



MATERIAL FACT SHEET

297587 FR-A840-05470-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/0000000000000297587

Product Components

307192 / FR-AF840-05470-60	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)	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)	547
Rated Output Current LD (A)	481
Rated Output Current ND (A)	432
Rated Output Current HD (A)	361
Rated Motor Capacity SLD (kW)	280
Rated Motor Capacity LD (kW)	250
Rated Motor Capacity ND (kW)	220
Rated Motor Capacity HD (kW)	185
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)	35(DELTA) / 2(STAR)
Power Loss SLD (W)	5850
Power Loss LD (W)	5100
Power Loss ND (W)	4550
Power Loss HD (W)	3700
Standby Power Consumption (W)	125
Protection Class	IP00

Product Dimensions & Weight

Width (mm)	680
Height (mm)	1010
Depth (mm)	380
Weight (kg)	166

Logistic Dimensions & Gross Weight

Length (cm)	118,0
Width (cm)	82,0
Height (cm)	54,0
Gross Weight (kg)	177,000
Volume (cdm)	522,504

Stock Data

Planned Delivery Time (Days)	156
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Life Cycle

Sales Start	30.05.2016
Predecessor	266762 / FR-A840-05470-2-60

Additional Product Information

Binding Tariff Information	DEBTI-21865/22-1
BTI validity date	01.01.2026
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	YES
REACH Substance CAS Number	127-19-5
REACH Substance CAS Number (2)	1317-36-8
REACH Substance CAS Number (3)	13560-89-9
REACH Substance CAS Number (4)	15571-58-1
REACH Substance CAS Number (5)	540-97-6
REACH Substance CAS Number (6)	541-02-6
REACH Substance CAS Number (7)	556-67-2
REACH Substance CAS Number (8)	7439-92-1
REACH Substance CAS Number (9)	84-61-7
Dangerous Goods Class	NO
Dangerous Goods Identifier	NO
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-A840-05470-E2-60&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-A840-05470-E2-60&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-A840-05470-E2-60&doc-lang=en

Network configuration file URL	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=ble8cf990c7c524b4e&q=FR-A840-05470-E2-60&doc-lang=en
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Product Packaging

Cardboard (g)	15093
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
282892	FR-A840-04320-06830-2-60 PCB MA	1	PC
307203	FR-CA80-02-E2-60	1	PC
282925	FR-A840-04320-2-60 PCB POWER	1	PC
282926	FR-A840-03250-2-60 PCB AUX	1	PC
282928	FR-A840-03250-12120/CC2 DM	12	PC
282929	FR-A840-04320-12120/CC2 FUSE HOLDER	2	PC
282930	FR-A840-04320-12120/CC2 FUSE	2	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	16	PC
283444	FR-A840-03250-12120-2-60 IGBT CM450DY207	12	PC
283466	FR-A840-05470-06830-2-60/CC2 INRUSH RES.	1	PC
283478	FR-A840-05470-2-60 DCCT	3	PC
283484	FR-A840-00770-2-60 OR BIGGER CBL MA-CPU	1	PC
282927	FR-A840/CC2-325A-432A-547A-DC CAPACITOR	8	PC
283707	FR-A840-00930-12120-2-60 COVER	1	PC
283679	FR-A840-04320-06830-2-60/ FR-CC2 ALL FAN	4	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
104665	FN 3359-600-99 f. A-160-220K/F-220-280K Radio Noise Filter for FR-A&F-04810-06100; C2 100m; C4 100m Class 100100404: FA-Inverter: Filter
113665	S-N400 AC100V Magnetic contactor. 220kW; 2NO + 2NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
113666	S-N400 AC200V Magnetic contactor. 220kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
113667	S-N400 AC400V Magnetic contactor. 220kW; 2NO + 2NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
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
209747	FFR-SI-432A-SS1 Sinusfilter for 200/400V Inverters;max 432A;FT=2-16kHz;(W*H*D) 480*640*max.680mm Class 100100404: FA-Inverter: Filter

Material	Description / Price List Text / Classification
209762	FFR-DT-500A-SS1 du/dt Filter for 400V Inverters; max. 500A; FT=2-16kHz; (W*H*D) 240*325*220mm 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
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
273310	FR-HEL-H220K DC Link choke for 400V Inverter with 220kW Motor Class 100100406: FA-Inverter: Choke
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

Material	Description / Price List Text / Classification
294939	FR-D-Sub9-A8NP-01 D-Sub9 Connection Adapter for FR-A8NP + Cover Class 100100402: FA-Inverter: Internal Option
296232	FR-BAL-B3-220K Input reactor 3ph, 400V, In= 432A, Pn=220kW, L1=0,051mH Class 100100406: FA-Inverter: Choke
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
307170	FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option
307192	FR-AF840-05470-60 Inverter Body AC; Pn: 185-280kW; 3x380-500V;In max: 547A;(220kW; 432A); 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
591588	RHF-5P 220-400-50-20-C High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;220kW Class 100100404: FA-Inverter: Filter
591609	RHF-8P 220-400-50-20-C High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;220kW Class 100100404: FA-Inverter: Filter