



CALIPSO

Shore power converter

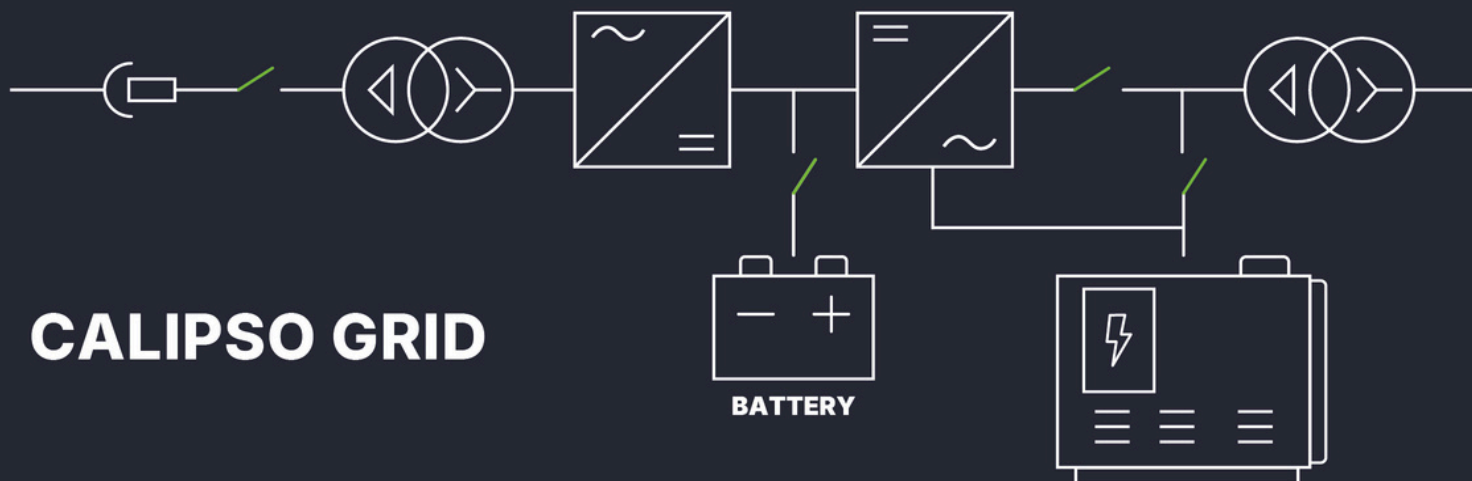
Safe, clean, reliable. uncompromising power on board.

CALIPSO is designed to provide stable, safe, and clean power at all times, whether underway or docked, combining advanced technology with onboard comfort. Thanks to its state-of-the-art modular design, the system maximizes power availability, allowing multiple inputs to be connected simultaneously without interruption.

Every device on board, from utility services to entertainment systems, and navigation instruments, operates flawlessly.

Engineered to convert any shore power input, regardless of voltage or frequency, from ports anywhere in the world, the integration of Active Front-End (AFE) technology optimizes energy transmission, while high-quality transformers ensure complete galvanic isolation and protection from possible shore power irregularities.

The pure sine wave output guarantees stable, silent current, perfect for sensitive loads.



MORE THAN A SHORE POWER CONVERTER

CALIPSO natively integrates the following technologies:

STO: Uninterrupted Power for Luxury Yachts

On a yacht, electrical power is fundamental to ensuring both operational functionality and guest comfort. Every system, from navigation to entertainment, depends on a stable and reliable energy source. For this reason, we developed the **Seamless Mode** within Calipso Shore Power, a cutting-edge solution designed to ensure efficient power transitions. These transitions between different energy sources are part of daily yacht management, whether docking, switching between generators, or adapting to generators and batteries varying shore power configurations in different ports. With **Seamless Mode** is guaranteed a continuous flow of power, preventing interruptions, and protecting all onboard systems. Transitions occur automatically and imperceptibly, significantly enhancing the overall reliability of your yacht.

Power Quality

The quality of the distributed power is fundamental to the safety and reliability of onboard systems.

While the vessel is connected to shore power, CALIPSO converts and supplies the entire yacht with the required energy in a stable and secure manner. During traditional or hybrid navigation, however, CALIPSO can operate in parallel with the yacht's generators and/or batteries, functioning as an **Active Harmonic Filter (AHF)** to enhance onboard power quality:

- ACTIVE HARMONIC FILTERING
- INTELLIGENT POWER FACTOR CORRECTION TO OPTIMIZE ENERGY CONSUMPTION
- ELIMINATION OF HARMONICS TO REDUCE LOSSES AND IMPROVE ONBOARD NETWORK EFFICIENCY
- INCREASED RELIABILITY AND LIFESPAN OF ALL ELECTRONIC EQUIPMENT
- VOLTAGE AND FREQUENCY STABILIZATION
- CONTINUOUS MONITORING OF DISTORTIONS AND TRANSIENTS

Touchscreen

CALIPSO is equipped with an intuitive interface for comprehensive system monitoring and management.

- **PLC with Touchscreen:**
An integrated PLC with a front touchscreen and status indicators allows real-time visualization of power flows, operational mode selection, and data logging.
- **Control Functions:**
 - Real-time display of power flows
 - Selection of operating modes
 - Logging of shore-imported energy
 - Alarm history
- **Remote Access:**
Capability to interface with other onboard systems/PLCs via standard industrial communication protocols such as Profinet, EtherCAT, and Modbus (RTU/TCP-IP).

Battery Energy Storage

The integration with Battery Energy Storage Systems (BESS) is one of the key elements of hybrid and fully electric vessels.

CALIPSO interfaces natively with the onboard batteries, enabling:

- OPTIMIZED CHARGING DURING NAVIGATION OR FROM SHORE
- CONTROLLED DISCHARGING TO SUPPLY PROPULSION OR AUXILIARY LOADS
- SUPPORT TO THE ONBOARD GRID DURING PEAKS OR EMERGENCIES (PEAK SHAVING)

Thanks to advanced control logic, the system autonomously determines when and how much energy to draw from the batteries, maximizing both efficiency and battery lifespan.

OUTPUT

Type: Single or 3 phase, neutral, isolated output

Voltage: 208 – 480 VAC

Frequency: 50 to 60 Hz

Voltage distortion: <2.0% (linear load)

Overload: 10 minutes 125%/30 seconds 150%

INPUT

Type: 3F – single cable (optional dual power cable)

Voltage: 180 – 520 VAC (reduced power/derating)

Current: Ampere, isolation transformer included

Frequency: 40 – 70 Hz

TECHNICAL FEATURES

Power: 100 kVA

Dimensions: 1374 x 786 x 1010 mm (H x W x D)

Acoustic noise: < 75 dBA @ 2 m

Temperature range: -10 to 55 °C, with power derating beyond limits

Protection rating: IP 55
(higher IP rating available on request)

Humidity: 0–95%

Cooling: forced ventilation / optional water cooling

Interface: 7" Touchscreen with event log
(Modbus TCP/IP – Profinet)