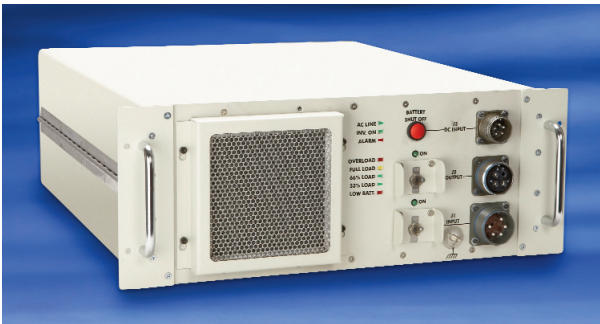




ED-LIB Series™ COTS Military-Grade 3-5kVA UPS with Lithium-Polymer Battery System



Unique UPS, Frequency/Phase Conversion and Power Conditioning Capabilities

Falcon® Electric's ED-LIB Series UPS, Frequency/ Phase Converter and Regenerative Power Source has been designed to tame harsh field power. It provides reliable computer-grade power suitable for power-sensitive equipment.

The ED converts incoming three-phase utility or generator power to DC which is regulated and fed into a robust PWM MOSFET inverter. The inverter stage then regenerates a new regulated, single-phase computer-grade power of the desired frequency.

This approach removes voltage transients, sags, surges and the frequency stability problems often encountered from ground-based and aircraft generator systems, as well as third-world utility sources.

Additionally, the ED-LIB allows for the connection of single-phase equipment to a three-phase source while maintaining a balanced power draw from all three phases. This helps eliminate excessive harmonics and nuisance tripping of circuit breakers due to phase imbalances on the three-phase source.

Superior output power quality is assured with $\pm 3\%$ voltage regulation and a sinewave harmonic distortion of less than 3%. Frequency regulation is maintained at $\pm 1\%$. The output specifications are held over the entire input voltage and frequency range, from no load to full load.

Lithium-Polymer Battery Weighs Only 55 lbs. and Offers Optimal Backup Time

Falcon's ED-LIB Series features the lightest battery bank available and is ideal for a wide range of military applications. At only 55 lbs., the high-capacity lithium-polymer battery module offers 15 minutes of battery backup at 2800 watts! Plus, its compact 2U rackmount enclosure allows for easy system integration.

Advanced Battery Management

The ED-LIB UPS has been specifically designed to operate with the Falcon high-capacity lithium-polymer battery module. The module incorporates the lithium-polymer batteries, Advanced Battery Management System (ABMS) and the charger into a 2U rackmount cabinet weighing only 55 pounds.

The ABMS monitors every individual cell continuously. It provides full cell equalization, cell and output level overload protection.

The internal EDBR5000-3/1/-LI-SEC battery charger is an advanced design with an input that accepts 115/200Vac, 47-450Hz three-phase or 115Vac, 120Vac, 47-450Hz single-phase power.

DOT and UN Certifications

The ED-LIB Series has received both DOT Title 49 CFR and UN ST4/SG/AC.10/11 certifications to allow for safe ground transportation of lithium-polymer batteries. The ED-LIB is designed to meet the shock and vibration requirements of the Munson Road Test.

To discuss your specific application, please contact Falcon Military Sales.

Advanced Features:

- * True Double-Conversion On-line Sinewave Design
- * UPS/Converter Weighs Only 74 Pounds in a 4U Rack
- * Wide 115/200Vac, 47-450Hz Three-Phase Input Voltage Window
- * Precision Single-Phase 120Vac, 50, 60 or 400Hz Output Voltage Regulation
- * Superior Brownout, Surge & Transient Protection
- * 2U Rackmount Lithium Battery Bank Weighs 55 Pounds!
- * Lithium Battery Bank Incorporates Advanced Battery Management and Charger
- * High-Capacity Lithium Battery System has DOT & UN Certifications
- * Optional VRLA Battery Packs Available
- * High Temperature +50°C Operation for Harsh Environments
- * Exceptionally Rugged Construction; Meets Munson Road Test Demands

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ED-LIB Series™ UPS

3kVA - 5kVA

ED Series Rackmount UPS, Frequency & Phase Converter 47Hz - 450Hz Three-Phase Input

