



# FN Series Scalable N+1 UPS

## 10kVA to 40kVA Rackmount

### Advanced Features:

- \* Parallel Rackmount Units with a Single Output of up to 40kVA
- \* True N+1 Redundancy
- \* ECO Mode: 97% Efficiency
- \* DSP Double-Conversion On-line Sinewave Design
- \* Input Power Factor Correction
- \* Programmable 50/60Hz Frequency Conversion
- \* Precision Output Voltage Regulation
- \* Extended Brownout, Surge & Transient Protection
- \* Remote Emergency Power Off (REPO)
- \* Optional Extended Battery Banks & Chargers
- \* RS-232C, USB & Optional SNMP/HTTP Agent



### Scalable Rackmount UPS up to 40kVA

Falcon® Electric's scalable N+1 on-line Uninterruptible Power Supply (UPS) provides the ideal scalable power protection solution. The FN UPS can easily be configured using individual 10kVA rackmount models, providing up to 30kVA with N+1 redundancy. Alternate parallel configurations of 10kVA to 40kVA are achievable if N+1 redundancy is not required.

### Stand-Alone Units Lower Costs

In contrast to other modular UPSs, the FN is a compact, stand-alone UPS that may be connected in parallel. This economical approach eliminates the added expense of buying cabinets to house control, power and battery modules.

### N+1 Redundancy Ensures Reliability

If your equipment has to operate without interruption or downtime, the N+1 configured FN UPS is the clear choice. Should an individual UPS require maintenance, the UPS is automatically sensed and taken offline. The user is notified through the LCD display and an audible alarm.

The UPS may be serviced or replaced without powering down the remaining models or connected load. Internal batteries are user-replaceable and hot-swappable, while the UPS and connected equipment are in full operation.

### Frequency Converter Ready

The FN UPS is easily programmed for use as a 50Hz or 60Hz frequency converter, making it the ideal choice for worldwide power applications.

### ECO Mode Saves Energy

The unit's "ECO Green Mode" setting increases the AC/AC efficiency up to 97% during times when the connected equipment is not in use. Falcon's ECO Mode reduces energy consumption, cooling expense and CO2 emissions.

In addition, the FN UPS features input power factor correction which lowers current demands on building wiring. When not in ECO Mode, the FN operates at a 90% AC/AC efficiency level, further reducing energy demands.

### True Regenerative On-line Design

The FN True Regenerative On-line UPS provides the highest level of protection against the widest spectrum of power problems. The incoming AC utility source is converted to a regulated DC voltage. From this DC voltage, a new AC voltage is generated, providing clean, tightly regulated power to your equipment.

### Microprocessor Control with DSP

The FN Series has been designed using advanced Digital Signal Processing (DSP) microprocessor technology. DSP technology yields the highest level of internal UPS protection, control, performance and reliability.

### RS-232, USB & SNMP/HTTP UPS Management

With the supplied UPSilon® software, all models support unattended shutdown, UPS management, data logging and a power diagnostic tool. The software supports all Windows® and other major platforms. For UNIX users, UPSilon is available as an option. Falcon also offers an optional SNMP/HTTP agent board.

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# FN Series Scalable N+1 UPS Rackmount

