-E840-0060EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-E840-0060EPB-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-E840-0060EPB-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-E840-0060EPB-60&amp;doc-lang=en</a> |

### Product Packaging

|                   |     |
|-------------------|-----|
| Cardboard (g)     | 315 |
| 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="#">600475</a> | FR-E840-0060-4-2.2K PCB MA           | 1        | PC   |
| <a href="#">611132</a> | FR-E840-0060EPA(B)-60 PCB GA         | 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   |

| Material               | Description                     | Quantity | Unit |
|------------------------|---------------------------------|----------|------|
| <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="#">611143</a> | FR-E840-0040-0095 COVER FAN     | 1        | PC   |
| <a href="#">611144</a> | FR-E800 COVER TOP ALL           | 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="#">87244</a>  | FR-BAL-B-4,0K<br>Input Reactor 3ph; 400V; for 4,0kW<br>Class 100100406: FA-Inverter: Choke   |
| <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="#">167612</a> | FR-RJ45-HUB10<br>Distribution Module for RJ45; 10 way<br>Class 100100403: FA-Inverter: External Option   |
| <a href="#">167613</a> | FR-RJ45-HUB4<br>Distribution Module for RJ45; 4 way<br>Class 100100403: FA-Inverter: External Option   |
| <a href="#">167614</a> | FR-RJ45-TR<br>Terminal Resistor Plug RJ45<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="#">209736</a> | FFR-SI-8.3A-SS1<br>Sinusfilter for 200/230/400V Inverters; max. 8,3A; FT=4-16kHz; (W*H*D) 155*205*95mm<br>Class 100100404: FA-Inverter: Filter                     |
| <a href="#">209755</a> | FFR-DT-10A-SS1<br>du/dt Filter for 400V Inverters; max. 10A; FT=2-16kHz; (W*H*D) 100*120*65mm<br>Class 100100404: FA-Inverter: Filter                              |
| <a href="#">238345</a> | FFR-HEL-H2.2K-E<br>DC Link choke for 400V Inverter; 2,2kW; 14,2mH; 4,4A<br>Class 100100406: FA-Inverter: Choke   |
| <a href="#">254685</a> | NF32-SV 3P 15A<br>Circuit breaker 3pole. In = 15A; Icu = Ics = 2,5kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker                          |
| <a href="#">254744</a> | NF63-SV 3P 15A<br>Circuit breaker 3pole. In = 15A; Icu = Ics = 7,5kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker                          |
| <a href="#">275503</a> | FR Configurator-M+FR-Configurator2<br>FR-Configurator for 700 series; multi I + FR-Configurator2 for 800 series<br>Class 100101203: FA-Software: Software Inverter |
| <a href="#">279195</a> | S-T10 AC400V 1A<br>Magnetic contactor. 4kW; 1NO; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor  |
| <a href="#">279195</a> | S-T10 AC400V 1A<br>Magnetic contactor. 4kW; 1NO; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor  |
| <a href="#">279202</a> | S-T10 AC400V 1B<br>Magnetic contactor. 4kW; 1NC; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor  |
| <a href="#">279202</a> | S-T10 AC400V 1B<br>Magnetic contactor. 4kW; 1NC; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor  |
| <a href="#">288438</a> | MMP-T32LF 18A<br>Motor prot. switch. 7,9kW; Ir=12,0 ~ 18,0A; Icu AC 400V=15kA<br>Class 100101101: FA-MMS: Manual Motor Starter                                     |
| <a href="#">312355</a> | FFR-MSH-095-16A-SF1<br>Radio Noise Filter for FR-E740/E840-060/095; C1 20m, C2 100m<br>Class 100100404: FA-Inverter: Filter  |

| Material               | Description / Price List Text / Classification   |
|------------------------|--|
| <a href="#">506377</a> | FR-A8AX-60 E-KIT<br>16-Bit-Digital-Input; BCD/Binary-Code; 24V DC; 5mA; Coated; E-KIT for FR-E800<br>Class 100100402: FA-Inverter: Internal Option |
| <a href="#">506378</a> | FR-A8AY-60 E-KIT<br>Digital-/Analog Output; Output load: 24V DC; 0,1A; Coated; E-KIT for FR-E800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">506379</a> | FR-A8AR-60 E-KIT<br>Relay output; 3 additional output relays; Coated; E-KIT for FR-E800<br>Class 100100402: FA-Inverter: Internal Option           |
| <a href="#">573101</a> | FR-A8AP-60 E-KIT<br>Incremental Encoder Feedback; E-KIT for FR-E800; Coated<br>Class 100100402: FA-Inverter: Internal Option                       |