



## MATERIAL FACT SHEET

### 297613 FR-A820-00046-E1-N6

#### General Data

Product Hierarchy	IAK24104
	INVERTER
	FR-A820 from 00046 to 04750
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	B (Limited Availability from Stock)

e-shop: <https://emea.mitsubishielectric.com/fa/shop/material-page/000000000000297613>

#### FA-Inverter: Inverter

Series	FR-A SERIES
Type	FR-A800-E INVERTER
Minimum Rated Voltage (V)	200
Min. Permissible Voltage (V)	170
Maximum Rated Voltage (V)	240
Max. Permissible Voltage (V)	264
Current Type	AC
Phases	3
Rated Output Current SLD (A)	4,6
Rated Output Current LD (A)	4,2
Rated Output Current ND (A)	3
Rated Output Current HD (A)	1,5
Rated Motor Capacity SLD (kW)	0,75
Rated Motor Capacity LD (kW)	0,75
Rated Motor Capacity ND (kW)	0,4
Rated Motor Capacity HD (kW)	0,2
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 (OFF ON INITIAL SETTINGS)
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 BASIC
Built-In Network (2)	MODBUS/TCP
Built-In Network (3)	SLMP
Built-In Network (4)	iQSS
Leakage Current (mA)	22

Power Loss SLD (W)	60
Power Loss LD (W)	55
Power Loss ND (W)	40
Power Loss HD (W)	30
Standby Power Consumption (W)	-
Protection Class	IP20

### Product Dimensions & Weight

Width (mm)	110
Height (mm)	310
Depth (mm)	112
Weight (kg)	2,48

### Logistic Dimensions & Gross Weight

Length (cm)	15,0
Width (cm)	40,0
Height (cm)	16,0
Gross Weight (kg)	3,572
Volume (cdm)	9,600

### Stock Data

Planned Delivery Time (Days)	189
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### Life Cycle

Sales Start	30.05.2016
Predecessor	284523 / FR-A820-00046-1-N6

### Additional Product Information

Binding Tariff Information	DEBTI-21865/22-1
BTI validity date	01.01.2026
Battery included	NO
Product Code	INV(EXCEPT VECTOR INV)

### 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	<a href="#">12626-81-2</a>
REACH Substance CAS Number (2)	<a href="#">127-19-5</a>
REACH Substance CAS Number (3)	<a href="#">1317-36-8</a>
REACH Substance CAS Number (4)	<a href="#">13560-89-9</a>
REACH Substance CAS Number (5)	<a href="#">15571-58-1</a>
REACH Substance CAS Number (6)	<a href="#">7439-92-1</a>
REACH Substance CAS Number (7)	<a href="#">96-45-7</a>
Dangerous Goods Class	NO
Dangerous Goods Identifier	NO
WEEE	B2B

### Conformity

CE	COMPLIANT
UL/cUL	COMPLIANT
EAC	NON-COMPLIANT
UKCA	COMPLIANT

### Documentation & Media Data

Manual URL Indicator	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=bltdae25c2bd5f2ff94&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en</a>
Certificates URL Indicator	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt8050dd1408c11cc2&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en</a>
CAD URL Indicator	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blt26ecc97a31a841c1&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en</a>
Network configuration file URL	<a href="https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en">https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&amp;doc-cats=blte8cf990c7c524b4e&amp;q=FR-A820-00046-E1-N6&amp;doc-lang=en</a>

## Product Packaging

Cardboard (g)	410
Other paper (g)	0
Aluminum (g)	0
Steel (g)	0
Styrofoam (g)	0
Other plastic (g)	10
Wood (g)	0
Glass (g)	0
Others (g)	0

## Spare parts

Material	Description	Quantity	Unit
<a href="#">283484</a>	FR-A840-00770-2-60 OR BIGGER CBL MA-CPU	1	PC
<a href="#">282932</a>	FR-A840/842/846-ALL TERMINAL BLOCK A80TA	1	PC
<a href="#">487533</a>	FR-A820-00046 PCB MA	1	PC
<a href="#">487559</a>	FR-A820-00046-00077-0.4K-0.75K PCB AUX	1	PC

