

Eaton FERRUPS UPS FE Series 60 Hz



Product Snapshot

Product rating:	500 VA–18 kVA
Input voltage	120/208/240, 208/240
Output voltage	120/208/240
Frequency:	60 Hz
Configuration:	Cabinet

Features

- Active voltage regulation converts power from almost any AC source into computer grade power
- Eliminates harmful harmonic currents from entering a building's wiring, where they can disrupt computer operations
- Enhanced diagnostics initiates automatic startup and scheduled tests on the logic board, battery and other critical systems
- Provides regulated output voltage without drawing power from batteries keeping the batteries full charged from unexpected blackouts
- Complete offering of LanSafe® power management software included to ensure data integrity
- Provides investment protection with a two-year limited warranty and a \$250,000 load protection guarantee (US and Canada)

Eaton® FERRUPS® uninterruptible power systems furnish unmatched reliability in configurable power protection for computers and telecommunications equipment. Patented ferroresonant technology delivers “bulletproof” power protection, overcoming spikes, sags, surges, noise and lightning. Eaton-exclusive SineSense provides clean, reliable power while conserving batteries during blackouts.

Extensive configurability options make FERRUPS the ideal power protection solution with a wide range of voltages, frequencies, runtimes, power cords and receptacles. FERRUPS prevents the backfeed of harmonic currents into building wiring which can disrupt computer operations.

Redundant power paths assure high fault-tolerance and optimum uptime. Galvanic isolation separates input from output, filtering line noise and surges. FERRUPS also features precision voltage regulation with no battery discharge down to 38% below nominal (depending upon load) as well as over 80 user-programmable diagnostic and communications functions.

FERRUPS models include free Eaton Software Suite power management software with connectivity cable and are BestLink SNMP/Web-ready for remote management. FERRUPS covers up to \$250,000 for damage to connected equipment resulting from a spike or surge (US and Canada only).



Powering Business Worldwide

FE SERIES, 60 HZ SPECIFICATIONS

Models	500 VA	700 VA	850 VA	1.15 kVA	1.4 kVA	1.8 kVA	2.1 kVA	3.1 kVA	4.3 kVA	5.3 kVA	7 kVA	10 kVA	12.5 kVA	18 kVA	
Part number	FE500 VA	FE700 VA	FE850 VA	FE1.15 kVA	FE1.4 kVA	FE1.8 kVA	FE2.1 kVA	FE3.1 kVA	FE4.3 kVA	FE5.3 kVA	FE7 kVA	FE10 kVA	FE12.5 kVA	FE18 kVA	
Capacity (kVA/kW)	.5/.35	.7/.5	.85/.6	1.15/.8	1.4/1	1.8/1.25	2.1/1.5	3.1/2.2	4.3/3	5.3/3.7	7/5	10/7.5	12.5/10	18/15	
Dimensions H x W x D	(inches)	12 x 10 x 21.25			15.1 x 15.2 x 20.2			21.2 x 15.25 x 22.9			29.5 x 15.5 x 25		36.5 x 19 x 32**		
	(mm)	305 x 255 x 540			385 x 390 x 515			540 x 390 x 585			750 x 395 x 635		930 x 485 x 815**		
Weight	(lb)	54	62	67	102	122	176	188	248	348	484	578	875	1089	1362
	(kg)	25	28	30	46	55	80	85	112	158	220	262	397	494	618
Input connection (hardwired input is standard for FE1.8 kVA and above)	6-ft cord w/NEMA 5-15P*					6-ft cord w/NEMA 5-20P*	6-ft cord w/NEMA L5-30P*	120V/40A 208V/25A 240V/20A	120V/50A 208V/30A 240V/25A	120V/70A 208V/40A 240V/35A	208V/60A 240V/50A	208V/80A 240V/70A	208V/110A 240V/100A		
Output connection	(4) NEMA 5-15R			(6) NEMA 5-15R		(6) NEMA 5-15R			Hardwired output is standard— for additional receptacle selections, refer to FERRUPS CTO Guide						
Typical runtime, minutes	(full load)	9	11	9	8	11	11	9	14	10	20	12	11	18	10
	(half load)	25	31	25	22	31	30	25	35	24	50	33	26	48	26

