



MATERIAL FACT SHEET

297576 FR-A840-00620-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/000000000000297576

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) | 62 |
| Rated Output Current LD (A) | 57 |
| Rated Output Current ND (A) | 44 |
| Rated Output Current HD (A) | 38 |
| Rated Motor Capacity SLD (kW) | 30 |
| Rated Motor Capacity LD (kW) | 30 |
| Rated Motor Capacity ND (kW) | 22 |
| Rated Motor Capacity HD (kW) | 18,5 |
| 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) |

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|-------------------------------|------|
| Power Loss SLD (W) | 740 |
| Power Loss LD (W) | 675 |
| Power Loss ND (W) | 520 |
| Power Loss HD (W) | 450 |
| Standby Power Consumption (W) | 20 |
| Protection Class | IP20 |

Product Dimensions & Weight

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|-------------|-----|
| Width (mm) | 250 |
| Height (mm) | 400 |
| Depth (mm) | 190 |
| Weight (kg) | 15 |

Logistic Dimensions & Gross Weight

| | |
|-------------------|--------|
| Length (cm) | 56,0 |
| Width (cm) | 40,0 |
| Height (cm) | 36,0 |
| Gross Weight (kg) | 16,904 |
| Volume (cdm) | 80,640 |

Stock Data

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

Life Cycle

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|-------------|---------------------------|
| Sales Start | 30.05.2016 |
| Predecessor | 266249 / FR-A740-00620-E8 |

Export Data

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|--|------------|
| 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,LR,NK |
| UKCA | COMPLIANT |

Documentation & Media Data

| | |
|--------------------------------|---|
| Manual URL Indicator | https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=bltdae25c2bd5f2ff94&q=FR-A840-00620-E2-60&doc-lang=en |
| Certificates URL Indicator | https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-A840-00620-E2-60&doc-lang=en |
| CAD URL Indicator | https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-A840-00620-E2-60&doc-lang=en |
| Network configuration file URL | https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blte8cf990c7c524b4e&q=FR-A840-00620-E2-60&doc-lang=en |

Product Packaging

| | |
|-------------------|--------|
| Cardboard (g) | 1855 |
| Other paper (g) | 0 |
| Aluminum (g) | 0 |
| Steel (g) | 0 |
| Styrofoam (g) | 482 |
| Other plastic (g) | 14,476 |
| Wood (g) | 0 |
| Glass (g) | 0 |
| Others (g) | 0 |

Spare parts

| Material | Description | Quantity | Unit |
|------------------------|--|----------|------|
| 307202 | FR-CA80-01-E2-60 | 1 | PC |
| 282932 | FR-A840/842/846-ALL TERMINAL BLOCK A80TA | 1 | PC |
| 283438 | FR-A840-00470-00770-2-60 THYRISTORMODULE | 1 | PC |
| 283450 | FR-A840-00470-01800-2-60 FAN | 2 | PC |
| 283460 | FR-A840-00470-00620-2-60 INRUSH RES. | 1 | PC |
| 283467 | FR-A840-00620-2-60 DCCT | 1 | PC |
| 283483 | FR-A840-00470-00620-2-60 CBL MA-CPU | 1 | PC |
| 283587 | FR-A840-00620-2-60 CAPACITOR | 4 | PC |
| 283694 | FR-A840-00470/00620-2-60 CHASSIS | 1 | PC |
| 283695 | FR-A840-00470/00620-2-60 CASE | 1 | PC |
| 283696 | FR-A840-00470/00620-2-60 COVER UPPER FR. | 1 | PC |
| 283697 | FR-A840-00470/00620-2-60 COVER LOWER FR. | 1 | PC |
| 283698 | FR-A840-00470/00620-2-60 COVER WIRING | 1 | PC |
| 283699 | FR-A840-00470/00620-2-60 COVER FAN | 1 | PC |
| 283700 | FR-A840-00470/00620-2-60 COVER TERMINAL | 1 | PC |
| 282886 | FR-A840-00470-00620-2-60 PCB MA | 1 | PC |
| 282896 | FR-A840-00470-00770-2-60 PCB GA | 1 | PC |
| 282904 | FR-A840-00470-00620-2-60 PCB AUX | 1 | PC |

