



Uninterruptible Power Systems & Power Conversion Products

ED Series 1kVA to 2.4kVA *2U - Rackmount* Frequency Converter with Battery Back Up

- 50/60/400 Hz Frequency Converter
- True Double Conversion UPS
- Precision Output Voltage & Frequency
- Pure Sinewave Output
- Wide Input Frequency Range
- Eliminates Generator Frequency & Voltage Drift
- Superior Brownout, Surge and Transient Protection
- Lightweight & Rugged Military COTS Construction
- 19", 2U Rackmount Form Factor



Technology Breakthrough

Falcon® Electric's ED -1 Series is more than an international voltage/frequency converter, voltage regulator, line conditioner and on-line UPS. Its unique features will significantly improve your equipment's reliability, virtually eliminating power-related downtime and dramatically increasing productivity. Its small size and lightweight construction makes it ideal for OEM and integrated applications.

Unique Frequency Converter & UPS Capability

The ED Series provides a unique flexibility in a small footprint. The ED Series can be factory configured as a pure frequency converter accepting a 50, 60 & 400Hz input and yielding a fixed 50 or 60Hz output. It can also supply a 400Hz, 120V output if properly derated. The ED-1 Series provides superior on-line UPS backup capability, making it an ideal solution for tough applications requiring both frequency conversion and on-line UPS backup.

Superior Voltage/Frequency Regulation & Extended Brownout Protection

Since the ED -1 Series is a solid-state generator, it prevents daily power disturbances from reaching your equipment. Constant voltage transformers, line conditioners and other devices are not designed to prevent damage from these problems, or provide battery backup. Line-interactive UPSs provide battery backup, but cannot be used as frequency converters.

The ED -1 Series continually regenerates new, clean AC power in pure sinewave form for superior protection. Even with wide input variations in voltage and frequency, the ED output steadfastly remains at its designed voltage and frequency. It also allows your system to continuously operate during extended brownouts to 88 VAC.

Enhanced Surge Start-up Capability

Falcon Electric's ED Series is designed to start-up loads that exhibit high inrush when started from the utility. This gives the ED the ability to start tough loads such as motors, multiple computers or incandescent lighting.

Turns Any Generator Into Computer-Grade Power

Due to its Regenerative On-line rackmount design, the ED -1 Series will regenerate new, clean computer grade power with tightly regulated voltage and frequency, independent of generator voltage and frequency drift.

Ideal for applications such as:

- Military & Aerospace
- Aircraft Frequency Conversion
- Off Shore Platforms
- Shipboard Systems
- Robotics
- Automated Manufacturing
- Test Equipment Benches
- Precision Motor Speed Application
- Mobile Office/Labs
- Communications/Microwave

ED Series

1kVA to 2.4kVA Rackmount

ED Series Model -1 Rackmount - Frequency Converter with Battery Back-Up (120V Input/Output)

Model Number	ED-1000RM-1	ED-1500RM-1	ED-2000RM-1	ED-2400RM-1
Nominal VA	1000	1500	2000	2400

Electrical Input

AC Voltage, +10% -20%	120Vac			
Current-Amps	10.4	15.6	20.8	25.0
Frequency Range	47-450 Hz			

Electrical Output

AC Voltage, $\pm 3\%$	120Vac			
Watts @ 50 or 60 Hz	700	1050	1400	1680
Watts @ 400 Hz	595	892	1190	1428
Current-Amps @ 50/60 Hz	8.3	12.5	16.7	20
Current-Amps @ 400 Hz	7.1	10.6	14.2	17
50/60 Hz Non-Linear Repetitive Peak (Amps)	20	30	40	47.6
400 Hz Non-Linear Repetitive Peak (Amps)	14.2	21.3	28.3	33.8
Total Harmonic Distortion	< 3% @ 100% Linear Load, < 5% @ 100% Non-Linear Load			
Overload	200% for 0.5 Seconds, 120% for 30 Seconds			
Dynamic Response	+/- 5% RMS for 100% Step Load Change, 1ms Recovery Time			
Output Protection	Short Circuit and Overload			

Battery

Type	Sealed Lead Acid Maintenance-Free Standard Batteries – Yuasa 12V, 7AH Optional High Temperature – Hawker 12V, 5AH			
Back Up Time @ Full Load (Std. batteries)	8 Minutes	5 Minutes	3 Minutes	
@ 1/2 Load	20 Minutes	14 Minutes	9 minutes	

Battery times are stated for standard batteries and are approximate.
Optional high temperature Hawker batteries available.

Electrical Connections

Input	6' Cord with 5-15P	6' Cord with 5-20P	6' Cord with L5-30P
Output	(4) 5-15R		

Other input plug and output plug configurations available, contact the factory.

Environmental

Operating Temperature	With standard Yuasa NP7-12 Batteries - 0° C to 40° C (32° F to 104° F) With optional Hawker high temperature batteries - 0° C to 50° C (32° F to 122° F)		
Humidity	10% to 95% Non – Condensing		
Altitude	7,000 Feet Consult the factory for higher altitude		
Cooling	Low Velocity Forced Air Fans		
Audible Noise @ 1.5 Meters	54dBA		

Controls and Indicators

Sequenced LEDs	Load Level
Single LED	Utility Present, Low Battery, Summary Alarm, Inverter On
Audible Alarms	Utility Interrupt, Inverter Failure, Overload, Low Battery
Communications	Dry Contact Closures on Utility Loss & Low Battery via 9 Pin "D" Connector

Mechanical

Dimensions H x W x D inches (mm)	3.5 x 17.13 x 20.1 (88.9 x 435.1 x 515.5)			
Weight lb. (kg)	54 (24.4)	58 (26.3)	60 (27.2)	65 (29.5)
Chassis	Light weight aluminum			

Specify input/output frequency, 50/60 or 400Hz (any combination).



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