

# Ultra RV

## Inverter/Charger



Your Best Partner for Power

Pure sine, high surge, and full feature,  
the Ultra RV is the state of the art.  
The heart of your power system!



2000W  
12V 50A

3000W  
12V 90A

3600W  
24V 50A

4500W  
24V 70A



The Ultra RV CSA certificated low frequency sine wave inverter charger represents highly sophisticated and advanced inverter charger available in 4500W/24Vdc with 70A charger, 3600W/24Vdc with 50A charger, 3000W /12Vdc with 90A charger and 2000W/12Vdc with 50A charger models. The Ultra RV features premium sine wave output with high surge capability and temperature compensated, power factor corrected, multi-stage charging to meet power needs of demanding loads including motor loads. All range of Ultra RV inverter chargers are compatible with optional system remove control panel, automatic generator start and battery temperature sensor. All of models are approved to UL458, CSA requirements.

## Product Features

- Designed to operate under harsh environment
- DC start & automatic self-diagnostic function
- True sine wave output (THD<3%) to operate sensitive electronic and electrical equipment.
- Automatic Generator start function
- Easy to install & easy to operate & easy to solve
- Low DC voltage supports home and office appliances
- Charge rate selectable from 0%-100%
- High efficiency design.
- 13Vdc battery recovery point, dedicated for renewable energy systems.
- 8 pre-set battery type selector plus De-sulphation for totally flat batteries.
- Power factor corrected multi-stage charger for fast, efficient charging, minimizing charging time.
- 10ms max transfer time between utility and battery, guarantees power continuity.
- 15s delay before transfer when AC resumes, protection for load when used with generator.
- Conformal coated circuit boards for humid environments.
- Battery temperature sensing to enhance battery lifecycle.
- LCD and LED display to indicate the status of the inverter charger
- ETL & c-ETL listed to CSA standard C22.2 No.107.1 and UL458
- Surge capacity to start difficult loads like refrigerators or A/C compressors.
- Power save mode to reduce idle consume.

### Protection Features

- AC input over voltage protection
- AC input low voltage protection
- Over temperature protection
- Over load protection
- Short circuit protection (1s after fault)
- Back feeding protection to avoids presenting an AC voltage on the AC input terminal in inverter mode.

### Applications



Electrical Specifications - Inverter	ULTRA FE2012A	ULTRA FE3012A	ULTRA FE3624A	ULTRA FE4524A
Coninuous output power	2000W	3000W	3600W	4500W
Surge Rating (20s)	6000W	9000W	10800W	13500W
Capable of starting electric motor	2HP	3HP	3HP	4HP
Output waveform	Pure sine wave/same as input(bypass mode)			
Nominal efficieny	>88% (peak)			
Line mode efficiency	>95%			
Power factor	0.9-1.0			
Nominal output voltage	100Vac-110Vac-120Vac			
Output voltage regulation	±10% RMS			
Output frequency	50/60Hz±0.3Hz			
Power consumption- inverting (no load)	3.5A <sub>dc</sub>	4.0A <sub>dc</sub>	3.0A <sub>dc</sub>	3.5A <sub>dc</sub>
Power consumption- searching mode	<1.4A <sub>dc</sub>	<1.6A <sub>dc</sub>	<1.05A <sub>dc</sub>	<1.05A <sub>dc</sub>
Transfer time	10ms (max)			
Total harmonic distortion (THD)	<3%			

Electrical Specifications - Charger	ULTRA FE2012A	ULTRA FE3012A	ULTRA FE3624A	ULTRA FE4524A
Input voltage range	Narrow: 100-135Vac; Wide: 90-135Vac			
Input frequency range	Narrow:47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz			
Input frequency range	Wide: 43±0.3Hz plus for 50Hz/60Hz			
Max charge current	50A	90A	50A	70A
Charger efficiency	80%	80%	80%	80%
Over charge current shutdown	15.7V	15.7V	31.4V	31.4V
Output voltage	Depends on battery type *for 12V (*2 for 24V)			
Battery Type	*Absortion mode (V <sub>dc</sub> )		*Float mode (V <sub>dc</sub> )	
Gel U.S.A	14		13.7	
A.G.M 1	14.1		13.4	
A.G.M 2	14.6		13.7	
Sealed lead acid	14.4		13.6	
Gel Euro	14.4		13.8	
Open lead acid	14.8		13.3	
Calcium	15.1		13.6	
De-sulphation	15.5 for 4hrs (12v model)		31 for 4hrs (24v model)	

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Electrical Specifications - DC Input	ULTRAFE2012A	ULTRAFE3012A	ULTRAFE3624A	ULTRAFE4524A
Nominal input voltage	12.0Vdc	12.0Vdc	24.0Vdc	24.0Vdc
Minimum start voltage	10.5/11.0/11.5/12.5Vdc		21.0/22.0/23.0/25.0Vdc	
Low battery alarm	10.5/11.0/11.5/12.5Vdc		21.0/22.0/23.0/25.0Vdc	
Low battery trip	10.0/10.5/11.0/12.0Vdc		20.0/21.0/22.0/24.0Vdc	
High voltage alarm & fault	16.0Vdc	16.0Vdc	32.0Vdc	32.0Vdc
High DC input recovery	15.5Vdc	15.5Vdc	31.0Vdc	31.0Vdc
Low battery voltage recovery	13.0Vdc	13.0Vdc	26.0Vdc	26.0Vdc
Electrical Specifications - Bypass & protection	ULTRAFE2012A	ULTRAFE3012A	ULTRAFE3624A	ULTRAFE4524A
Input voltage waveform	Sine wave (grid or generator)			
Nominal voltage	120Vac			
Low voltage trip (Wide/Narrow)	80V/90V±4%			
Low voltage re-engage (Wide/Narrow)	90V/100V±4%			
High voltage trip	140V±4%			
High voltage re-engage	135V±4%			
Max AC input voltage	150Vac			
Nominal input frequency	50Hz or 60Hz (auto detect)			
Low frequency trip	Narrow: 47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz			
Low frequency trip	Wide: 40±0.3Hz for 50Hz/60Hz			
Low frequency re-engage	Narrow: 48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz			
Low frequency re-engage	Wide: 45±0.3Hz for 50Hz/60Hz			
High frequency trip	Narrow: 55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz			
High frequency trip	Wide: 70±0.3Hz for 50Hz/60Hz			
High frequency re-engage	Narrow: 54±0.3Hz for 50Hz, 64±0.3Hz for 60Hz			
High frequency re-engage	Wide: 65±0.3Hz for 50Hz/60Hz			
Output short circuit protection	Breaker	Breaker	Breaker	Breaker
Electrical Specifications - General	ULTRAFE2012A	ULTRAFE3012A	ULTRAFE3624A	ULTRAFE4524A
Mounting method	Versatile mounting			
Display	LCD+LED status display			
Warranty	2 Years	2 Years	2 Years	2 Years
Automatic Generator Start (AGS)	Yes	Yes	Yes	Yes
Battery temperature sensor	Option	Option	Option	Option
Remote control panel	Option	Option	Option	Option
Regulatory and environment compliance	ETL & c-ETL certificated to CSA 107.1, UL458			
Inverter dimensions (L*W*H)	460mm*328mm*178mm			
Inverter weight (kg)	23	26.5	25.5	31.5
Shipping dimensions (L*W*H)	580mm*450mm*285mm			
Shipping weight (kg)	28	31.5	30.5	36.5
Working temperature	0-40C°	0-40C°	0-40C°	0-40C°
Storage temperature	0-70C°	0-70C°	0-70C°	0-70C°

Specifications are subject to change without notice

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