Model Number	ED4-3000RM-3/1-60-LIB	ED4-4000RM-3/1-60-LIB	ED4-5000RM-3/1-60-LIB
Nominal VA	3000	4000	5000
Electrical Input			
Nominal AC Voltage , +10% -10%	115/200 Vac or 120/208 Vac 3Ø (without modification)		
Current Amps	9.6A per Phase	12.8A per Phase	16A per Phase
Frequency Range	47Hz - 450Hz		
Power Factor Correction	>0.90pf		
Electrical Output			
Watts	2100	2800	3500
AC Voltage	120Vac 1Ø, ± 3%		
Frequency (set at the factory)	50Hz or 60Hz ±1Hz, 400Hz ±4Hz		
Current Amps	25A with 0.7pf Load 17.5A with 1.0pf Load	33.4A with 0.7pf Load 23.4A with 1.0pf Load	41.7A with 0.7pf Load 29A with 1.0pf Load
Non – Linear Repetitive Peak (Amps)	60	80	100
Total Harmonic Distortion	< 3% @ 100% Linear Load, < 5% @ 100% Non-Linear Load		
Overload	110% for 100 Seconds		
Dynamic Response	± 5% RMS for 100% Step Load Change, 1ms Recovery Time		
Output Protection	Short Circuit and Overload		
Battery			
DC Bus Voltage	72Vdc		
Back Up Time @Full Load	28 minutes	15 minutes	5 minutes
Battery Charger	Located inside the EDBR5000-3/1-Li Battery Bank		
Electrical Connections			
Input	(1) MS3452W24-10P (Located on the front panel)		
Output	(1) MS3452W22-22S (Located on the front panel)		
External LI Battery System	(1) MS3102A18-11P (Located on the front panel)		
Environmental			
Temperature	Operational Storage	-10°C to +50°C -40°C to +60°C	
Humidity	10% to 95% Non – Condensing		
Altitude	10,000 Feet (3000 meters) without derating		
Cooling	200cfm Fan		
Air Flow	Front to Rear		
Audible Noise	60dBA @ 1.5 Meters		
Controls & Indicators			
Sequenced LEDs	Load Level / Battery Level		
Single LEDs	Utility Present, Summary Alarm, Inverter On		
Audible Alarm	Utility Interrupt, Inverter Failure, Overload		
Communications	Dry Contact Closures on Utility Loss via 9 Pin "D" Connector		
Mechanical			
Dimensions	inches H x W x D (mm)	6.97 x 16.87 x 21.19 (177.1 x 428.5 x 538.3)	
Chassis	4U Rackmount		
Weight	lbs. (kg)	74 (33.6)	
Mounting	Rackmount Front Panel & Slide Rail Mounting Holes		

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www.falconups.com - email: sales@falconups.com

ED-LIB Series™ Lithium Battery System 3kVA - 5kVA

Model Number	EDBR5000-3/1-LI-SEC	
Description	Lithium-Polymer Battery System with Advanced Battery Management and Internal Charger	
Charger Electrical		
Nominal AC Voltage , +10% -10%	115/200 Vac or 120/208 Vac, Three-Phase Wye or 120Vac Single-Phase	
Current Amps	3A	
Frequency Range	47Hz - 450Hz	
Power Factor Correction	>0.95pf	
Output Voltage	72Vdc Nominal	
Battery Recharge Time	8 Hours or Less	
Output & Charge Controlled by	Microprocessor Based, Advanced Battery Management Board	
Missing or Improper Phase Indication	Red Indicator Light on Front Panel	
Battery Information		
Type	Lithium Polymer	
Cell Voltage	3.75Vdc	
Cell Rating	5AH	
Number of cells	80 Cells	
Advanced Battery Management		
Battery Charging	Charge Voltage Control, Cell Voltage Equalization	
Battery Output Protection	Over-current, Short Circuit, Over-Discharge, Over-Charge and Over-Temperature	
Battery Level Status	Four Segment LED Gas Gauge (green LEDs)	
Features	Cell Monitoring and Equalization, Two-Tier Over Current Protection, High Level of Programmability and Accurate Battery State of Charge	
Firmware Updates	Must be Performed by the Factory	
Electrical Connections		
Charger Input	MS3452W24-10PW	
UPS Output	MS3102A18-11S	
Environmental		
Temperature	Operational Storage	-10°C to +50° C -40°C to +60°C
Humidity	10% to 95% Non – Condensing	
Altitude	10,000 Feet (3000 meters) without derating	
Cooling	Two Low Velocity Cooling Fans	
Air Flow	Front to Rear	
Audible Noise	55dBA @ 1.5 Meters	
Vibration	Meets requirements of MIL-STD-810F, Method 514.5	
Mechanical		
Dimensions	inches H x W x D (mm)	3.47" x 22.19" x 16.87" (88 x 56.3 x 42.8)
Chassis	2U Rackmount	
Weight	lbs. (kg)	55 (25)
Mounting	Provisioned for the Installation of Rackmount Equipment Slides	
Approvals		
Transportation	DOT Title 49CFR & UN ST/SG/AC.10/11	
Air Shipments	Cargo Aircraft Only	
Shipping Instructions	Must contact Falcon Electric prior to shipment	

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