



## MATERIAL FACT SHEET

### 307230 FR-F840-04320-E2-60

#### General Data

|                     |  |
|---------------------|--|
| Product Hierarchy   | IAK24203                               |
|                     | INVERTER                               |
|                     | FR-F840 from 02160                     |
| 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/000000000000307230>

#### Product Components

|  |               |
|--|---------------|
| <a href="#">307190 / FR-AF840-04320-60</a> | 1 pc required |
| <a href="#">307205 / FR-CF80-01-E2-60</a>  | 1 pc required |

#### FA-Inverter: Inverter

|                               |                                |
|-------------------------------|--------------------------------|
| Series                        | FR-F800 SERIES                 |
| Type                          | FR-F800-E INVERTER             |
| Minimum Rated Voltage (V)     | 380                            |
| Min. Permissible Voltage (V)  | 323                            |
| Maximum Rated Voltage (V)     | 500                            |
| Max. Permissible Voltage (V)  | 550                            |
| Current Type                  | AC                             |
| Phases                        | 3                              |
| Rated Output Current SLD (A)  | 432                            |
| Rated Output Current LD (A)   | 361                            |
| Rated Motor Capacity SLD (kW) | 220                            |
| Rated Motor Capacity LD (kW)  | 185                            |
| Frequency Range (Hz)          | 0,2-590                        |
| Control Method                | MAGNETIC FLUX VECTOR CONTROL   |
| Control Method (2)            | PM SENSORLESS VECTOR CONTROL   |
| Control Method (3)            | SOFT-PWM/HIGH FREQUENCY PWM    |
| Control Method (4)            | V/F CONTROL                    |
| Motor Type                    | INDUCTION MOTOR, PM MOTOR      |
| Integrated EMC Filter         | YES                            |
| Safe Torque Off (STO)         | YES                            |
| Regenerative (4Q)             | NO                             |
| Integrated DC Choke           | NO                             |
| Display                       | FR-DU08                        |
| Display Type                  | 5 DIGITS LED (12 SEGMENT)      |
| PLC Function                  | YES                            |
| Program Memory                | 6K                             |
| Program Memory Unit           | STEPS                          |
| Integrated Digital Inputs     | 12                             |
| Digital Outputs (Transistor)  | 5                              |
| Digital Outputs (Relay)       | 2                              |
| Integrated Analogue Inputs    | 3                              |
| Integrated Analogue Outputs   | 2                              |
| IO Type of Terminal Block     | SPRING CLAMP                   |
| Expandable                    | YES                            |
| USB                           | 1+1 MINI                       |
| Ethernet Port                 | 1                              |
| Built-In Network              | BACNET/IP                      |
| Built-In Network (2)          | CC-LINK IE FIELD NETWORK BASIC |
| Built-In Network (3)          | MELSOFT/FA                     |
| Built-In Network (4)          | MODBUS/TCP                     |
| Built-In Network (5)          | SLMP                           |
| Built-In Network (6)          | iQSS                           |
| Leakage Current (mA)          | 35(Delta) / 2(Star)            |
| Power Loss SLD (W)            | 4650                           |

|                               |      |
|-------------------------------|------|
| Power Loss LD (W)             | 3800 |
| Standby Power Consumption (W) | 96   |
| Protection Class              | IP00 |

### Product Dimensions & Weight

|             |      |
|-------------|------|
| Width (mm)  | 498  |
| Height (mm) | 1010 |
| Depth (mm)  | 380  |
| Weight (kg) | 117  |

### Logistic Dimensions & Gross Weight

|                   |         |
|-------------------|---------|
| Length (cm)       | 118,0   |
| Width (cm)        | 64,0    |
| Height (cm)       | 51,0    |
| Gross Weight (kg) | 128,000 |
| Volume (cdm)      | 385,152 |

### Stock Data

|                              |     |
|------------------------------|-----|
| Planned Delivery Time (Days) | 189 |
|------------------------------|-----|

### Life Cycle

|             |                           |
|-------------|---------------------------|
| Sales Start | 15.02.2017                |
| Predecessor | 156608 / FR-F740-04320-EC |

### Additional Product Information

|                            |                        |
|----------------------------|------------------------|
| Binding Tariff Information | DEBTI-21865/22-1       |
| BTI validity date          | 01.01.2026             |
| Battery included           | NO                     |
| Product Code               | INV(EXCEPT VECTOR INV) |

### Export Data

|  |            |
|--|------------|
| Commodity Code                           | 85371091   |
| Legal Control (Dual Use List)            | Not Listed |
| Country of Origin                        | China (CN) |
| Preference Status (Supplier Declaration) | Non EU     |

### Environmental

|                            |           |
|----------------------------|-----------|
| REACH Limit Exceeded       | NO        |
| Dangerous Goods Class      | NO        |
| Dangerous Goods Identifier | NO        |
| RoHS Compliance            | COMPLIANT |
| WEEE                       | B2B       |