Operation

Nominal input voltage	120	120/208/240						208/240						
Input voltage range	+15%, -20%													
Input power factor	0.98													
Nominal output voltage	120	120/208/240												
Output voltage regulation	±3% for input voltages of +15% to -20%													
Output voltage waveform	Sine wave													
Output voltage THD	5% or less at rated kW load													
Overload capacity	150% surge and 125% for 10 minutes online, 150% surge and 110% for 10 minutes on inverter													
Transfer time	0 ms													
Lightning, surge & noise protection	2000:1 spike attenuation using ANSI/IEEE C62.41 and C62.45 Category A and Category B tests Common mode: >120 dB. Normal mode: >60 dB													
Efficiency	85	86	85	88	88	90	90	91	90	90	90	90	91	92
Safety certification	UL, CSA (cUL)													
EMI compliance	FCC Class A													
Testing standards	ANSI/IEEE C62.41 (1991); ANSI/IEEE C62.45 (2002); EN62040-2													
Communication	RS-232 serial port (DB25), plus contact closures													

Environmental

Operating temperature	0°C to 40°C (32°F to 104°F)													
Storage temperature	-20°C to +60°C (-4°F to 140°F)													
Relative humidity	5 to 95% without condensation													
Audible noise at 1m (dB)	41	41	47	49	49	51	51	51	50	51	54	61	61	61
Altitude	3,050m (10,000 ft) maximum													

Due to continuing product improvement programs, all specifications are subject to change without notice. *120V standard configuration. **Batteries in second cabinet. Contact factory for weights and dimensions.

To learn more about the Eaton FERRUPS UPS,
please visit: Eaton.com/Ferrups

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Printed in USA
BR153035EN
May 2014

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Eaton FERRUPS FE Series 50 Hz



Features

- Active Voltage Regulation converts power from almost any AC source into computer grade power
- Eliminates harmful harmonic currents from entering a building's wiring, where they can disrupt computer operations
- Enhanced diagnostics initiates automatic startup and scheduled tests on the logic board, battery and other critical systems
- Provides regulated output voltage without drawing power from batteries keeping the batteries fully charged from unexpected blackouts
- Complete offering of LanSafe® management software included to ensure data integrity
- Enables automatic shutdown of UPS-protected devices with NetWatch 5.0 software
- Warranty
 - 2-Year Limited Warranty
 - \$250,000 Load Protection Guarantee (U.S. and Canada)



Product Snapshot

Rating:	850 VA - 5.3 kVA
Input Voltage:	220/230/240
Output Voltage:	220/230/240
Frequency:	50 Hz
Configuration:	Tower

Eaton® FERRUPS® uninterruptible power systems (UPSs) furnish unmatched reliability in configurable power protection for computers and telecommunications equipment. Patented ferroresonant technology delivers "bulletproof" power protection, overcoming spikes, sags, surges, noise, and lightning. Eaton's exclusive SineSense provides clean, reliable power while conserving batteries during blackouts.

Extensive configurability options make FERRUPS the ideal power protection solution with a wide range of voltages, frequencies, runtimes, power cords, and receptacles. FERRUPS prevents the backfeed of harmonic currents into building wiring which can disrupt computer operations.

Redundant power paths assure high fault-tolerance and optimum uptime. Galvanic isolation separates input from output, filtering line noise and surges. FERRUPS also features precision voltage regulation with no battery discharge down to 38% below nominal (depending upon load); and over 80 user-programmable diagnostic and communications functions.

FERRUPS models include free Eaton Software Suite power management software with connectivity cable, and are BestLink SNMP/WEB-ready for remote management. FERRUPS covers up to US\$250,000 for damage to connected equipment resulting from a spike or surge (U.S. and Canada only).



