



## MATERIAL FACT SHEET

### 318075 FR-F846-03610-E2-60L2

#### General Data

|                     |                          |
|---------------------|--------------------------|
| Product Hierarchy   | IAK24500                 |
|                     | INVERTER                 |
|                     | FR-F846 IP55             |
| 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/000000000000318075](https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000318075)

#### FA-Inverter: Inverter

|                               |                                |
|-------------------------------|--------------------------------|
| Series                        | FR-F800 SERIES                 |
| Type                          | FR-F846-E2 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 LD (A)   | 325                            |
| Rated Motor Capacity LD (kW)  | 160                            |
| 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           | YES                            |
| 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)          | 2                              |
| Power Loss SLD (W)            | 4050                           |
| Standby Power Consumption (W) | 78                             |
| Protection Class              | IP55                           |

#### Product Dimensions & Weight

|             |      |
|-------------|------|
| Width (mm)  | 420  |
| Height (mm) | 1510 |

|             |       |
|-------------|-------|
| Depth (mm)  | 456,6 |
| Weight (kg) | 193   |

### Logistic Dimensions & Gross Weight

|                   |         |
|-------------------|---------|
| Length (cm)       | 165,0   |
| Width (cm)        | 56,0    |
| Height (cm)       | 67,0    |
| Gross Weight (kg) | 260,000 |
| Volume (cdm)      | 619,080 |

### Stock Data

|                              |     |
|------------------------------|-----|
| Planned Delivery Time (Days) | 296 |
|------------------------------|-----|

### Life Cycle

|             |                |
|-------------|----------------|
| Sales Start | 01.03.2018     |
| Predecessor | No Predecessor |

### Additional Product Information

|                            |                  |
|----------------------------|------------------|
| Binding Tariff Information | DEBTI-21865/22-1 |
| BTI validity date          | 01.01.2026       |
| Battery included           | NO               |

### Export Data

|                                          |            |
|------------------------------------------|------------|
| Commodity Code                           | 85371091   |
| 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="#">12626-81-2</a> |
| REACH Substance CAS Number (2) | <a href="#">127-19-5</a>   |
| REACH Substance CAS Number (3) | <a href="#">1317-36-8</a>  |
| REACH Substance CAS Number (4) | <a href="#">13560-89-9</a> |
| REACH Substance CAS Number (5) | <a href="#">15571-58-1</a> |
| REACH Substance CAS Number (6) | <a href="#">540-97-6</a>   |
| REACH Substance CAS Number (7) | <a href="#">541-02-6</a>   |
| REACH Substance CAS Number (8) | <a href="#">556-67-2</a>   |
| REACH Substance CAS Number (9) | <a href="#">7439-92-1</a>  |
| Dangerous Goods Class          | NO                         |
| Dangerous Goods Identifier     | NO                         |
| RoHS Compliance                | COMPLIANT                  |
| WEEE                           | B2B                        |

### Conformity

|                    |           |
|--------------------|-----------|
| CE                 | COMPLIANT |
| UL/cUL             | COMPLIANT |
| EAC                | 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-F846-03610-E2-60L2&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-F846-03610-E2-60L2&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-F846-03610-E2-60L2&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-F846-03610-E2-60L2&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-F846-03610-E2-60L2&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-F846-03610-E2-60L2&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-F846-03610-E2-60L2&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-F846-03610-E2-60L2&amp;doc-lang=en</a> |

### Product Packaging

|                   |       |
|-------------------|-------|
| Cardboard (g)     | 18500 |
| Other paper (g)   | 0     |
| Aluminum (g)      | 0     |
| Steel (g)         | 15    |
| Styrofoam (g)     | 0     |
| Other plastic (g) | 150   |
| Wood (g)          | 0     |
| Glass (g)         | 0     |

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

#### Spare parts

| Material               | Description                              | Quantity | Unit |
|------------------------|------------------------------------------|----------|------|
| 498581                 | FR-F846-E2 PCB CPU                       | 1        | PC   |
| <a href="#">487412</a> | FR-A846-01800-03610-55K-132K PCB MA      | 1        | PC   |
| <a href="#">282925</a> | FR-A840-04320-2-60 PCB POWER             | 1        | PC   |
| <a href="#">498461</a> | FR-F846-00620-03610 FAN                  | 3        | PC   |
| <a href="#">283450</a> | FR-A840-00470-01800-2-60 FAN             | 2        | PC   |
| <a href="#">283444</a> | FR-A840-03250-12120-2-60 IGBT CM450DY207 | 6        | PC   |
| <a href="#">282932</a> | FR-A840/842/846-ALL TERMINAL BLOCK A80TA | 1        | PC   |
| 282933                 | FR-A840-00170-00250/A846-ALL CBL MA-CPU  | 1        | PC   |
| <a href="#">283475</a> | FR-A840-03610-2-60 DCCT                  | 3        | PC   |
| <a href="#">282942</a> | FR-A840-03250-12120 BALANCE RESISTOR     | 12       | PC   |
| 282943                 | FR-A842-07700-08660 / CC2 ALL THERMISTOR | 1        | PC   |
| <a href="#">283715</a> | FR-A846-2-60C2 ALL RJ45 ADAPTER 846ADP   | 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="#">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="#">157515</a> | FR-ADP<br>Adaptor Module for Operator Panel FR-DU07<br>Class 100100403: FA-Inverter: External Option                                           |
| <a href="#">242151</a> | FR-PU07-01<br>Programming panel with LCD-Display for FR-700-NA series<br>Class 100100403: FA-Inverter: External Option                         |
| <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="#">270292</a> | FR-HC2-H160K KIT<br>Harmonic Converter 160kW 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="#">274514</a> | FR-A8NP<br>ProfibusDP Interface for FR-A/F800 with FR-A/F700 PPO types<br>Class 100100402: FA-Inverter: Internal 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="#">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             |
| <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="#">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     |
| <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           |