

ED-M 1-2.4KVA FREQUENCY / PHASE CONVERTERS THREE PHASE / SINGLE PHASE 2RU SIZE RACKMOUNT DATASHEET

Overview

The Falcon® Electric ED-M Series delivers precise three-phase to single-phase power conversion with integrated UPS capability, eliminating phase imbalance and providing clean, regulated AC power for demanding military, industrial, and aerospace applications



Key Advantages

- **Wide Input Range & Frequency Flexibility:** Accepts 47–450 Hz input, providing stable 50 Hz, 60 Hz, or 400 Hz output for global and specialized power requirements.
- **True Online Double-Conversion Technology:** Continuously regenerates clean, tightly regulated AC power, protecting sensitive systems from voltage fluctuations, spikes, and noise.
- **Frequency & Phase Conversion Capability:** Converts three-phase to single-phase or single-phase to three-phase power while maintaining precise voltage and frequency control.
- **Extended Brownout Protection:** Operates reliably during wide input voltage swings, preventing downtime and equipment malfunction caused by unstable line conditions.
- **Industrial-Grade Reliability:** Solid-state design ensures exceptional durability and long service life in demanding environments such as aerospace, military, and industrial automation.
- **Flexible Configuration Options:** Available in multiple power ratings (1 kVA–2.4 kVA) with various input/output voltage options to meet application-specific needs.

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D A T A S H E E T

Model Number	ED4-1000RM-3/1-4-M ED4-1000RM-3/1-5-M ED4-1000RM-3/1-6-M	ED4-1500RM-3/1-4-M ED4-1500RM-3/1-5-M ED4-1500RM-3/1-6-M	ED4-2000RM-3/1-4-M ED4-2000RM-3/1-5-M ED4-2000RM-3/1-6-M	ED4-2400RM-3/1-4-M ED4- 2400RM-3/1-5-M ED4- 2400RM-3/1-6-M	
Nominal VA	1000	1500	2000	2400	
Electrical Input					
Nominal AC Voltage	115/200 Vac 3Ø (±20%) or 120/208 Vac 3Ø (±20%)				
Current Amps	3.6A (per phase)	5.2A (per phase)	7.5A (per phase)	8.5A (per phase)	
Frequency	350-450 Hz				
Isolation	Three-Phase Galvanic				
Power Factor	>0.87pf				
Electrical Output					
Watts	700	1050	1400	1680	
Current (@ 0.7pf load)	8.3A	12.5A	16.7A	20A	
Non-Linear Repetitive Peak Amps	20A	30A	40A	48A	
AC Voltage (Specify at the time of order)	115 Vac or 120 Vac (nominal)				
Frequency	-4-M Models = 400 Hz ±1% -5-M Models = 50 Hz ±1% -6-M Models = 60 Hz ±1%				
Voltage Regulation	±3%				
Dynamic Response	± 5% RMS for 100% Step Load Change, 1ms Recovery Time				
Harmonic Distortion	< 3% @ 100% Linear Load, < 5% @ 100% Non-Linear Load				
Overload	200% for 0.5 Seconds, 120% for 30 Seconds				
Crest Ratio	3:1				
Ride Through Without Batteries	100ms (typical)				
Optional Battery Backup Support					
DC Bus Voltage	72 Vdc				
Battery Charger Current	400 ma				
Battery Bank Models	EDBR-1SH-M EDBR-2SH-M				
Battery Type	Energys Cyclon X Cells wide temperature batteries (rated -60°C to +80°C operational)				
Back Up Time (typ.)	-1SH -2SH	13 32	8.5 18	4.4 12	3.5 10
Transfer Time					
Line Fails/Recovers	0 ms				
Electrical Connections					
Input	(1 ea.) AMPHENOL# MS3102A18-11P, 12 AWG Pins				
Output	(2 ea.) AMPHENOL# MS 3102A16-10S, 12 AWG SOCKETS				
Optional Battery Bank	(1 ea.) AMPHENOL# MS3102E18-5P, 12 AWG SOCKETS				
Environmental					
Temperature	Operational -20°C to 60°C (-4°F to 140°F) Storage -40°C to 60°C (-40°F to 140°F)				
Humidity	10% to 95% Non – Condensing				
Altitude	Operational - 10,000 Feet Transportation - 40,000 Feet				
Cooling	Low Velocity Forced Air Fans				
Audible Noise (@ 1.5 Meters)	54dBA				
Controls & Indicators					
LED Display	Sequenced - Load Level / Battery Level Single - Utility Present, Summary Alarm, Inverter On, Output On, Charger Off				
Audible Alarms	Utility Interrupt, Inverter Failure, Overload				
Controls	UPS On/Off, Input & Output Circuit Breakers				
Communications	Two RS-232 ports located on the UPS rear panel				
Mechanical					
Dimensions UPS inches (mm)	3.48 x 17.13 x 20.06 (88.4 x 435.2 x 509.6)				
Battery Banks	3.48 x 16.9 x 20.46 (88.4 x 429.3 x 519.7)				
Weight lbs. (kg)	45 (15.88)				
Battery Bank Options	EDBR-1SH-M = 60 (27.3) EDBR-2SH-M = 90 (40.9)				

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