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FE SERIES, 50 HZ SPECIFICATIONS

Models	850 VA	1.4 kVA	3.1 kVA	5.3 kVA
Model Number	QFE850 VA	QFE1.4 kVA	QFE3.1 kVA	QFE5.3 kVA
Capacity (kVA/kW)	.85/.6	1.4/1	3.1/2.2	5.3/3.7
Dimensions (inches)	12 x 10 x 21.25	15.1 x 15.2 x 20.2	21.2 x 15.25 x 22.9	29.5 x 15.5 x 25
H x W x D (mm)	305 x 255 x 540	385 x 390 x 515	540 x 390 x 585	36.5 x 19 x 32
Weight (lbs)	86	154	256	505
(kg)	39	70	116	229
Input Connection	IEC-320 (10A) male connector		IEC-320 (16A) male connector	220/21A 230/20A 240/19A
Output (quantity)	4			Hardwired output is standard Contact Factory for receptacle options
Connection (type)	IEC-320 (10A) male connector			
Typical (Full Load)	9	11	14	20
Runtime: (Half Load) (minutes)	25	31	35	50

Operation

Nominal Input Voltage	220/230/240			
Input Voltage Range	+15%, -20%			
Operating Frequency	50 Hz Nominal (adjustable limits +_ 0.01 Hz to +_ 3Hz)			
Nominal Output Voltage	220/230/240			
Output Voltage Regulation	± 3% for input voltages of +15% to -20%			
Output Voltage Waveform	Sine wave			
Output Voltage THD	5% or less at rated kW load			
Overload Capacity	150% surge and 125% for 10 min. on line, 150% surge and 110% for 10 minutes on inverter			
Transfer Time	0 ms			
Lightning, Surge & Noise Protection	2000:1 spike attenuation using ANSI/IEEE C62.41 and C62.45 Category A and Category B tests. Common Mode - >120 dB. Normal Mode - >60dB			
Efficiency	85	88	91	90
Safety Certification	UL, CSA (cUL), Complies with European Low Voltage Directive 73/23/EEC			
EMI Compliance	FCC Class A, Complies with European Electromagnetic Compatibility Directive 89/336/EEC			
Testing Standards	ANSI/IEEE C62.41 (1991); ANSI/IEEE C62.45 (2002); EN62040-2			
Communication	RS-232 serial port (DB-25), plus contact closures			

Environmental

Operating Temperature	0 to 40° C			
Storage	-20° C to +60° C			
Relative Humidity	0 to 95% without condensation			
Audible Noise at 1m	47	49	51	51
Altitude	3,050m (10,000 ft.) maximum			

All specifications typical and are subject to change without notice.

To learn more about the Eaton FERRUPS UPS,
please visit: Eaton.com/Ferrups

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ILP0368
May 2014

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Eaton FERRUPS Rackmount 60 Hz



Unmatched reliability in configurable power protection for computers and telecommunications equipment

Features

- Active voltage regulation converts power from almost any AC source into computer grade power
- Eliminates harmful harmonic currents from entering a building's wiring, where they can disrupt computer operations
- Enhanced diagnostics initiate automatic startup and scheduled tests on the logic board, battery and other critical systems
- Provides regulated output voltage without drawing power from batteries, keeping the batteries fully charged for unexpected blackouts
- Complete offering of LanSafe® power management software included to ensure data integrity
- Enables automatic shutdown of UPS-protected devices with NetWatch Client 5.0 software
- Provides investment protection with a two-year limited warranty and \$250,000 load protection guarantee (U.S. and Canada)

Product snapshot

Rating:	1.4 kVA–7 kVA
Input voltage:	120/208/240
Output voltage:	120/208/240
Frequency:	60 Hz
Configuration:	Rackmount

Eaton® FERRUPS® UPSs furnish unmatched reliability in configurable power protection for computers and telecommunications equipment. Patented ferroresonant technology delivers "bulletproof" power protection, overcoming spikes, sags, surges, noise and lightning. Eaton-exclusive SineSense provides clean, reliable power while conserving batteries during blackouts.

