



## MATERIAL FACT SHEET

### 297573 FR-A840-00310-E2-60

#### General Data

|                     |                             |
|---------------------|-----------------------------|
| Product Hierarchy   | IAK24101                    |
|                     | INVERTER                    |
|                     | FR-A840 from 00023 to 00620 |
| 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/000000000000297573](https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000297573)

#### FA-Inverter: Inverter

|                               |                                |
|-------------------------------|--------------------------------|
| Series                        | FR-A SERIES                    |
| Type                          | FR-A800-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)  | 31                             |
| Rated Output Current LD (A)   | 29                             |
| Rated Output Current ND (A)   | 23                             |
| Rated Output Current HD (A)   | 17                             |
| Rated Motor Capacity SLD (kW) | 15                             |
| Rated Motor Capacity LD (kW)  | 15                             |
| Rated Motor Capacity ND (kW)  | 11                             |
| Rated Motor Capacity HD (kW)  | 7,5                            |
| 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)            | SOFT-PWM/HIGH FREQUENCY PWM    |
| Control Method (5)            | V/F CONTROL                    |
| Control Method (6)            | VECTOR CONTROL (WITH FR-A8AP)  |
| Motor Type                    | INDUCTION MOTOR, PM MOTOR      |
| Brake Chopper ED (%)          | 100                            |
| 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                            |
| RS-485                        | OPTIONAL                       |
| USB                           | 1+1 MINI                       |
| Ethernet Port                 | 1                              |
| Built-In Network              | CC-LINK IE FIELD NETWORK       |
| Built-In Network (2)          | CC-LINK IE FIELD NETWORK BASIC |
| Built-In Network (3)          | MODBUS/TCP                     |
| Leakage Current (mA)          | 35(DELTA) / 2(STAR)            |

|                               |      |
|-------------------------------|------|
| Power Loss SLD (W)            | 370  |
| Power Loss LD (W)             | 345  |
| Power Loss ND (W)             | 280  |
| Power Loss HD (W)             | 210  |
| Standby Power Consumption (W) | 20   |
| Protection Class              | IP20 |

#### Product Dimensions & Weight

|             |     |
|-------------|-----|
| Width (mm)  | 220 |
| Height (mm) | 300 |
| Depth (mm)  | 190 |
| Weight (kg) | 8,3 |

#### Logistic Dimensions & Gross Weight

|                   |        |
|-------------------|--------|
| Length (cm)       | 46,0   |
| Width (cm)        | 37,0   |
| Height (cm)       | 36,0   |
| Gross Weight (kg) | 9,915  |
| Volume (cdm)      | 61,272 |

#### Stock Data

|                              |     |
|------------------------------|-----|
| Planned Delivery Time (Days) | 100 |
|------------------------------|-----|

#### Life Cycle

|             |                           |
|-------------|---------------------------|
| Sales Start | 30.05.2016                |
| Predecessor | 214592 / FR-A740-00310-E8 |

#### Additional Product Information

|                            |                             |
|----------------------------|-----------------------------|
| Binding Tariff Information | DEBTI-21865/22-1            |
| BTI validity date          | 01.01.2026                  |
| Battery included           | NO                          |
| Forecast Breakdown         | FR-A840 FROM 00023 TO 00620 |

#### 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                | COMPLIANT            |
| Shipping Approvals | ABS,BV,DNV GL,L,R,NK |
| 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-A840-00310-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2f94&amp;q=FR-A840-00310-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-A840-00310-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-A840-00310-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-A840-00310-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-A840-00310-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-A840-00310-E2-60&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-A840-00310-E2-60&amp;doc-lang=en</a> |

#### Product Packaging

|                 |        |
|-----------------|--------|
| Cardboard (g)   | 1518,9 |
| Other paper (g) | 0      |
| Aluminum (g)    | 0      |
| Steel (g)       | 0      |
| Styrofoam (g)   | 266    |

|                   |       |
|-------------------|-------|
| Other plastic (g) | 6,768 |
| Wood (g)          | 0     |
| Glass (g)         | 0     |
| Others (g)        | 0     |