Compatible products

| Material | Description / Price List Text / Classification |
|------------------------|---|
| 70727 | FR-A5 CBL 1 Cable for connecting Inverter and Programming panel; 1m Class 100100405: FA-Inverter: Cable |
| 70728 | FR-A5 CBL 2,5 Cable for connecting Inverter and Programming panel; 2,5m Class 100100405: FA-Inverter: Cable |
| 70729 | FR-A5 CBL 5 Cable for connecting Inverter and Programming panel; 5m Class 100100405: FA-Inverter: Cable |
| 87247 | FR-BAL-B-22K Input Reactor 3ph; 400 V; for 22kW Class 100100406: FA-Inverter: Choke |
| 127947 | BU-UFS 22 Brake Unit 400V; Contin. Braking Current 22A; 10sec peak current 34A Class 100100407: FA-Inverter: Brake Option |
| 127948 | BU-UFS 40 Brake Unit 400V; Contin. Braking Current 34A; 10sec peak current 55A Class 100100407: FA-Inverter: Brake Option |
| 127950 | BU-UFS 110 Brake Unit 400V; Contin. Braking Current 44A; 10sec peak current 138A Class 100100407: FA-Inverter: Brake Option |
| 129629 | RUFC22 (PACK OF 1) Brake Resistor for BU-UFS22; 2kW; 1x24 Ohm Class 100100407: FA-Inverter: Brake Option |
| 129630 | RUFC40 (PACK OF 2) Brake Resistor Set for BU-UFS40; 2kW; 2x6,8 Ohm Class 100100407: FA-Inverter: Brake Option |
| 129631 | RUFC110 (PACK OF 4) Break Resistor Set for BU-UFS110; 2kW; 4x6,8 Ohm Class 100100407: FA-Inverter: Brake Option |
| 167612 | FR-RJ45-HUB10 Distribution Module for RJ45; 10 way Class 100100403: FA-Inverter: External Option |
| 167613 | FR-RJ45-HUB4 Distribution Module for RJ45; 4 way Class 100100403: FA-Inverter: External Option |
| 167614 | FR-RJ45-TR Terminal Resistor Plug RJ45 Class 100100403: FA-Inverter: External Option |
| 191579 | FR-ABR-H22K External High-Duty Brake Resistor; 400V; 22kW; 52 Ohm; 6%ED Class 100100407: FA-Inverter: Brake Option |
| 193680 | FFR-BS-00620-75A-SF100 Radio Noise Fiter for FR-A&F-00470-00620; C1 20m; C2 100m Class 100100404: FA-Inverter: Filter |
| 209740 | FFR-SI-48A-SS1 Sinusfilter for 200/400V Inverters; max. 48A; FT=4-16kHz; (W*H*D) 240*290*210mm Class 100100404: FA-Inverter: Filter |