Extensive configurability options make FERRUPS the ideal power protection solution with a wide range of voltages, frequencies, runtimes, power cords and receptacles. FERRUPS prevents the backfeed of harmonic currents into building wiring, which can disrupt computer operations. Redundant power paths

assure high fault-tolerance and optimum uptime. Galvanic isolation separates input from output, filtering line noise and surges.

FERRUPS also features precision voltage regulation with no battery discharge down to 38% below nominal (depending upon load) as well as over 80 user-programmable diagnostic and communications functions.

FERRUPS models include free Eaton Software Suite power management software with connectivity cable and are BestLink SNMP/Web-ready for remote management. FERRUPS covers up to \$250,000 for damage to connected equipment resulting from a spike or surge (U.S. and Canada only).



Eaton NetWatch Client 5.0 has tested compatible with Cisco Unified Communications Manager 4.3. Go to www.eaton.com/PQ/cisco for disclaimer.



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Technical specifications

Model		1.4 kVA	2.1 kVA	3.1 kVA	7 kVA*
Model No.		FES1.4 kVA	FER2.1 kVA	FER3.1 kVA	FER7 kVA
Capacity (kVA/kW)		1.4/1	2.1/1.5	3.1/2.2	7/5
Dimensions H x W x D	inches mm	9.75 x 16 x 21.25 248 x 406 x 540	9.75 x 16 x 26.25 248 x 406 x 667	9.75 x 16 x 26.25 248 x 406 x 667	19 x 16 x 26.25 483 x 406 x 667
Front panel H x W	inches mm	10.5 x 19 267 x 483	10.5 x 19 267 x 483	10.5 x 19 267 x 483	19.25 x 19 489 x 483
Battery pack H x W x D	inches mm	Internal	Internal	Internal	8.3 x 16.25 x 24.25 211 x 413 x 616
Weight (includes batteries)	lb kg	150 68	220 100	238 108	580 263
Input—hardwired connection circuit breaker requirement (contact factory for powercord options)		120=15A	120=25A	120=35A 208=20A 240=20A	208=40A 240=40A
Output connection		Hardwired output is standard. Contact factory for receptacle options.			
Typical runtime:	full load half load	14 36	24 58	14 35	12 33
Operation					
Nominal input voltage		120/208/240			
Input voltage range		+15%, -20%			
Operating frequency		60 Hz (online: ±0.01 Hz to ±3 Hz adjustable, on inverter: ±0.005 Hz)			
Nominal output voltage		120/208/240			
Output voltage regulation		±3% for input voltages +15%, -20% of nominal			
Output voltage waveform		Sine Wave			
Output voltage		THD 5% or less at rated kW load			
Overload capacity		150% surge and 125% for 10 minutes on-line. 150% surge and 110% for 10 minutes on inverter			
Transfer time		0 ms			
Lightning, surge and noise protection		2000: 1 spike attenuation using C62.41 and C62.45 Category A and Category B tests Noise rejection: common mode—>120 dB, normal mode—>60 dB			
Efficiency % (online)		88	90	91	90
Heat (online)	BTU/hr kW/hr	465 0.136	568 0.166	742 0.217	1896 0.556
Battery charger (DC)		12V, 4A	48V, 4A	48V, 4A	48V, 5A
Safety certification		UL, CSA (CUL)			
EMI compliance		FCC Class A			
Testing standards		ANSI/IEEE C62.41 (1991); ANSI/IEEE C62.45 (2002); EN62040-2			
Communication		RS232 serial port (DB-25), plus contact closures			
Environmental					
Operating temperature		0° to 40°C			
Storage temperature		-20° to +60°C (-20° to +40°C if battery not removed)			
Relative humidity		5 to 95% without condensation			
Audible noise (dBA)		50	50	51	52
Altitude		3050m (10,000 ft) maximum			

* 7 kVA model includes front panel keypad and display. All specifications typical and are subject to change without notice.



