

# ATLAS MARINE SYSTEMS

## Ultra LV Series

# ShorPOWER® FREQUENCY CONVERTERS

Atlas Marine Systems is the world leader in the design of marine electrical power systems. Atlas provides electrical engineering services to define the vessel electrical distribution system and the appropriate application of its TecPOWER® series switchboards, load management and power management systems. Additionally, the Atlas ShorPOWER® product line, using either a single or dual transformer isolation approach, provides the widest selection of onboard frequency converters available to the yachting community.



### APPLICATION:

The ShorPOWER® *ULTRA LV* is a single transformer isolation system utilizing state-of-the-art IGBT technology and a pulse width modulated (PWM) control system. This system eliminates concerns over compliance to ever increasing marina regulations and compliance statements regarding the use of onboard generators while docked. Noise and air pollution caused by these generators, coupled by increased operational and maintenance costs, make the use of an *ULTRA* frequency converter a must. Additionally, the ShorPOWER® *ULTRA LV* can isolate, regulate and condition dockside power, and protect the onboard electrical system by eliminating voltage spikes, surges, voltage drops or sags, and harmonic distortions typical of dock power. The *ULTRA LV* is available in a low voltage configuration for yachts under 150 feet that frequent ports in the US and the Caribbean. The *ULTRA* converts any frequency and phase to the yacht's exact electrical requirements. For increased capacity, where marina power pedestals are limited, the dual cord option is available except for locations, such as Europe, where ground fault circuit interrupters (GFCI) are common. The *ULTRA* is surprisingly lightweight, and packaged with the space limitations of the yacht in mind. This system will convert single-phase voltage or three-phase voltage to the specific electrical configuration onboard the yacht. The *ULTRA LV* is available in sizes from 12 to 50 kVA.

### STANDARD FEATURES:

- Power ratings from 12 kVA to 50 kVA
- Input auto-ranging from 190 to 250 volts, single or three-phase, 50 or 60 Hz
- Voltage transient and lightning protection (single transformer isolation)
- Single and three-phase outputs in all standard bus configurations
- Light weight design
- Minimum installed volume
- Analog display and control panel
- Precise output voltage and frequency regulation
- Fully integrated input / output electronic protection package
- State-of-the-art IGBT and PWM technology
- Input emergency power off (EPO)
- Automatic restart select
- Built-in self-diagnostics system
- Input safety disconnect
- No periodic calibration required
- Remote control and monitoring interface
- Stud type power connections
- Pure sine wave output

# ATLAS MARINE SYSTEMS - ShorPOWER® Ultra LV

## OPTIONS AVAILABLE:

- Remote communications data link: RS 232, RS 485, Modem or Ethernet (specify one only)
- Integrated dual shore cord system – not GFCI compatible
- Extended voltage and lightning protection module (additional transformer isolation)
- Non-integrated generator to generator, seamless power transfer module
- Modular configuration
- Output load disconnect
- Local touch-screen display and control panel
- Remote touch-screen display and control panel
- Remote start / stop / reset switch control box
- TecPOWER® switchboard data link interface
- Fully integrated ShorPOWER to generator, seamless power transfer system
- Parallelable for increased capacity or redundancy

## GENERAL SPECIFICATIONS

### INPUT:

<b>Voltage Range:</b>	190 to 250 volts
<b>Phase (specify):</b>	Single or three-phase
<b>Phase Rotation:</b>	Any
<b>Frequency:</b>	40 to 70 Hz
<b>Power Factor:</b>	≥ 0.95
<b>Inrush Current:</b>	< 50% of full load current
<b>Protection:</b>	Over/ under voltage, loss of phase & over current

### ENVIRONMENTAL:

<b>Temperature Range:</b>	-25°C to +55°C
<b>Humidity:</b>	0% to 95%, non-condensing

### MECHANICAL:

Mechanical specifications vary depending on configuration selected. Contact Atlas Marine Systems to obtain more information.

### OUTPUT:

#### Power Ratings (specify):

- At single-phase: 12, 15, 25 kVA
- At three-phases: 12, 15, 25, 30, 35, 40, 50 kVA at 0.85 power factor

#### Overload:

- At 12 kVA: 300% peak (motor starting), 150% for 60 seconds, 100% continuous
- At 15 to 50 kVA: 600% peak (motor starting), 200% for 20 seconds, 150% for 60 seconds, 110% for 2 hours, or 100% continuous

#### Voltage (specify):

- Single-phase, 2-wire: 110, 115, 120, 200, 220, 230, 240 volts
- Single-phase, 3-wire: 110/220, 115/230, 120/240 volts
- Three-phase, 3-wire: 220, 230, 240, 380, 400, 415, 440, 460, 480 volts
- Three-phase, 4-wire: 115/200, 120/208, 220/380, 230/400, 240/415, 265/460, 277/480 volts

<b>Voltage Regulation:</b>	At 12 kVA: ± 3%
	At 15 to 50 kVA: ± 1%

<b>Phase Imbalance:</b>	No Restriction
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<b>Frequency (specify):</b>	50 Hz or 60 Hz ± 0.1 Hz
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#### Harmonic Distortion:

- At 12 kVA: 3% maximum, 2% typical (linear loads)
- At 15 to 50 kVA: 2% maximum, 1% typical (linear loads)

<b>Protection:</b>	Over/under voltage, over load, short circuit, & over temperature
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