### Conformity

|                    |               |
|--------------------|---------------|
| CE                 | COMPLIANT     |
| UL/cUL             | COMPLIANT     |
| EAC                | NON-COMPLIANT |
| Shipping Approvals | DNV,ABS       |
| 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-F840-04320-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-F840-04320-E2-60&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-F840-04320-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-F840-04320-E2-60&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-F840-04320-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-F840-04320-E2-60&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-F840-04320-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-F840-04320-E2-60&amp;doc-lang=en</a> |

### Product Packaging

|                   |       |
|-------------------|-------|
| Cardboard (g)     | 13122 |
| Other paper (g)   | 0     |
| Aluminum (g)      | 0     |
| Steel (g)         | 0     |
| Styrofoam (g)     | 0     |
| Other plastic (g) | 495   |
| Wood (g)          | 0     |
| Glass (g)         | 0     |

|            |   |
|------------|---|
| Others (g) | 0 |
|------------|---|

### Spare parts

| Material               | Description                              | Quantity | Unit |
|------------------------|--|----------|------|
| <a href="#">282892</a> | FR-A840-04320-06830-2-60 PCB MA          | 1        | PC   |
| <a href="#">307205</a> | FR-CF80-01-E2-60                         | 1        | PC   |
| <a href="#">282925</a> | FR-A840-04320-2-60 PCB POWER             | 1        | PC   |
| <a href="#">282926</a> | FR-A840-03250-2-60 PCB AUX               | 1        | PC   |
| <a href="#">282927</a> | FR-A840/CC2-325A-432A-547A-DC CAPACITOR  | 6        | PC   |
| <a href="#">282928</a> | FR-A840-03250-12120/CC2 DM               | 9        | PC   |
| <a href="#">282929</a> | FR-A840-04320-12120/CC2 FUSE HOLDER      | 2        | PC   |
| <a href="#">282930</a> | FR-A840-04320-12120/CC2 FUSE             | 2        | PC   |
| <a href="#">282932</a> | FR-A840/842/846-ALL TERMINAL BLOCK A80TA | 1        | PC   |
| <a href="#">282940</a> | FR-A840/842/CC2-ALL CASE CPU             | 1        | PC   |
| <a href="#">282942</a> | FR-A840-03250-12120 BALANCE RESISTOR     | 12       | PC   |
| <a href="#">283444</a> | FR-A840-03250-12120-2-60 IGBT CM450DY207 | 9        | PC   |
| <a href="#">283465</a> | FR-A840-04320-04810-2-60 INRUSH RES.     | 1        | PC   |
| <a href="#">283476</a> | FR-A840-04320-2-60 DCCT Current Transf.  | 3        | PC   |
| <a href="#">283484</a> | FR-A840-00770-2-60 OR BIGGER CBL MA-CPU  | 1        | PC   |
| <a href="#">282927</a> | FR-A840/CC2-325A-432A-547A-DC CAPACITOR  | 6        | PC   |
| <a href="#">283707</a> | FR-A840-00930-12120-2-60 COVER           | 1        | PC   |
| <a href="#">283679</a> | FR-A840-04320-06830-2-60/ FR-CC2 ALL FAN | 3        | 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 3<br>Cable for connecting Inverter and Programming panel; 3m<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="#">88426</a>  | SC-FR-PC CONNECTION CABLE PC>INVERTER<br>Programming Cable RS 232>RS485/422; 5m<br>Class 100100405: FA-Inverter: Cable                                   |
| <a href="#">104664</a> | FN 3359-400-99 f. A-110-132K/F-132-185K<br>Radio Noise Filter for FR-A&F-03250-04320; C2 100m; C4 100m<br>Class 100100404: FA-Inverter: Filter           |
| <a href="#">113662</a> | S-N300 AC100V<br>Magnetic contactor. 160kW; 2NO + 2NC; Us = AC 100V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                  |
| <a href="#">113663</a> | S-N300 AC200V<br>Magnetic contactor. 160kW; 2NO + 2NC; Us = AC 200V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                  |
| <a href="#">113664</a> | S-N300 AC400V<br>Magnetic contactor. 160kW; 2NO + 2NC; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                  |
| <a href="#">157515</a> | FR-ADP<br>Adaptor Module for Operator Panel FR-DU07<br>Class 100100403: FA-Inverter: External Option   |
| 167612                 | 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   |
| 167614                 | FR-RJ45-TR<br>Terminal Resistor Plug RJ45<br>Class 100100403: FA-Inverter: External Option   |
| <a href="#">204780</a> | NF400-SEW 3P 400A<br>Circuit breaker 3pole. Ir = 200 - 400A; Icu = Ics = 42kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker       |
| <a href="#">204782</a> | NF400-HEW 3P 400A<br>Circuit breaker 3pole. Ir = 200 - 400A; Icu = Ics = 65kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker       |
| <a href="#">204784</a> | NF400-REW 3P 400A<br>Circuit breaker 3pole. Ir = 200 - 400A; Icu / Ics = 125 / 63kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker |