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Germany: 49.0.7841.604.0
Italy: 39.02.66.04.05.40
Norway: 47.23.03.65.50
Sweden: 46.8.598.940.00
United Kingdom: 44.1753.608.700

ASIA PACIFIC
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New Zealand: 64.0.3.343.3314
China: 86.21.6361.5599
HK/Korea/Taiwan: 852.2745.6682
India: 91.11.4223.2300
Singapore/SEA: 65.6825.1668

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FERRUPS Shipboard SEACOTS UPCS



**These products are
TAA Compliant**

Product snapshot

Product rating:	18 kVA
Input voltage:	208/240V
Output voltage:	120/208/240V
Frequency:	60 Hz
Configuration:	Cabinet

Features

- Meets stringent performance standards for installation in naval combatants
- Tested to MIL-S-901 and MIL-S-167-1
- Delivers bulletproof protection with ferroresonant technology
- Converts power from almost any AC source into computer-grade power
- Prolongs backup time with external battery cabinets
- Conditions incoming power without depleting the battery to preserve battery power for power outages
- Monitors internal logic board, batteries, and other critical components at scheduled intervals for reliable performance
- Saves money on installation costs by minimizing input breaker and wire size with low input THD and high power factor
- Ensures data integrity with complete offering of power management software

FERRUPS SEACOTS rackmount model



Product snapshot

Rating:	3.1 kVA–5 kVA
Input voltage:	120V
Output voltage:	120V
Frequency:	60 Hz
Configuration:	Rackmount

The FERRUPS® Shipboard Uninterruptible Power Conditioning System (UPCS) is uniquely designed to support nautical applications. After extensive development and testing, the FERRUPS performs reliably in the severe electrical and physical environment of naval combatants. Consisting of Shipboard Environmentally Adapted Commercial Off-the shelf (SEACOTS) components, the FERRUPS also meets TAA Compliant standards and is available on our GSA contract.

The FERRUPS essentially performs two main functions. First, it regulates incoming power, conditioning it so that the protected equipment connected to the UPCS always receives computer-grade power. This output power is consistently free from power disturbances that can cripple electronic warfare equipment. Both a sudden incident such as a violent surge and a long-term diet of poor quality power can damage electrical equipment on a naval vessel. Second, the FERRUPS contains batteries to provide power during a power outage. Should a power failure occur, the FERRUPS seamlessly switches to battery power without interruption. The FERRUPS can be fitted with multiple battery cabinets for extended battery backup time.

Backed by many years of reliable implementations and an unwavering commitment from Eaton to support Navy shipboard applications, the FERRUPS is a proven power protection system. The FERRUPS provides the highest level of design and performance to keep your critical applications running without interruption.



Powering Business Worldwide

Computer-grade Power Conditioning and Regulation

The FERRUPS combines true, no-break regulated and conditioned computer-grade power with galvanic isolation. As a result, the effects of spikes, sags, surges, switching transients, and noise are eliminated without the addition of a separate power conditioner or isolation transformer. The FERRUPS converts power from almost any AC source, while its bi-directional filtering protects the ship's electrical power from electrical noise and harmonics generated by the protected equipment.

Electrically Performance-Tested

The FERRUPS has been electrically performance-tested by the Naval Ship Systems Engineering Station on an ungrounded ship's power system in the land-based test site (LBTS). The FERRUPS meets the criteria for shipboard installation. The rugged FERRUPS has been medium weight shock-tested to MIL-S-901 (three "hits" each on all three axis) for Grade A unrestricted shipboard installation, and tested to MIL-S-167-1 through 50 Hz vibrations for unrestricted shipboard installation. The FERRUPS maintained all operational capabilities throughout the entire test evolution.

Condition-based Maintenance, Self-diagnostics and Monitoring

The FERRUPS incorporates self-diagnostics that test and monitor its inverter, battery charger, logic, and operating limits. Should a system fail or exceed the operating limits, it alerts the user by sounding an audible alarm.

Reliability

Since 1983, the FERRUPS with its patented ferroresonant technology continues to set the standard for reliable single-phase power protection. Now in its sixth generation, this state-of-the-art technology is at the core of each FERRUPS.