## Compatible products

Material	Description / Price List Text / Classification
<a href="#">134969</a>	FR-BAL-S-B-0,4K Input Reactor; 1 ph.; 230 V; for 0,4 K Class 100100406: FA-Inverter: Choke
167612	FR-RJ45-HUB10 Distribution Module for RJ45; 10 way Class 100100403: FA-Inverter: External Option
<a href="#">167613</a>	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
<a href="#">209735</a>	FFR-SI-4.5A-SS1 Sinusfilter for 200/230/400V Inverters;max. 4,5A;FT=4-16kHz;(W*H*D) 125*180*75mm Class 100100404: FA-Inverter: Filter
<a href="#">209755</a>	FFR-DT-10A-SS1 du/dt Filter for 400V Inverters; max. 10A; FT=2-16kHz; (W*H*D) 100*120*65mm Class 100100404: FA-Inverter: Filter
<a href="#">221540</a>	USB-CAB-5M USB 2.0 connection cabel, plug USB A to plug USB B (mini), 5m Class 100100303: FA-HMI: Cable
<a href="#">238357</a>	FFR-HEL-0.4K-E DC Link choke for 200V Inverter; 0,4kW; 17mH; 2,1A Class 100100406: FA-Inverter: Choke
<a href="#">254682</a>	NF32-SV 3P 5A Circuit breaker 3pole. In = 5A; Icu = Ics = 2,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">254682</a>	NF32-SV 3P 5A Circuit breaker 3pole. In = 5A; Icu = Ics = 2,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">254741</a>	NF63-SV 3P 5A Circuit breaker 3pole. In = 5A; Icu = Ics = 7,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">254741</a>	NF63-SV 3P 5A Circuit breaker 3pole. In = 5A; Icu = Ics = 7,5kA at AC 440V Class 100100901: FA-MCCB: Moulded-Case Circuit Breaker
<a href="#">262948</a>	A8NDPV1 Profibus DPV1 with Dsub Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">262949</a>	A8NPRT_2P Profinet 2port Interface for FR-A/F800 with Drive Profile Class 100100402: FA-Inverter: Internal Option
<a href="#">262950</a>	A8NEIP_2P EtherNet/IP 2port Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269426</a>	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
<a href="#">269427</a>	FR-A8AY Digital-/Analog Output; Output load: 24V DC; 0,1A for FR-F/A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269428</a>	FR-A8AR Relay output; 3 additional output relays for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269429</a>	FR-A8AP Incremental Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269430</a>	FR-A8AL Incremental encoder feedback terminal block for FR-A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269431</a>	FR-A8NC CC-Link Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">269432</a>	FR-A8ND DeviceNet Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">273102</a>	FR-A8NCE CC-Link IE Field Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">274514</a>	FR-A8NP ProfibusDP Interface for FR-A/F800 with FR-A/F700 PPO types Class 100100402: FA-Inverter: Internal Option
<a href="#">274526</a>	FR-A8TAT Adapter for control terminal of A/F700 to A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">275503</a>	FR Configurator-M+FR-Configurator2 FR-Configurator for 700 series; multi I + FR-Configurator2 for 800 series Class 100101203: FA-Software: Software Inverter
<a href="#">279140</a>	S-T10 AC24V 1A Magnetic contactor. 4kW; 1NO; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279141</a>	S-T10 AC48V 1A Magnetic contactor. 4kW; 1NO; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279142</a>	S-T10 AC100V 1A Magnetic contactor. 4kW; 1NO; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279143</a>	S-T10 AC200V 1A Magnetic contactor. 4kW; 1NO; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279144</a>	S-T10 AC300V 1A Magnetic contactor. 4kW; 1NO; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279195</a>	S-T10 AC400V 1A Magnetic contactor. 4kW; 1NO; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279196</a>	S-T10 AC500V 1A Magnetic contactor. 4kW; 1NO; Us = AC 500V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279197</a>	S-T10 AC24V 1B Magnetic contactor. 4kW; 1NC; Us = AC 24V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279198</a>	S-T10 AC48V 1B Magnetic contactor. 4kW; 1NC; Us = AC 48V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279199</a>	S-T10 AC100V 1B Magnetic contactor. 4kW; 1NC; Us = AC 100V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279200</a>	S-T10 AC200V 1B Magnetic contactor. 4kW; 1NC; Us = AC 200V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279201</a>	S-T10 AC300V 1B Magnetic contactor. 4kW; 1NC; Us = AC 300V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">279202</a>	S-T10 AC400V 1B Magnetic contactor. 4kW; 1NC; Us = AC 400V, 50Hz Class 100101001: FA-MC: Magnetic Contactor

Material	Description / Price List Text / Classification
<a href="#">279203</a>	S-T10 AC500V 1B Magnetic contactor. 4kW; 1NC; Us = AC 500V, 50Hz Class 100101001: FA-MC: Magnetic Contactor
<a href="#">283939</a>	FR-A8APR Resolver interface/orientation control/Resolver feedback control/vector control Class 100100402: FA-Inverter: Internal Option
<a href="#">283940</a>	FR-A8AZ Analog Input/ output, Thermistor interface Class 100100402: FA-Inverter: Internal Option
<a href="#">284809</a>	A8NECT_2P Ethercat 2port Interface for FR-A/F800 Class 100100402: FA-Inverter: Internal Option
<a href="#">285244</a>	FR-A8TP Incremental Encoder Feedback Terminal Block for FR-A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">294939</a>	FR-D-Sub9-A8NP-01 D-Sub9 Connection Adapter for FR-A8NP + Cover Class 100100402: FA-Inverter: Internal Option
<a href="#">297422</a>	FR-A8APS Absolute Encoder Feedback for FR-A800 (EnDat) Class 100100402: FA-Inverter: Internal Option
<a href="#">298153</a>	FR-A8NCA CANopen Interface for FR-A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">298153</a>	FR-A8NCA CANopen Interface for FR-A800 Class 100100402: FA-Inverter: Internal Option
<a href="#">307170</a>	FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option
<a href="#">307170</a>	FR-A8ERS-60 Optioncard to change Ethernet board to serial communication Class 100100402: FA-Inverter: Internal Option
<a href="#">403614</a>	FR-A8APA SinCos Encoder Feedback for FR-A800 Class 100100402: FA-Inverter: Internal Option