#### Spare parts

| Material               | Description                              | Quantity | Unit |
|------------------------|------------------------------------------|----------|------|
| <a href="#">282885</a> | FR-A840-00310-00380-2-60 PCB MA          | 1        | PC   |
| <a href="#">282894</a> | FR-A840-00310-2-60 PCB GA                | 1        | PC   |
| <a href="#">307202</a> | FR-CA80-01-E2-60                         | 1        | PC   |
| <a href="#">282932</a> | FR-A840/842/846-ALL TERMINAL BLOCK A80TA | 1        | PC   |
| <a href="#">283447</a> | FR-A840-00310/00380/00770-2-60 FAN       | 2        | PC   |
| <a href="#">283459</a> | FR-A840-00310-00380-2-60 INRUSH RES.     | 1        | PC   |
| <a href="#">283482</a> | FR-A840-00310-00380-2-60 CBL MA-CPU      | 1        | PC   |
| <a href="#">283554</a> | FR-A840-00310-2-60 CAPACITOR             | 2        | PC   |
| <a href="#">283685</a> | FR-A840-00170-00380-2-60 COVER UPPER FR. | 1        | PC   |
| <a href="#">283689</a> | FR-A840-00310/00380-2-60 CHASSIS         | 1        | PC   |
| <a href="#">283690</a> | FR-A840-00310/00380-2-60 CASE            | 1        | PC   |
| <a href="#">283691</a> | FR-A840-00310/00380-2-60 COVER LOWER FR. | 1        | PC   |
| <a href="#">283692</a> | FR-A840-00310/00380-2-60 COVER WIRING    | 1        | PC   |
| <a href="#">283693</a> | FR-A840-00310/00380-2-60 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="#">71053</a>  | FR-BAL-B-11/15K<br>Input Reactor 3ph; 400V; for 11/15kW<br>Class 100100406: FA-Inverter: Choke                                    |
| <a href="#">127947</a> | BU-UFS 22<br>Brake Unit 400V; Contin. Braking Current 22A; 10sec peak current 34A<br>Class 100100407: FA-Inverter: Brake Option   |
| <a href="#">127948</a> | BU-UFS 40<br>Brake Unit 400V; Contin. Braking Current 34A; 10sec peak current 55A<br>Class 100100407: FA-Inverter: Brake Option   |
| <a href="#">127950</a> | BU-UFS 110<br>Brake Unit 400V; Contin. Braking Current 44A; 10sec peak current 138A<br>Class 100100407: FA-Inverter: Brake Option |
| <a href="#">129629</a> | RUFC22 (PACK OF 1)<br>Brake Resistor for BU-UFS22; 2kW; 1x24 Ohm<br>Class 100100407: FA-Inverter: Brake Option                    |
| <a href="#">129630</a> | RUFC40 (PACK OF 2)<br>Brake Resistor Set for BU-UFS40; 2kW; 2x6,8 Ohm<br>Class 100100407: FA-Inverter: Brake Option               |
| <a href="#">129631</a> | RUFC110 (PACK OF 4)<br>Break Resistor Set for BU-UFS110; 2kW; 4x6,8 Ohm<br>Class 100100407: FA-Inverter: Brake 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="#">191577</a> | FR-ABR-H11K<br>External High-Duty Brake Resistor; 400V; 11kW; 52 Ohm; 6%ED<br>Class 100100407: FA-Inverter: Brake Option          |
| <a href="#">193679</a> | FFR-BS-00380-55A-SF100<br>Radio Noise Filter for FR-A&F-00310-00380; C1 20m; C2 100m<br>Class 100100404: FA-Inverter: Filter      |

