ATLAS MARINE SYSTEMS

Frequency Converter

ShorPOWER® SHF

100-125kVA

The ShorPOWER SHF frequency converter utilizes state-of-the-art technology including the latest generation of power semiconductors and transformers controlled by an ultra-high speed digital system to create precisely regulated output power. This technology allows the converter to be very compact and lightweight while being electrically powerful and highly efficient.

The SHF will automatically connect to any marina power source worldwide and provide clean, stable and reliable power for the yacht. This is especially important due to ever increasing regulations regarding the use of onboard diesel engine generators while docked at a marina. Noise and air pollution caused by these generators, coupled by increased operational and maintenance costs, make the use of the SHF frequency converter a must.

Additionally, the SHF produces a highly regulated output regardless of fluctuations in the dockside power or changes in load onboard. This regulation protects the onboard electrical system by eliminating voltage transients and harmonic distortions typical of dockside power.

The SHF is designed to be the most reliable converter on the market by manufacturing the converter using only the highest quality components and by engineering the converter specifically for marine use, such as operating continually at 100% load in high ambient temperatures.

The compact, lightweight form factor allows the SHF to be installed where height is restricted. Additionally, the ability to mount the system in either a vertical or horizontal configuration expands the installation opportunities on board. The SHF is designed as a dual input machine to maximize the use of available dock power.

STANDARD FEATURES

- Certified to UL 1012
- Input to Output Isolation via Internal Transformer
- Low Input Current Distortion
- Ethernet Interface (Modbus TCP / IP)
- High Efficiency
- Input High Voltage Transient Protection
- Multi-Language Display
- Precise Output Voltage and Frequency Regulation
- External Service Access Port
- Generous Overload Capability
- Sophisticated Diagnostic and Protection System
- Alarm Indication when Input Current Exceeds Programmed Dock Breaker Rating
- Unbalanced Loads on Board are not Reflected on the Input
- Dual Shore Cord Inputs with Proportional Load Sharing

OPTIONS AVAILABLE

- Output Load Disconnect
- Horizontal Configuration
- Remote Touchscreen or Control Panel
- Remote Access - Wired Ethernet Connection
- TecPOWER® Switchboard Data Link Interface
- Switchboard Controlled Soft Transfer
- RS485 Interface (Modbus)
- Top Exhaust
- Seamless Power Transfer Between ShorPOWER and Generator, and Between Generators
- Parallelable for Increased Capacity or Redundancy
- Low Voltage Output (Requires Separate Module)

This product was manufactured in a plant whose quality management system is registered to ISO 9001:2015.

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INPUT

Voltage	177 to 528 Volts, 1Ø and 3Ø, 2 or 3 Wire Plus Ground
Frequency	50/60 Hz ±10%
Input Current Distortion	≤ 5%
Power Factor	≥ 0.99
Phase Rotation	Any
Inrush Current	No Greater than 50% of Full Load Current
Protection	Over/Under Voltage, Loss of Phase, Over Current, Short Circuit, Voltage Transient Protection IAW IEEE C62.41.1 Location Cat. B/C

ENVIRONMENTAL

Acoustical Noise	<65 dBA at 5 Feet (1.5m)
Temperature Range	-40°C to +55°C
Relative Humidity	0 - 95%, Non-Condensing
Ingress Protection	IP23 (Optional IP55)
Enclosure	NEMA 250, Type 3RX Corrosion Resistant

ENERGY FACTORS

Efficiency	92% Typical at Full Load; 91% Typical at Half Load; Varies Depending on Config.

OUTPUT

Power Rating	100 or 125 kVA (Specify)
System Power Ratings	200 to 1000 kVA (Specify)
Power Factor	Up to 1.0
Overload	100% Continuous 110% for 60 Min 125% for 10 Min 150% for 2 Min 200% for 20 Sec
Voltage (Specify)	
• Three-Phase, 3-Wire	380, 400, 415, 440, 460, 480 Volts
• Three-Phase, 4-Wire	220/380, 230/400, 240/415, 265/460, 277/480 Volts
Crest Factor	1.414 ±3%
Voltage Regulation	±1.0% Under All Conditions of Line, Balanced Loads and Temperature
Frequency (Specify)	50 or 60 Hz
Frequency Regulation	±0.01% Under AllConditions of Line, Load and Temperature
Frequency Transients	None
Phase Angle Regulation	±2° for Balanced Loads; ±4° for Unbalanced Loads
Harmonic Distortion	3% Maximum (Linear Loads)
Protection	All Standard Electrical and Environmental Monitoring for Equipment and Load Protection

FIGURE 1 – ShorPOWER SHF 100–125kVA

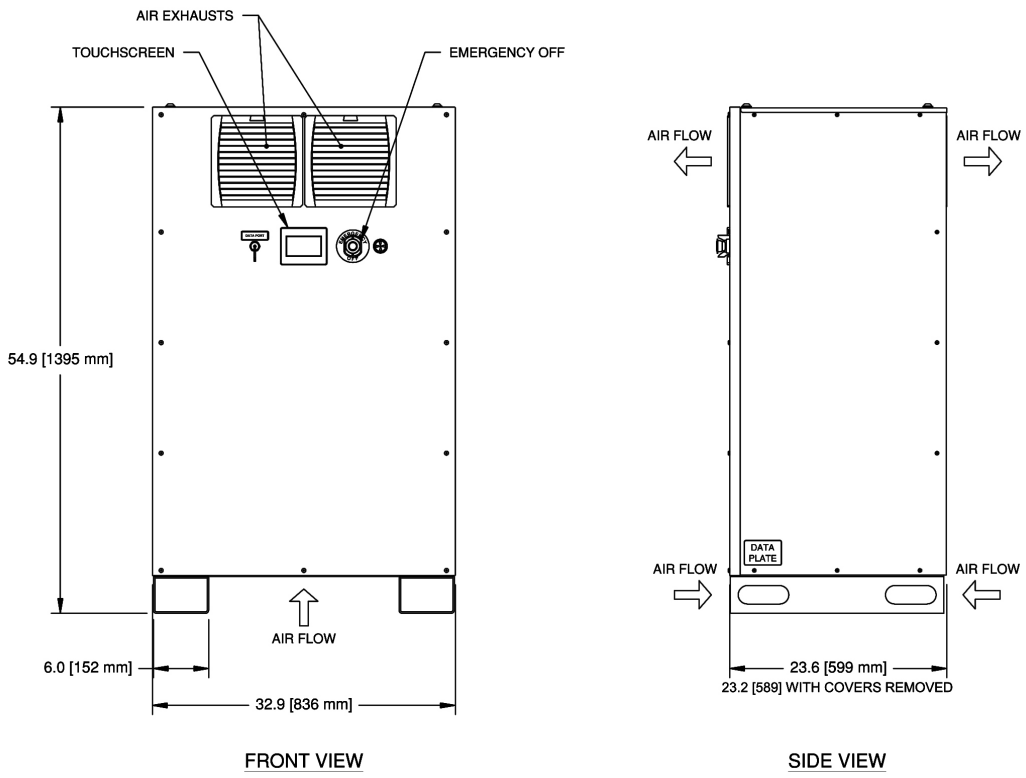
COOLING

Forced Convection

WEIGHT

Weight Varies with Options

100kVA	820lbs (372kg)
125kVA	840lbs (381kg)



Specifications Subject to Change Without Notice

Rev M

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