# 10kVA - 40kVA

<b>Model Number</b> (Includes FN10KRM-2B & FNBRM-1S9-10K)	FN10KRM-2TXB	FN10KRM-2TXB	FN10KRM-2TXB	FN10KRM-2TXB
<b>Number of Parallel Units</b>	1	2	3	4
N+1 VA Rating	N/A	10,000	20,000	30,000
Maximum VA Rating (not-N+1)	10,000	20,000	30,000	40,000
<b>Electrical Input</b>				
Nominal AC Voltage	208 or 240Vac (Please specify the input voltage at the time of order)			
Voltage Range	160Vac to 280Vac			
Bypass Voltage Window	184 to 260Vac, or 195 to 260Vac (Programmable)			
Current-Amps (system) N+1 (not-N+1)	N/A 50A	50A 100A	100A 150A	N/A 200A
Frequency	50/60 Hz (Synchronized Auto – Tracking) or 47-63 Hz (Programmable Unsynchronized)			
Power Factor Correction	> 0.95			
Efficiency AC/AC	Up to 90%, ECO Mode to 97%, Battery Mode 85%			
<b>Electrical Output</b>				
Watts	9,000	18,000	27,000	36,000
N+1 Redundant Mode	N/A	9,000	18,000	27,000
Voltage (Non-isolated) (UPS Output Only)	208, 220, 230, 240Vac Programmable (UPS modules may not be connected in parallel without a FN10KRM-2B isolation module installed on the output of each UPS module)			
Voltage (Isolated) (FN10KRM-2B Transformer Module Output)	Note: Two 120Vac outputs may be connected in parallel to provide a single 120Vac output, 240/120Vac Split-Phase (3 wire plus ground)			
Overload Capability	105% ~ 150% 167sec ~ 0.1sec before transfer to bypass, >150% Immediately transfer to bypass Bypass mode 105% ~ 200% 500sec ~ 0.22sec before turn off, >200% 0.22sec before turn off			
Voltage Regulation	UPS Module ±2%, with FN10KRM-2B Output Transformer Module ±3%			
Voltage Adjustment	±0%, ±1%, ±2% or ±3% (Programmable)			
Frequency	50/60 Hz ± 5 Hz (Synchronized Auto-Tracking) or 50 Hz and 60 Hz (Programmable Fixed Output) Note: UPS output capacity designed to 75% when programmed for fixed output frequency			
Frequency Stability	±0.2% (Fixed frequency operation) Fixed frequency output available in non-parallel configurations only, and the output must be derated by 25%			
Frequency Window	±1 Hz or ±3 Hz (Programmable, Auto-Tracking mode)			
Harmonic Distortion	5% Typical			
Crest Ratio	3:1			
<b>Battery</b>				
DC Voltage	240Vdc			
Type	12V, 45W Sealed Lead-Acid Maintenance-Free (20 pieces)			
Charger Current	1.5A			
Back Up Time (Full Load/Half Load)	5.5 Minutes / 15 Minutes			
Recharge Time	5 Hours to 90%			
Replacement	Hot-Swappable & User-Replaceable			
<b>Transfer Time</b>				
Line Fails/Recovers	0 ms			
UPS to Bypass or Reverse	0-1 ms			
After Overload	Auto Transfer to UPS			
<b>Electrical Connections</b>				
Input	Hardwire Terminal Block			
Output	Hardwire Terminal Block			
REPO	Hardwire Connector Supplied			
<b>Environmental</b>				
Operating Temperature	0°C to 40°C (32°F to 104°F)			
Humidity	10% to 95% Non – Condensing			
Altitude	10,000 Feet			
Cooling	Low Velocity Forced Air Fans			
Audible Noise @ 1 Meter	50 dbA			
<b>Controls and Indicators</b>				
Status on LCD & LED	Line mode, Backup mode, ECO (green) mode, Bypass, Low Battery, Defective Battery, Overload, UPS Alarm, Transferring with interruption			
LCD Displayed Readings	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage, Internal Temperature			
Self-Diagnostics	At power up, Manual front panel button & Software control with programmable 24-hour automatic self-test			
Audible Alarms	Utility Loss, Low Battery, Transfer to Bypass and UPS Failure			
Communications	RS-232 Serial Port (Bundled UPSilon Software) & REPO Connector, Optional USHA SNMP/HTTP Agent			
<b>Mechanical</b>				
UPS Dimensions HxWxD (inches)	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3
Model FN10KRM-2TXB (mm)	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667
Number of cabinets	1 (3U)	2 (3U)	3 (3U)	4 (3U)
Battery Bank Dimensions HxWxD (inches)	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3
Model FNBRM-1S9-10K (mm)	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667
Number of cabinets	1 (3U)	2 (3U)	3 (3U)	4 (3U)
Transformer Module HxWxD (inches)	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3	5.2 x 17.4 x 26.3
Model FN10KRM-2B (mm)	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667	132 x 440 x 667
Number of cabinets	1 (3U)	2 (3U)	3 (3U)	4 (3U)
UPS Weight lbs. (kg)	57 (26)	114 (52)	171 (78)	228 (104)
Battery Bank Weight lbs. (kg)	150 (68)	300 (136)	450 (204)	600 (272)
Transformer Module lbs. (kg)	108 (49)	216 (98)	324 (147)	432 (196)
Agency Listing	UL & cUL Listed, CE, FCC Class A			

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