



MATERIAL FACT SHEET

297594 FR-A842-12120-E2-60

General Data

Product Hierarchy	IAK24103
	INVERTER
	FR-A840 from 2160
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	C (Non-Stock Material / Make-to-Order)

e-shop: https://mitsubishi-electric-eshop.mee.com/mee/FA_1A/EUR/en/p/000000000000297594

Product Components

307199 / FR-AF842-12120-60	1 pc required
307203 / FR-CA80-02-E2-60	1 pc required

FA-Inverter: Inverter

Series	FR-A SERIES
Type	FR-A800-E INVERTER
Minimum Rated Voltage (V)	430
Min. Permissible Voltage (V)	430
Maximum Rated Voltage (V)	780
Max. Permissible Voltage (V)	780
Current Type	DC
Phases	1
Rated Output Current SLD (A)	1212
Rated Output Current LD (A)	1094
Rated Output Current ND (A)	962
Rated Output Current HD (A)	866
Rated Motor Capacity SLD (kW)	630
Rated Motor Capacity LD (kW)	560
Rated Motor Capacity ND (kW)	500
Rated Motor Capacity HD (kW)	450
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
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)	2(Delta) / 1(STAR)
Power Loss SLD (W)	9810
Power Loss LD (W)	8630
Power Loss ND (W)	7400
Power Loss HD (W)	6490
Standby Power Consumption (W)	111
Protection Class	IP00

Product Dimensions & Weight

Width (mm)	680
Height (mm)	1580
Depth (mm)	440
Weight (kg)	243

Logistic Dimensions & Gross Weight

Length (cm)	176,0
Width (cm)	93,0
Height (cm)	69,0
Gross Weight (kg)	295,000
Volume (cdm)	1.129,392

Stock Data

Planned Delivery Time (Days)	156
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Life Cycle

Sales Start	30.05.2016
Predecessor	266769 / FR-A842-12120-2-60

Additional Product Information

Binding Tariff Information	DEBTI-19524/22-1
BTI validity date	14.05.2026
Battery included	NO

Export Data

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-A842-12120-E2-60&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-A842-12120-E2-60&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-A842-12120-E2-60&doc-lang=en
Network configuration file URL	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blte8cf990c7c524b4e&q=FR-A842-12120-E2-60&doc-lang=en

Product Packaging

Cardboard (g)	7495
Other paper (g)	0
Aluminum (g)	0
Steel (g)	0

Styrofoam (g)	0
Other plastic (g)	789
Wood (g)	39000
Glass (g)	0
Others (g)	0

Spare parts

Material	Description	Quantity	Unit
282893	FR-A842-07700-12120-2-60 PCB MA	1	PC
307203	FR-CA80-02-E2-60	1	PC
282925	FR-A840-04320-2-60 PCB POWER	2	PC
282929	FR-A840-04320-12120/CC2 FUSE HOLDER	4	PC
282930	FR-A840-04320-12120/CC2 FUSE	4	PC
282932	FR-A840/842/846-ALL TERMINAL BLOCK A80TA	1	PC
282940	FR-A840/842/CC2-ALL CASE CPU	1	PC
282942	FR-A840-03250-12120 BALANCE RESISTOR	24	PC
283444	FR-A840-03250-12120-2-60 IGBT CM450DY207	18	PC
283451	FR-A842-07700-12120 FAN	4	PC
282939	FR-A842-12120-2-60 / CC2-500K DCCT	3	PC
283484	FR-A840-00770-2-60 OR BIGGER CBL MA-CPU	1	PC
283593	FR-A840-03610-2-60 CAPACITOR	12	PC
283707	FR-A840-00930-12120-2-60 COVER	1	PC
283680	FR-A842-ALL FUSE 6.9URD32TTF0900	6	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
130229	FN 3359-1600-99 f. A-450K/F-450-530K Radio Noise Filter for FR-A&F-10940-12120; C2 100m; C4 100m Class 100100404: FA-Inverter: Filter
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
209751	FFR-SI-880A-SS1 Sinusfilter for 400V Inverters; max. 880A; FT=2-16kHz; (W*H*D) 660*895*max.560mm Class 100100404: FA-Inverter: Filter
209766	FFR-DT-1100A-SS1 du/dt Filter for 400V Inverters; max. 1100A; FT=2-16kHz; (W*H*D) 360*380*250mm 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
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

Material	Description / Price List Text / Classification
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
274511	FR-CC2-H500K-60 AC/DC Rectifier; Pn: 500kW; 3x380-500V; int. DC Choke; IP00; 150%60s/200%3s Class 100100403: FA-Inverter: External Option
274511	FR-CC2-H500K-60 AC/DC Rectifier; Pn: 500kW; 3x380-500V; int. DC Choke; IP00; 150%60s/200%3s Class 100100403: FA-Inverter: External Option
274514	FR-A8NP ProfibusDP Interface for FR-A/F800 with FR-A/F700 PPO types Class 100100402: FA-Inverter: Internal Option
274525	FR-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
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
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 Absolute 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
307170	FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option

Material	Description / Price List Text / Classification
307170	FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option
307199	FR-AF842-12120-60 Inverter Body DC; Pn: 450-630kW; DC 537-707V;In max: 1212A;(500kW; 962A); IP00 Class 100100401: FA-Inverter: Inverter
307203	FR-CA80-02-E2-60 Control Card for FR-A840-02160 up to 12120 Ethernet Version Class 100100402: FA-Inverter: Internal Option
403614	FR-A8APA SinCos Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option
487882	FR-A8NCG Plug-in Option for CC-Link IE TSN Communication Function Class 100100402: FA-Inverter: Internal Option
596905	RHF-5P 500-400-50-00-S High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;500kW Class 100100404: FA-Inverter: Filter
596912	RHF-8P 500-400-50-00-S High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;500kW Class 100100404: FA-Inverter: Filter