Free Software

FERRUPS models include the free Software Suite CD with power management software and a connectivity cable. Free software upgrades and downloads are available on the Eaton Web site (Eaton.com/powerquality). The UPCS is equipped with an RS-232 communications port and status contact closures.



Remote Monitoring

The FERRUPS can be directly interfaced to the ship's data network for remote monitoring with the optional BestLink Web/SNMP adapter, which provides SNMP, HTTP, SMTP, WAP, and Telnet compatibility as well as advanced RS-232 communications. The BestLink Web/SNMP adapter allows easy monitoring, management, and if necessary, safe shut down or reboot of equipment connected to the FERRUPS. The adapter expands your ability to control, track, and monitor power conditions throughout the network.



BestLink Web/SNMP Adapter

Compact Solution

All FERRUPS components fit through standard 26-inch x 66-inch ship hatches. Configured system packages include an external bypass, step-down transformer, and battery packs along with the UPCS itself.

Service

The FERRUPS is backed by a 24/365 help desk and available on-site service. In addition, replacement parts can be shipped throughout the world, and operation and maintenance training are also available.

Additional Battery Cabinets

The FERRUPS has multiple MIL-S-901 tested battery cabinets available for extended battery backup times.

BATTERY BACKUP TIMES

	With Battery Pack 23FE-1295	With Battery Pack 5FE-901-R (rackmount model)	
	FE18kVA	FER 3.1	FER 7.0
Half Load	1 hr. 46 min.	NA	NA
Full Load	37 min.	90 min	30 min

Note: Battery times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

TECHNICAL SPECIFICATIONS - TOWER MODEL¹

GENERAL

Part Number	FE18kVA: FE18KINHAAAKL
Power Rating	18 kVA / 15 kW
Input Connection	Hardwired
Input Connection RatingA	FE18kVA: 208V / 105A, 240V / 100A
Output Connection	Hardwired standard

PHYSICAL

Dimensions (H x W x D)	36.5 x 19.0 x 32.0 in. / 930 x 485 x 815 mm
Weight	FE18kVA: 1362 lb. / 618 kg
Shock Mounts	6 shock mounts per UPS and 12 shock mounts per battery cabinet are required for Mil Spec 901

OPERATION

Nominal Input Voltage	208/240V
Input Voltage Range	+15%, -20%
Operating Frequency	60 Hz
Nominal Output Voltage	120/208/240V
Output Voltage Regulation	±3% for input voltages of +15% to -20%
Output Voltage Waveform	Sine wave
Output Voltage THD	5% or less at rated kW load
Overload Capacity	150% surge and 125% for 10 minutes online, 150% surge and 110% for 10 minutes on inverter
Transfer Time	0 ms
Nominal Battery Voltage	120 Vdc
Lightning, Surge & Noise Protection	2000:1 spike attenuation using ANSI/IEEE C62.41 and C62.45 Category A and B tests. Common mode: >120 dB. Normal mode: >60 dB.
Efficiency	FE18kVA: 92%
Safety Certification	UL, CSA (cUL)
EMI Compliance	FCC Class A
Testing Standards	MIL-S901, MIL-167-1, ANSI/IEEE C62.41 (1980); ANSI/IEEE 62.45 (1987); IEC 801-2, 801-4, 801-5
Communication	RS-232 serial port (DB-25), plus contact closures

ENVIRONMENTAL

Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-20 to 60°C (-4 to 140°F)
Relative Humidity	0 to 95% without condensation
Audible Noise @ 1 meter	FE18kVA: 57 dB
Altitude	3,050 m (10,000 ft.) maximum
Front Panel Indicators	AC Line: Status of AC input source Ready: Availability of battery backup power Charging: Status of battery charging Battery Power: Illuminates when UPS is providing battery power Alarm: General alarm status
Control Panel	Keypad operation to change UPS modes and to display and change parameters
Control Panel Connection	Attached to front of UPS with 6-ft. (1.8m) cable for hand-held operation

