



MATERIAL FACT SHEET

318072 FR-F846-02160-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/000000000000318072

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)	180
Rated Motor Capacity LD (kW)	90
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)	2520
Standby Power Consumption (W)	46
Protection Class	IP55

Product Dimensions & Weight

Width (mm)	420
Height (mm)	1360

Depth (mm)	456,6
Weight (kg)	150

Logistic Dimensions & Gross Weight

Length (cm)	150,0
Width (cm)	55,0
Height (cm)	67,0
Gross Weight (kg)	195,000
Volume (cdm)	552,750

Stock Data

Planned Delivery Time (Days)	296
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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	12626-81-2
REACH Substance CAS Number (2)	127-19-5
REACH Substance CAS Number (3)	1317-36-8
REACH Substance CAS Number (4)	13560-89-9
REACH Substance CAS Number (5)	15571-58-1
REACH Substance CAS Number (6)	540-97-6
REACH Substance CAS Number (7)	541-02-6
REACH Substance CAS Number (8)	556-67-2
REACH Substance CAS Number (9)	7439-92-1
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	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=bltdae25c2bd5f2ff94&q=FR-F846-02160-E2-60L2&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=FR-F846-02160-E2-60L2&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=FR-F846-02160-E2-60L2&doc-lang=en
Network configuration file URL	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blte8cf990c7c524b4e&q=FR-F846-02160-E2-60L2&doc-lang=en

Product Packaging

Cardboard (g)	17500
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
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Spare parts

Material	Description	Quantity	Unit
498581	FR-F846-E2 PCB CPU	1	PC
487412	FR-A846-01800-03610-55K-132K PCB MA	1	PC
282925	FR-A840-04320-2-60 PCB POWER	1	PC
498461	FR-F846-00620-03610 FAN	3	PC
283450	FR-A840-00470-01800-2-60 FAN	2	PC
283444	FR-A840-03250-12120-2-60 IGBT CM450DY207	3	PC
282932	FR-A840/842/846-ALL TERMINAL BLOCK A80TA	1	PC
282933	FR-A840-00170-00250/A846-ALL CBL MA-CPU	1	PC
283472	FR-A840-02160-2-60 DCCT	3	PC
282942	FR-A840-03250-12120 BALANCE RESISTOR	8	PC
282943	FR-A842-07700-08660 / CC2 ALL THERMISTOR	1	PC
283715	FR-A846-2-60C2 ALL RJ45 ADAPTER 846ADP	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
104663	FN 3359-250-28 f. A-90K/ F-110K Radio Noise Filter for FR-A&F-02160-02600; C2 100m; C4 100m Class 100100404: FA-Inverter: Filter
157515	FR-ADP Adaptor Module for Operator Panel FR-DU07 Class 100100403: FA-Inverter: External Option
242151	FR-PU07-01 Programming panel with LCD-Display for FR-700-NA series Class 100100403: FA-Inverter: External Option
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
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
270291	FR-HC2-H110K KIT Harmonic Converter 110kW for Power Factor correction; 400V Class; KIT Class 100100403: FA-Inverter: External 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

Material	Description / Price List Text / Classification
274526	FR-A8TAT Adapter for control terminal of A/F700 to A/F800 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
290115	FR-A8NCN Control Net Interface for FR-A800 series Class 100100402: FA-Inverter: Internal Option
290116	FR-A8TR Screw Terminal Block for FR-A/F800 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
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
403133	FR-A8AVP Phase detection option board of FR-A/F800 Class 100100402: FA-Inverter: Internal Option
403134	FR-A8VPB-H Phase detection transformer box for FR-A8AVP Class 100100403: FA-Inverter: External Option
487882	FR-A8NCG Plug-in Option for CC-Link IE TSN Communication Function Class 100100402: FA-Inverter: Internal Option