

## FERRUPS® FE Series 60Hz

Unrivalled 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 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 power management software included to ensure data integrity

### Warranty

- ▶ 2-Year Limited 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 and customization 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.

### Product Snapshot

|                 |                      |
|-----------------|----------------------|
| Rating:         | 500 VA - 18kVA       |
| Input Voltage:  | 120/208/240, 208/240 |
| Output Voltage: | 120/208/240          |
| Frequency:      | 60 Hz                |
| Configuration:  | Tower                |

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 has won Midrange Systems' "Buyer's Choice" award six of the last eight years. 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).

## FE Series, 60Hz Specifications

| Models                       | 500VA                    | 700VA   | 850VA   | 1.15kVA            | 1.4kVA   | 1.8kVA                   | 2.1kVA              | 3.1kVA                   | 4.3kVA   | 5.3kVA                                 | 7kVA                             | 10kVA                            | 12.5kVA              | 18kVA                |                        |
|------------------------------|--------------------------|---------|---------|--------------------|----------|--------------------------|---------------------|--------------------------|----------|--|----------------------------------|----------------------------------|----------------------|----------------------|------------------------|
| Part Number                  | FE500VA                  | FE700VA | FE850VA | FE1.15kVA          | FE1.4kVA | FE1.8kVA                 | FE2.1kVA            | FE3.1kVA                 | FE4.3kVA | FE5.3kVA                               | FE7kVA                           | FE10kVA                          | FE12.5kVA            | FE18kVA              |                        |
| 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 (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**     |                      |                        |
| H x W x D (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 (lbs)                 | 62                       | 79      | 85      | 132                | 154      | 183                      | 196                 | 256                      | 359      | 505                                    | 604                              | 875                              | 1089                 | 1362                 |                        |
|                              | 28                       | 36      | 39      | 60                 | 70       | 83                       | 89                  | 116                      | 163      | 229                                    | 274                              | 397                              | 494                  | 618                  |                        |
| Input Connection             | 6 ft. cord w/NEMA 5-15P* |         |         |                    |          | 6 ft. cord w/NEMA 5-20P* |                     | 6 ft. cord w/NEMA 5-20P* |          | 120V/40A<br>208V/25A<br>240V/20A       | 120V/40A<br>208V/30A<br>240V/25A | 120V/40A<br>208V/40A<br>240V/35A | 208V/60A<br>240V/50A | 208V/75A<br>240V/65A | 208V=115A<br>240V=100A |
| Output Connection (quantity) | 4                        |         |         | 6                  |          |                          | 6                   |                          |          | Hardwired output is standard           |                                  |                                  |                      |                      |                        |
| (type)                       | NEMA 5-15R               |         |         | NEMA 5-15R         |          |                          | NEMA 5-15R          |                          |          | Contact Factory for receptacle options |                                  |                                  |                      |                      |                        |
| Typical Runtime: (Full Load) | 9                        | 11      | 9       | 8                  | 11       | 11                       | 9                   | 14                       | 10       | 20                                     | 12                               | 11                               | 18                   | 10                   |                        |
| (minutes) (Half Load)        | 23                       | 28      | 23      | 21                 | 28       | 30                       | 25                  | 35                       | 24       | 50                                     | 33                               | 26                               | 48                   | 26                   |                        |

### Operation

|                                     |   |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------------------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Nominal Input Voltage               | 120/208/240   |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Input Voltage Range                 | +15%, -20%  |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Input Power Factor                  | 0.98  |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Nominal Output Voltage              | 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 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.<br>Common Mode - >120 dB. Normal Mode - >60dB |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 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/EEE C62.41 (1980); ANSI/EEE C62.45 (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                    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Storage Temperature   | -20° C to +60° C              |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Relative Humidity     | 5 to 95% without condensation |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Audible Noise at 1m   | 41                            | 41 | 47 | 49 | 49 | 51 | 51 | 51 | 50 | 51 | 54 | 55 | 56 | 57 |
| Altitude              | 3, 050m (10,000 ft.) maximum  |    |    |    |    |    |    |    |    |    |    |    |    |    |

All specifications typical and are subject to change without notice.

Powerware offers a complete line of Uninterruptible Power Systems from 250VA to more than 4000kVA.

\*120 V Standard Configuration

\*\*Batteries in second cabinet. Contact factory for weights and dimensions.

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