| Material               | Description / Price List Text / Classification   |
|------------------------|--|
| <a href="#">204785</a> | NF400-UEW 3P 400A<br>Circuit breaker 3pole. Ir = 200 - 400A; Icu = Ics = 200kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker                |
| <a href="#">209747</a> | FFR-SI-432A-SS1<br>Sinusfilter for 200/400V Inverters;max 432A;FT=2-16kHz;(W*H*D) 480*640*max.680mm<br>Class 100100404: FA-Inverter: Filter                        |
| <a href="#">209762</a> | FFR-DT-500A-SS1<br>du/dt Filter for 400V Inverters; max. 500A; FT=2-16kHz; (W*H*D) 240*325*220mm<br>Class 100100404: FA-Inverter: Filter                           |
| <a href="#">221540</a> | USB-CAB-5M<br>USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m<br>Class 100100303: FA-HMI: Cable  |
| <a href="#">262948</a> | A8NDPV1<br>Profibus DPV1 with Dsub Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">262949</a> | A8NPRT_2P<br>Profinet 2port Interface for FR-A/F800 with Drive Profile<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">262950</a> | A8NEIP_2P<br>EtherNet/IP 2port Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">269426</a> | FR-A8AX<br>16-Bit-Digital-Input; BCD/Binary-Code; 24V DC; 5mA for FR-F/A800<br>Class 100100402: FA-Inverter: Internal Option                                       |
| <a href="#">269427</a> | FR-A8AY<br>Digital-/Analog Output; Output load: 24V DC; 0,1A for FR-F/A800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">269428</a> | FR-A8AR<br>Relay output; 3 additional output relays for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option   |
| <a href="#">269431</a> | FR-A8NC<br>CC-Link Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">269432</a> | FR-A8ND<br>DeviceNet Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">270293</a> | FR-HC2-H220K KIT<br>Harmonic Converter 220kW for Power Factor correction; 400V Class; KIT<br>Class 100100403: FA-Inverter: External Option                         |
| <a href="#">273102</a> | FR-A8NCE<br>CC-Link IE Field Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">273309</a> | FR-HEL-H185K<br>DC Link choke for 400V Inverter with 185kW Motor<br>Class 100100406: FA-Inverter: Choke  |
| <a href="#">274514</a> | FR-A8NP<br>ProfibusDP Interface for FR-A/F800 with FR-A/F700 PPO types<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">274526</a> | FR-A8TAT<br>Adapter for control terminal of A/F700 to A/F800<br>Class 100100402: FA-Inverter: Internal Option  |
| <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="#">283940</a> | FR-A8AZ<br>Analog Input/ output, Thermistor interface<br>Class 100100402: FA-Inverter: Internal Option   |
| <a href="#">284809</a> | A8NECT_2P<br>Ethercat 2port Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option   |
| <a href="#">290115</a> | FR-A8NCN<br>Control Net Interface for FR-A800 series<br>Class 100100402: FA-Inverter: Internal Option  |
| <a href="#">290116</a> | FR-A8TR<br>Screw Terminal Block for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option   |
| <a href="#">294939</a> | FR-D-Sub9-A8NP-01<br>D-Sub9 Connection Adapter for FR-A8NP + Cover<br>Class 100100402: FA-Inverter: Internal Option  |

| Material               | Description / Price List Text / Classification   |
|------------------------|--|
| <a href="#">296231</a> | FR-BAL-B3-185K<br>Input reactor 3ph, 400V, In= 361A, Pn=185kW, L1=0,061mH<br>Class 100100406: FA-Inverter: Choke                                   |
| <a href="#">296613</a> | FR-LU08-01<br>Clear text LCD Parameter unit for all units of 800 Series (IP55)<br>Class 100100403: FA-Inverter: External Option                    |
| <a href="#">307170</a> | FR-A8ERS-60<br>Optioncard to change Ethernet board to serial communication<br>Class 100100402: FA-Inverter: Internal Option                        |
| <a href="#">403133</a> | FR-A8AVP<br>Phase detection option board of FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option   |
| <a href="#">403134</a> | FR-A8VPB-H<br>Phase detection transformer box for FR-A8AVP<br>Class 100100403: FA-Inverter: External Option  |
| <a href="#">487882</a> | FR-A8NCG<br>Plug-in Option for CC-Link IE TSN Communication Function<br>Class 100100402: FA-Inverter: Internal Option                              |
| <a href="#">591586</a> | RHF-5P 185-400-50-20-C<br>High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;185kW<br>Class 100100404: FA-Inverter: Filter |
| <a href="#">591607</a> | RHF-8P 185-400-50-20-C<br>High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;185kW<br>Class 100100404: FA-Inverter: Filter |