MARPOWER®

Power converters

Marpower SPC-II Shore Power Converter

Discover the world's smallest and lightest inverter: the Marpower SPC-II Shore Power Converter. This air-cooled system converts every shore power and frequency into a high-quality, reliable, and safe power supply on board. The converter is compatible with all ports worldwide.

The Marpower SPC-II is up to 25% smaller and up to 45% lighter than a transformer. More space for comfort and luxury on the ship. Moreover, this facilitates easy installation and maintenance. The SPC-II is intended for mega yachts and other applications where size, weight, and flexibility are important.

The Marpower SPC-II has a modular structure. Modules are added depending on the requested power. The galvanic insolation prevents electrolytic corrosion and offers a safe electrical 3-phase + N system. Optionally, the converter can be used as an active harmonic filter during sailing.

We offer worldwide service and support with a flexible service team, agents, and stock at various locations.

Advantages of the Marpower SPC-II Shore Power Converter

- ✓ World's smallest and lightest Shore Power Converter
- ✓ Up to 25% smaller than a transformer
- ✓ Up to 45% less weight
- ✓ Air cooled
- ✓ Galvanic isolation for optimal safety
- ✓ Modular construction
- ✓ Full seamless transfer
- ✓ Easy installation
- ✓ Worldwide service and support
- ✓ Optional active harmonic compensation

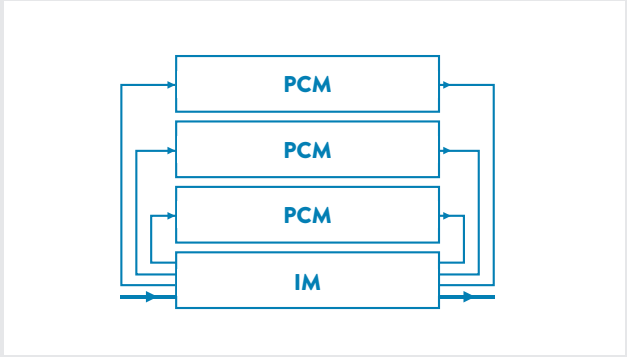
MARPOWER®

Due to its plug-and-play design the Marpower SPC-II facilitates easy and flexible installation, operation, and maintenance of shore power converter solutions. The modular concept makes it easy to upgrade or expand the system for future demands. In addition, this advanced solution provides the following benefits:

- ✓ Supports a wide variety of input voltages and frequencies
- ✓ Provides galvanic isolation for optimal safety
- ✓ Provides power conditioning of input power
- ✓ Supports from 25-187kVA in a single tower
- ✓ Supports up to at least 750kVA in a multiple system configuration
- ✓ Supports multiple shore cords from different dockside supplies, wihout feedback risks.
- ✓ Support a variety of applications, including: Frequency Converter and Power Conditioner
- ✓ Low heat dissipation
- ✓ Contributes to overall system reliability and availability
- ✓ Seamless power transfer

System configuration

Marpower Shore Power Converter is a flexible and modular solution. The figure shows a basic conversion system with a single shore cord input and a single connection towards the vessel.



PCM: The power converter module is available in a 25kV, 31kVA and 37kVA configuration. These PCMs can be paralleled up to at least 20 units (5 per system).

IM: The interface module provides a safe and reliable way to distribute incoming and delivered power over individual PCMs with a maximum of 5 modules.

Single and Dual shore cord can be provided with optionally a switch to make the selection between the input cords. It also provides every power module on the input and output with a circuit breaker for safety and ability to disconnect a PCM to run on reduced power.

INPUT

Input line voltages	170 – 520V, 1 or 3 phase
Frequency range	40-70Hz
Input power factor	> 0,99 at full load
Input current	95A per power module
Inrush current	< 100% at rated current
Earth leakage current	< 2 mA per power module

OUTPUT

Output voltage	3 x 400V rms + neutral 50Hz 3 x 208V rms + neutral 60Hz (other voltages and frequencies on request)
Nominal system power	25kVA – 740kVA
Nom. module power	25kVA / 31kVA / 37kVA at Uout = 400VA
Units in parallel	up to 20 modules
Overload	120% 15 min 150% 1 min 200% 5 sec
Voltage distortion	< 3%
Voltage variation	± 1% (at min max load)
Frequency accuracy	± 0,05% (at fixed load)
Efficiency	> 92%

INTERFACE/DIAGNOSTICS

LCD display	
Modbus	RTU
USB	
Hard wired IO	potential free contacts

MECHANICAL

Power	Weight	Size (HxWxD) in mm
37kVA* (vertical)	140 kg	860 x 396 x 685**
37kVA* (horizontal)	142 kg	350 x 800 x 685**
75kVA*	302 kg	860 x 800 x 685
112kVA*	434 kg	1115 x 800 x 685
150kVA*	568 kg	1470 x 800 x 685
187kVA*	700 kg	1725 x 800 x 685
*Uout = 400V cos phi = 0.8		** excl. EMI filter

Cooling	forced air, fan speed controlled
Protection degree	IP22 (higher IP value on request)
Temperature	0-45°C, power derating when exceeded
Humidity	0-95% non condensing
Colour	Ral 9010 (other colours on request)
Noise	< 60dBA at 1 mtr per module