BATTERY CHARGERS

Dimensions	Included within UPS enclosure
Charger Rating	20A
Recharge Time	Four times faster than standard, internal charger rated for 5A

OPTIONAL STEP-DOWN TRANSFORMERS

Part Number	FE18kVA: T2535183SNAVY
Voltage	480/240V in, 240V out; bulk head mounted
Qualification	Mil Spec 901 qualified

OPTIONAL BYPASS SWITCH

Part Number	BPE05MBBAS1ALNVY
Style	Make-before-break switch
Qualification	Mil Spec 901 qualified

OPTIONAL BATTERY PACK

Part Number	23FE-1295
Battery Description	2 strings of 100 Ah batteries, 10 batteries per string
Dimensions (H x W x D)	50 x 29 x 32 in. / 1270 x 737 x 813 mm
Weight	1910 lb. / 866 kg

1. Due to continuing product improvement programs, specifications are subject to change without notice.

TECHNICAL SPECIFICATIONS - RACKMOUNT MODELS¹

GENERAL

Part Numbers	FER3.1KDDAAAAAR* FER3.1KDDEAAAAAR FER7KDDFAAAFL
Power Ratings	FER3.1: 3.1kVA/2.2kW FER7: 5.0kVA/5.0kW
Input Connection	Hardwired
Input Connection RatingA	FER3.1: 120V/35A FER7: 120V/65A
Output Connection	Hardwired standard

*Internal battery

PHYSICAL

Dimensions (H x W x D)	FER3.1: 9.75x16x26.25 (inches)/ 248x406x667(mm) FER7.0: 19x16x26.25 (inches)/ 483x406x667 (mm)
Weight	FER3.1*: 238 lb/108 kg FER3.1: 138 lb/63 kg FER7.0: 330 lb/150 kg

*Internal battery model

OPERATION

Nominal Input Voltage	120V
Input Voltage Range	+15%, -20%
Operating Frequency	60 Hz
Nominal Output Voltage	120V
Output Voltage Regulation	±3% for input voltages of +15% to -20%
Output Voltage Waveform	Sine wave
Output Voltage THD	5% or less at rated kW load
Overload Capacity	150% surge and 125% for 10 minutes online, 150% surge and 110% for 10 minutes on inverter
Transfer Time	0 ms
Nominal Battery Voltage	48 Vdc
Lightning, Surge & Noise Protection	2000:1 spike attenuation using ANSI/IEEE C62.41 and C62.45 Category A and B tests. Common mode: >120 dB. Normal mode: >60 dB.
Efficiency	FER3.1: 91% FER7: 90%
Safety Certification	UL, CSA (cUL)
EMI Compliance	FCC Class A
Testing Standards	MIL-S901, MIL-167-1, ANSI/IEEE C62.41 (1980); ANSI/IEEE 62.45 (1987); IEC 801-2, 801-4, 801-5
Communication	RS-232 serial port (DB-25), plus contact closures

ENVIRONMENTAL

Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-20 to 60°C (-4 to 140°F)
Relative Humidity	0 to 95% without condensation
Audible Noise @ 1 meter	FER3.1: 52dB FER7: 52 dB
Altitude	3,050 m (10,000 ft.) maximum
Front Panel Indicators	AC Line: Status of AC input source Ready: Availability of battery backup power Charging: Status of battery charging Battery Power: Illuminates when UPS is pro- viding battery power Alarm: General alarm status

OPTIONAL BYPASS SWITCH

Part Number	BPE04MBBAS1ARML
Style	Make-before-break switch
Qualification	Mil Spec 901 qualified

OPTIONAL BATTERY PACK

Part Number	5FE-901-R
Battery Description	1 string of 75 Ah batteries, 4 batteries per string
Dimensions (H x W x D)	10.5 x 19 x 26.5 in. / 268 x 482 x 673 mm
Weight	353 lb. / 160 kg

1. Due to continuing product improvement programs, specifications are subject to change without notice.

For more information, please visit
Eaton.com/MarineUSG

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Printed in USA
FER05FXA
October 2012

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