| Material               | Description / Price List Text / Classification                                                                                               |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">209738</a> | FFR-SI-25A-SS1<br>Sinusfilter for 200/230/400V Inverters;max. 25A;FT=4-16kHz;(W*H*D) 210*260*125mm<br>Class 100100404: FA-Inverter: Filter   |
| <a href="#">209756</a> | FFR-DT-25A-SS1<br>du/dt Filter for 400V Inverters; max. 25A; FT=2-16kHz; (W*H*D) 125*140*80mm<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="#">238349</a> | FFR-HEL-H11K-E<br>DC Link choke for 400V Inverter; 11kW; 2,58mH; 20,5A<br>Class 100100406: FA-Inverter: Choke                                |
| <a href="#">247896</a> | BH-D10 3P 50A TYPE C N<br>Miniature circuit breaker 50 A, 3 pole, Type C<br>Class 100100801: FA-MCB: Miniature Circuit Breaker               |
| <a href="#">253073</a> | NF63-SV 3P 50A<br>Circuit breaker 3pole. In = 50A; Icu = Ics = 7,5kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker    |
| <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="#">254786</a> | NF63-HV 3P 50A<br>Circuit breaker 3pole. In = 50A; Icu / Ics = 10 / 8kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker |
| <a href="#">254837</a> | NF125-SV 3P 50A<br>Circuit breaker 3pole. In = 50A; Icu = Ics = 25kA at AC 440V<br>Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker    |
| <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="#">269429</a> | FR-A8AP<br>Incremental Encoder Feedback for FR-A800<br>Class 100100402: FA-Inverter: Internal Option                                         |
| <a href="#">269430</a> | FR-A8AL<br>Incremental encoder feedback terminal block for FR-A800<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="#">273102</a> | FR-A8NCE<br>CC-Link IE Field Interface for FR-A/F800<br>Class 100100402: FA-Inverter: Internal Option                                        |
| <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="#">274525</a> | FR-LU08<br>Clear text LCD Parameter unit for all units of 800 Series<br>Class 100100403: FA-Inverter: External Option                        |

| Material               | Description / Price List Text / Classification                                                                                                                     |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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="#">277882</a> | FR-A8CN03<br>Heatsink Protrusion Attachment for FR-F/A840-00310/00380; for FR-A820-00630<br>Class 100100403: FA-Inverter: External Option                          |
| <a href="#">279239</a> | S-T21 AC24V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 24V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                           |
| <a href="#">279240</a> | S-T21 AC48V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 48V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                           |
| <a href="#">279241</a> | S-T21 AC100V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 100V, 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="#">279243</a> | S-T21 AC300V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 300V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                         |
| <a href="#">279244</a> | S-T21 AC400V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 400V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                         |
| <a href="#">279245</a> | S-T21 AC500V 2A2B<br>Magnetic contactor. 11kW; 2NO + 2NC; Us = AC 500V, 50Hz<br>Class 100101001: FA-MC: Magnetic Contactor                                         |
| <a href="#">283939</a> | FR-A8APR<br>Resolver interface/orientation control/Resolver feedback control/vector control<br>Class 100100402: FA-Inverter: Internal Option                       |
| <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="#">285244</a> | FR-A8TP<br>Incremental Encoder Feedback Terminal Block for FR-A800<br>Class 100100402: FA-Inverter: Internal Option                                                |
| <a href="#">289335</a> | FR-A8NS<br>SSCNet Interface for FR-A800<br>Class 100100402: FA-Inverter: Internal Option                                                                           |
| <a href="#">291924</a> | BHW-T10 3P Type B 50A<br>MCB 3-pole, Rated current 50A, Operating characteristic B<br>Class 100100801: FA-MCB: Miniature Circuit Breaker                           |
| <a href="#">291996</a> | BHW-T10 3P Type C 50A<br>MCB 3-pole, Rated current 50A, Operating characteristic C<br>Class 100100801: FA-MCB: Miniature Circuit Breaker                           |
| <a href="#">292086</a> | BHW-T10 3P Type D 50A<br>MCB 3-pole, Rated current 50A, Operating characteristic D<br>Class 100100801: FA-MCB: Miniature Circuit Breaker                           |
| <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                                                |
| <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="#">297422</a> | FR-A8APS<br>Absolute Encoder Feedback for FR-A800 (EnDat)<br>Class 100100402: FA-Inverter: Internal Option                                                         |
| <a href="#">298153</a> | FR-A8NCA<br>CANopen Interface for FR-A800<br>Class 100100402: FA-Inverter: Internal Option                                                                         |
| <a href="#">307170</a> | FR-A8ERS-60<br>Optioncard to change Ethernet board to serial communication<br>Class 100100402: FA-Inverter: Internal Option                                        |

| Material               | Description / Price List Text / Classification                                                                                                   |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <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="#">403614</a> | FR-A8APA<br>SinCos Encoder Feedback for FR-A800<br>Class 100100402: FA-Inverter: Internal Option                                                 |
| <a href="#">591574</a> | RHF-5P 11-400-50-20-C<br>High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;11kW<br>Class 100100404: FA-Inverter: Filter |
| <a href="#">591594</a> | RHF-8P 11-400-50-20-C<br>High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;11kW<br>Class 100100404: FA-Inverter: Filter |