| Material | Description / Price List Text / Classification |
|------------------------|--|
| 209757 | FFR-DT-47A-SS1 du/dt Filter for 400V Inverters; max. 47A; FT=2-16kHz; (W*H*D) 155*195*110mm Class 100100404: FA-Inverter: Filter |
| 221540 | USB-CAB-5M USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m Class 100100303: FA-HMI: Cable |
| 238367 | FFR-HEL-22K-E DC Link choke for 200V Inverter; 22kW; 0,3mH; 95A Class 100100406: FA-Inverter: Choke |
| 254840 | NF125-SV 3P 75A Circuit breaker 3pole. In = 75A; Icu = Ics = 25kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker |
| 254842 | NF125-SV 3P 100A Circuit breaker 3pole. In = 100A; Icu = Ics = 25kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker |
| 262948 | A8NDPV1 Profibus DPV1 with Dsub Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 262949 | A8NPRT_2P Profinet 2port Interface for FR-A/F800 with Drive Profile Class 100100402: FA-Inverter: Internal Option |
| 262950 | A8NEIP_2P EtherNet/IP 2port Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 269426 | FR-A8AX 16-Bit-Digital-Input; BCD/Binary-Code; 24V DC; 5mA for FR-F/A800 Class 100100402: FA-Inverter: Internal Option |
| 269427 | FR-A8AY Digital-/Analog Output; Output load: 24V DC; 0,1A for FR-F/A800 Class 100100402: FA-Inverter: Internal Option |
| 269428 | FR-A8AR Relay output; 3 additional output relays for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 269429 | FR-A8AP Incremental Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 269430 | FR-A8AL Incremental encoder feedback terminal block for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 269431 | FR-A8NC CC-Link Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 269432 | FR-A8ND DeviceNet Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 273102 | FR-A8NCE CC-Link IE Field Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 274514 | FR-A8NP ProfibusDP Interface for FR-A/F800 with FR-A/F700 PPO types Class 100100402: FA-Inverter: Internal Option |
| 274525 | LU08 Clear text LCD Parameter unit for all units of 800 Series Class 100100403: FA-Inverter: External Option |
| 274526 | FR-A8TAT Adapter for control terminal of A/F700 to A/F800 Class 100100402: FA-Inverter: Internal Option |
| 275503 | FR Configurator-M+FR-Configurator2 FR-Configurator for 700 series; multi I + FR-Configurator2 for 800 series Class 100101203: FA-Software: Software Inverter |
| 277883 | FR-A8CN04 Heatsink Protrusion Attachment for FR-F/A840-00470/00620; for FR-A820-00770/0125 Class 100100403: FA-Inverter: External Option |
| 283939 | FR-A8APR Resolver interface/orientation control/Resolver feedback control/vector control Class 100100402: FA-Inverter: Internal Option |
| 283940 | FR-A8AZ Analog Input/ output, Thermistor interface Class 100100402: FA-Inverter: Internal Option |

| Material | Description / Price List Text / Classification |
|------------------------|---|
| 284809 | A8NECT_2P Ethercat 2port Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option |
| 285244 | FR-A8TP Incremental Encoder Feedback Terminal Block for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 289335 | FR-A8NS SSCNet Interface for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 294939 | FR-D-Sub9-A8NP-01 D-Sub9 Connection Adapter for FR-A8NP + Cover Class 100100402: FA-Inverter: Internal Option |
| 296613 | FR-LU08-01 Clear text LCD Parameter unit for all units of 800 Series (IP55) Class 100100403: FA-Inverter: External Option |
| 297422 | FR-A8APS Incremental Encoder Feedback for FR-A800 (EnDat) Class 100100402: FA-Inverter: Internal Option |
| 298153 | FR-A8NCA CANopen Interface for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 298656 | S-T35 AC100V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298656 | S-T35 AC100V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298657 | S-T35 AC200V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298657 | S-T35 AC200V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298658 | S-T35 AC24V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298658 | S-T35 AC24V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298659 | S-T35 AC300V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298659 | S-T35 AC300V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298660 | S-T35 AC400V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298660 | S-T35 AC400V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298661 | S-T35 AC48V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298661 | S-T35 AC48V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298662 | S-T35 AC500V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 500V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 298662 | S-T35 AC500V Magnetic contactor. 18,5kW; 2NO + 2NC; Us = AC 500V, 50Hz Class 100101001: FA-MC: Magnetic Contactor |
| 307170 | FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option |
| 307170 | FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option |

| Material | Description / Price List Text / Classification |
|------------------------|--|
| 403614 | FR-A8APA SinCos Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option |
| 591577 | RHF-5P 22-400-50-20-C High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;22kW Class 100100404: FA-Inverter: Filter |
| 591597 | RHF-8P 22-400-50-20-C High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;22kW Class 100100404: FA-Inverter: Filter |