

EATON

Powerware

Powerware® FERRUPS® Rackmount 60 Hz

Unmatched reliability in configurable power protection for computers and telecommunications equipment



Product Snapshot

Rating:	850 VA - 7 kVA
Input Voltage:	120/208/240
Output Voltage:	120/208/240
Frequency:	60 Hz
Configuration:	Rackmount

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
- Warranty
 - 10-Year Pro-Rated Warranty
 - \$25,000 Load Protection Guarantee (U.S. and Canada)

Powerware 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. Powerware-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 back-feed of harmonic currents into building wiring, which can disrupt computer operations. Redundant power paths assure high fault-tolerance and opti-

mum 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 Powerware Software Suite power management software with connectivity cable, and are BestLink SNMP/WEB-ready for remote management. FERRUPS covers up to US\$25,000 for damage to connected equipment resulting from a spike or surge (U.S. and Canada only).

Technical Specifications

Model		850 VA	1.15 kVA	1.4 kVA	1.8 kVA	2.1 kVA	3.1 kVA	4.3 kVA*	7 kVA*
Model No.		FES850 VA	FES1.15 kVA	FES1.4 kVA	FER1.8 kVA	FER2.1 kVA	FER3.1 kVA	FER4.3 kVA	FER7 kVA
Capacity (kVA/kW)		.8/6	1.15/8	1.4/1	1.8/1.25	2.1/1.5	3.1/2.2	4.3/3	7/5
Dimensions	inches	9.75 x 16 x 21.25			9.75 x 16 x 26.25*		19 x 16 x 26.25		
H x W x D	mm	248 x 406 x 540			248 x 406 x 667		483 x 406 x 667		
Front Panel	inches	10.5 x 19			10.5 x 19		19.25 x 19		
H x W	mm	267 x 483			267 x 483		489 x 483		
Battery Pack	inches	Internal			Internal		8.3 x 16.25 x 24.25		
H x W x D	mm						211 x 413 x 616		
Weight	lb	105	135	150	209	220	238	495	580
(includes batteries)	kg	48	62	68	95	100	108	225	263
Input - Hardwired Connection		120=10A	120=15A	120=15A	120=20A	120=25A	120=35A	120=40A	120=65A
Circuit Breaker Requirement		208=5A	208=10A	208=10A	208=15A	208=15A	208=20A	208=25A	208=40A
(Contact factory for powercord options.)		240=5A	240=5A	240=10A	240=10A	240=15A	240=15A	240=20A	240=35A
Output Connection		Hardwired output is standard. Contact factory for receptacle options.							
Typical Runtime:	full load	11	19	14	31	24	14	26	12
(minutes)	half load	28	49	36	73	58	35	61	33

Operation

Nominal Input Voltage	120/208/240								
Input Voltage Range	+15%, -20%								
Operating Frequency	60 Hz (on-line - ±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. +5%,-8.3% for any line , load or battery condition.								
Output Voltage Waveform	Sine Wave								
Output Voltage	THD 5% or less THD 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 - >60dB								
Efficiency % (on-line)	85	88	88	90	90	91	90	90	90
Heat (on-line)	BTU/hr.	361	372	465	474	568	742	1138	1896
	kW/hr.	0.106	0.109	0.136	0.139	0.166	0.217	0.333	0.556
Battery Charger (DC)	12V, 4A	12V, 4A			48V, 4A		48V, 5A		
Safety Certification	UL, CSA (CUL)								
EMI Compliance	FCC Class A								
Testing Standards	ANSI/IEEE C62.41 (1980); ANSI/IEEE C62.45 (1987); IEC 801-2, 801-4, 801-5								
Communication	DB25 communication port with RS-232 serial communications, alarm and inverter contact closures, and EPO shutdown.†								

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)	48	50	50	50	50	51	50	52	52
Altitude	3050 m (10,000 ft.) maximum								

*8, 2.1 and 3.1 kVA models can be configured with 21.25 inch depth. Consult factory. 1.4 kVA and 7 kVA models include front panel keypad and display. All specifications typical and are subject to change without notice.

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