

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 ShorPOWER SHF frequency converter a must.

Additionally, the ShorPOWER 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 for actual 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

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

VERTICAL CONFIGURATION

REMOTE TOUCHSCREEN OR CONTROL PANEL

REMOTE ACCESS - WIRED ETHERNET CONNECTION

TECPOWER® SWITCHBOARD DATA LINK INTERFACE

SWITCHBOARD CONTROLLED SOFT TRANSFER

RS485 INTERFACE (MODBUS)

SEAMLESS POWER TRANSFER BETWEEN SHORPOWER AND GENERATOR, AND BETWEEN GENERATORS

Parallelable for Increased Capacity or Redundancy

LOW VOLTAGE OUTPUT (REQUIRES SEPARATE MODULE)

LEFT SIDE EXHAUST

## **INPUT**

VOLTAGE 177 TO 528 VOLTS, 100 and 300, 2 or 3 Wire Plus Ground Frequency 50/60 Hz  $\pm 100$ % Input Current Distortion  $\leq 5\%$  Power Factor  $\geq 0.99$  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

ACOUSTICAL NOISE

TEMPERATURE RANGE

-40°C TO +55°C

RELATIVE HUMIDITY

O - 95%, NON-CONDENSING

INGRESS PROTECTION

IP20 (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.

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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)

OUTPUT

• THREE-PHASE, 3-WIRE 380, 400, 415, 440, 460, 480 VOLTS

• THREE-PHASE, 4-WIRE 220/380, 230/400, 240/415, 254/400, 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

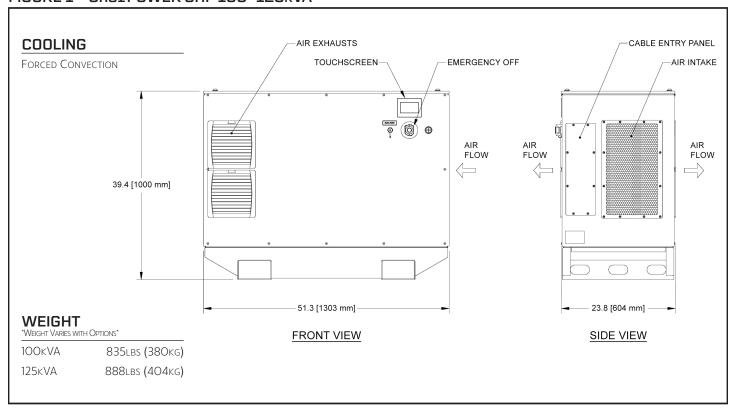
Phase Angle Regulation ±2° for Balanced Loads;

± 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



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE