



MATERIAL FACT SHEET

409330 FR-A840-01160-E2-60CRN

General Data

Product Hierarchy	IAK24102
	INVERTER
	FR-A840 from 00770 to 01800
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_IA/EUR/en/p/000000000000409330

Product Components

297579 / FR-A840-01160-E2-60	1 pc required
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FA-Inverter: Inverter

Series	FR-A800 PLUS SERIES
Type	FR-A800-CRN (FOR CRANES)
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)	116
Rated Output Current LD (A)	106
Rated Output Current ND (A)	86
Rated Output Current HD (A)	71
Rated Motor Capacity ND (kW)	45
Rated Motor Capacity HD (kW)	37
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 (%)	-
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
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)	1340
Power Loss LD (W)	1220
Power Loss ND (W)	1020
Power Loss HD (W)	860
Standby Power Consumption (W)	28
Protection Class	IP00

Product Dimensions & Weight

Width (mm)	435
Height (mm)	550
Depth (mm)	250
Weight (kg)	41

Logistic Dimensions & Gross Weight

Length (cm)	57,0
Width (cm)	60,0
Height (cm)	39,0
Gross Weight (kg)	47,000
Volume (cdm)	133,380

Stock Data

Planned Delivery Time (Days)	156
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Life Cycle

Sales Start	01.12.2018
Predecessor	No Predecessor

Additional Product Information

Difference to Standard 1	CRANE CONTROL
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

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-A840-01160-E2-60CRN&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-A840-01160-E2-60CRN&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-A840-01160-E2-60CRN&doc-lang=en
Network configuration file URL	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blte8cf990c7c524b4e&q=FR-A840-01160-E2-60CRN&doc-lang=en

Product Packaging

Cardboard (g)	4400
Other paper (g)	0
Aluminum (g)	0
Steel (g)	15
Styrofoam (g)	0
Other plastic (g)	50
Wood (g)	0

Glass (g)	0
Others (g)	0

Spare parts

Material	Description	Quantity	Unit
282888	FR-A840-00930-01160-2-60 PCB MA	1	PC
282906	FR-A840-00930-01800-2-60 PCB AUX	1	PC
283590	FR-A840-01160-2-60 CAPACITOR	4	PC
283435	FR-A840-00930-01800-2-60 DM	3	PC
283450	FR-A840-00470-01800-2-60 FAN	3	PC
283439	FR-A840-00930-01800-2-60 THYRISTORMODULE	1	PC
283442	FR-A840-00930-01160-2-60 IGBT 2MBI200VB	3	PC
282932	FR-A840/842/846-ALL TERMINAL BLOCK A80TA	1	PC
591466	FR-DU08 PARAMETER-UNIT ALL	1	PC
283484	FR-A840-00770-2-60 OR BIGGER CBL MA-CPU	1	PC
591470	FR-A870 CABLE ALL BKO-CA1972H01	1	PC
591471	FR-A870 CABLE ALL BKO-CA1972H02	1	PC
283470	FR-A840-01160-2-60 DCCT	1	PC
591486	FR-A870 COVER INTERFACE ALL	1	PC
591485	FR-A870 COVER CA PCB PRINT ALL	1	PC
283709	FR-A840-00930-01800-2-60 COVER FAN	3	PC
283710	FR-A840-00930-01800-2-60 COVER TERMINAL	1	PC
283462	FR-A840-00930-01800-2-60 INRUSH RES.	1	PC
282941	FR-A840-77A-116A BALANCE RESISTOR	6	PC
591494	FR-A870 GROUND WIRE ETH ALL	1	PC
676513	FR-A840-00930-01800 BREAKING IGBT	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
71044	FR-BAL-B-45K Input Reactor 3ph; 400V; for 45kW Class 100100406: FA-Inverter: Choke
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
193683	FFR-BS-01800-180A-SF100 Radio Noise Filter for FR-A&F-00930-01800; C1 20m; C2 100m Class 100100404: FA-Inverter: Filter
209743	FFR-SI-93A-SS1 Sinusfilter for 200/400V Inverters; max. 93A; FT=4-16kHz; (W*H*D) 300*345*215mm Class 100100404: FA-Inverter: Filter
209758	FFR-DT-93A-SS1 du/dt Filter for 400V Inverters; max. 93A; FT=2-16kHz; (W*H*D) 190*240*100mm Class 100100404: FA-Inverter: Filter
212210	RUFC40 (000100) Brake Resistor Class 100100403: FA-Inverter: External Option
221540	USB-CAB-5M USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m Class 100100303: FA-HMI: Cable
238355	FFR-HEL-H45K-E DC Link choke for 400V Inverter; 45kW; 0,84mH; 82A Class 100100406: FA-Inverter: Choke

Material	Description / Price List Text / Classification
254843	NF125-SV 3P 125A Circuit breaker 3pole. In = 125A; Icu = Ics = 25kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
255079	NF250-SV 3P 175A Circuit breaker 3pole. In = 175A; Icu = Ics = 36kA 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	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
277945	FR-A8CN06 Heatsink Protrusion Attachment for FR-F/A840-00930 bis 01800; for FR-A820-01870/ 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
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
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
298670	S-T65 AC100V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298671	S-T65 AC200V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298672	S-T65 AC24V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298673	S-T65 AC300V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298674	S-T65 AC400V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298675	S-T65 AC48V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298676	S-T65 AC500V Magnetic contactor. 30kW; 2NO + 2NC; Us = AC 500V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298684	S-T100 AC100V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298685	S-T100 AC200V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298686	S-T100 AC24V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298687	S-T100 AC300V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298688	S-T100 AC400V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
298689	S-T100 AC48V Magnetic contactor. 55kW; 2NO + 2NC; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
307164	FR-AF840-01160-60 Inverter Body AC; Pn: 37-55kW; 3x380-500V;In max: 116A;(45kW; 86A); IP00 Class 100100401: FA-Inverter: Inverter
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
307202	FR-CA80-01-E2-60 Control Card for FR-A840-00770 -01800 Ethernet Version Class 100100402: FA-Inverter: Internal Option
403614	FR-A8APA SinCos Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option
591579	RHF-5P 45-400-50-20-C High efficient double-stage passive harmonic filter for THDi <5%;400V;50Hz;45kW Class 100100404: FA-Inverter: Filter

Material	Description / Price List Text / Classification
591600	RHF-8P 45-400-50-20-C High efficient double-stage passive harmonic filter for THDi <8%;400V;50Hz;45kW Class 100100404: FA-Inverter: Filter