



Uninterruptible Power Systems & Power Conversion Products

ED Series™ UVS PLUS® 1kVA to 4kVA Frequency & Voltage Converters

- True Double Conversion Design
- Precision Output Voltage & Frequency
- Pure Sinewave Output
- Wide Input Frequency Range
- 50, 60 & 400Hz Frequency Conversion
- Voltage Conversion Models Available
- Eliminates Generator Frequency & Voltage Drift
- Superior Brownout, Surge and Transient Protection
- Battery Backed Up Models Available



Technology Breakthrough

Falcon® Electric's new ED Series™ UVS Plus® is more than an international voltage/frequency converter, voltage regulator or line conditioner. 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 can be configured as an international converter, making it an ideal solution for those tough applications requiring both voltage and frequency conversions. A battery system may be added to most models, turning it into a true Regenerative On-line UPS.

Superior Voltage/Frequency Regulation & Extended Brownout Protection

Since the ED 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.

The ED continually regenerates new, clean AC power in pure sinewave form for superior protection. Even with wide input variations in voltage and frequency, the ED Series UVS Plus's 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 loads that exhibit up to 1000% inrush current when started from 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 design, the ED 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 Model-A Frequency Converter (120V Input/Output)

Model Number	ED-1000-A	ED-1500-A	ED-2000-A	ED-3000-A	ED-4000-A
Nominal VA	1000	1500	2000	3000	4000

Electrical Input

AC Voltage, +10% -20%	120V	120V	120V	120V	120V
Current-Amps	10	15	20	29	39
Frequency Range	47 – 450	47 - 450	47 - 450	47 - 450	47 - 450

Electrical Output

AC Voltage, ± 3%	120V	120V	120V	120V	120V
Watts @ 50 or 60 Hz	700	1050	1400	2100	2800
Watts @ 400 Hz	595	892	1190	1785	2380
Current-Amps @ 50/60 Hz	8.3	12.5	16.7	25	33
Current-Amps @ 400Hz	7.1	10.6	14.2	21.2	28.3
50/60 Hz Non – Linear Repetitive Peak (Amps)	20	30	40	60	79.9
400 Hz Non – Linear Repetitive Peak (Amps)	14.2	21.3	28.3	42.4	56.6
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				

Electrical Connections

Input	6' Cord with 5-15P	8' Cord with 5-20P	8' Cord with L5-30P	Hardwired	Hardwired
Output	(4) 5-15R	(4) 5-15R	(4) 5-15R	Hardwired	Hardwired

Environmental

Operating Temperature	0° C to 35° C (32° F to 95° F)				
Humidity	10% to 95% Non – Condensing				
Altitude	7,000 Feet				
Cooling	Low Velocity Forced Air Fans				
Audible Noise @ 1.5 Meters	49dBA		54dBA		

Controls and Indicators

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

Mechanical

Dimensions H x W x D inches (mm)	13.5 x 6.25 x 19.4 (342.9 x 158.8 x 492.8)				
Weight lb. (kg)	25 (11.3)	38 (17.2)	38 (17.2)	50 (22.7)	50 (22.7)
Design	FCC Class A				

Specify input/output frequency, 50/60 or 400Hz (any combination).
Standard models shown. Custom configurations available, Consult Factory.

ED Series™ UVS PLUS® Models -1/2LC & 2/1LC

ED Series Model-1/2LC & 2/1LC Voltage & Frequency Converter (1/2LC, 120V Input/200-240V Output ~ 2/1LC, 200-240 Input/120V Output)

Model Number	ED-1000-1/2LC	ED-1500-1/2LC	ED-2000-1/2LC	ED-1000-2/1LC	ED-1500-2/1LC	ED-2000-2/1LC
Nominal VA	1000	1500	2000	1000	1500	2000

Electrical Input

AC Voltage, +10% -20%	120V	120V	120V	230V	230V	230V
Current-Amps	10.4	15.6	20.8	5.4	8.1	10.9
Frequency Range	47 – 450	47 - 450	47 - 450	47 – 450	47 – 450	47 – 450

Electrical Output

AC Voltage, ± 3%	230V	230V	230V	120V	120V	120V
Watts @ 50 or 60 Hz	700	1050	1400	700	1050	1400
Watts @ 400 Hz	N/A	N/A	N/A	595	892	1190
Current-Amps @ 50/60Hz	4.3	6.5	8.7	8.3	12.5	16.7
Current-Amps @ 400Hz	N/A	N/A	N/A	7.1	10.6	14.2
50/60 Hz Non – Linear Repetitive Peak (Amps)	8.7	13.0	17.4	20	30	40
400 Hz Non – Linear Repetitive Peak (Amps)	N/A	N/A	N/A	14.2	21.3	28.3
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					

Electrical Connections

Input	6' Cord with 5-15P	8' Cord with 5-20P	8' Cord with L5-30P	As Specified	As Specified	As Specified
Output	As Specified	As Specified	As Specified	(4) 5-15R	(4) 5-15R	(4) 5-15R

Environmental

Operating Temperature	0° C to 35° C (32° F to 95° F)					
Humidity	10% to 95% Non – Condensing					
Altitude	7,000 Feet					
Cooling	Low Velocity Forced Air Fans					
Audible Noise @ 1.5 Meters	49dBA	54dBA	49dBA	49dBA	54dBA	54dBA

Controls and Indicators

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

Mechanical

Dimensions H x W x D inches (mm)	13.5 x 6.25 x 22.4 (342.9 x 158.8 x 568.9)	13.5 x 6.25 x 19.4 (342.9 x 158.8 x 492.8)
Weight lb. (kg)	41 (18.6) 64 (29)	41 (18.6) 64 (29) 64 (29)
Design	FCC Class A	

Specify input/Output frequency, 50/60 or 400Hz (any combination).
 Standard configuration can be field changed to 200V, 220V or 240V.
 Standard models shown. Custom configurations available, Consult Factory.
 Batteries may be added to most ED Series Models, Consult Factory.

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

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

Electrical Input

AC Voltage, +10% -20%	120V	120V	120V
Current-Amps	10.4	15.6	20.8
Frequency Range	47 – 450	47 – 450	47 - 450

Electrical Output

AC Voltage, ± 3%	120V	120V	120V
Watts @ 50 or 60 Hz	700	1050	1400
Watts @ 400 Hz	595	892	1190
Current-Amps @ 50/60 Hz	8.3	12.5	16.7
Current-Amps @ 400Hz	7.1	10.6	14.2
50/60 Hz Non – Linear Repetitive Peak (Amps)	20	30	40
400 Hz Non – Linear Repetitive Peak (Amps)	14.2	21.3	28.3
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		
Back Up Time @ Full Load	8 Minutes	5 Minutes	
@ 1/2 Load	20 Minutes	14 Minutes	

Battery times are approximate.

Electrical Connections

Input	6' Cord with 5-15P	8' Cord with 5-20P	8' Cord with L5-30P
Output	(4) 5-15R	(4) 5-15R	(4) 5-15R

Environmental

Operating Temperature	0° C to 35° C (32° F to 95° F)		
Humidity	10% to 95% Non – Condensing		
Altitude	7,000 Feet		
Cooling	Low Velocity Forced Air Fans		
Audible Noise @ 1.5 Meters	49dBA	54dBA	

Controls and Indicators

Sequenced LED's	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)	13.5 x 6.25 x 19.4 (342.9 x 158.8 x 492.8)		
Weight lb. (kg)	41 (18.6)	64 (29)	64 (29)
Design Standard	UL Listed 1778, FCC Class A		

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

Standard models shown. Custom configurations available, Consult Factory.