

# Technical Overview

## VSP<sub>4</sub> Shore Power Converter

### 108kVA Dual Cord Input



# MAGNUS

dependable shore power

Unique high-frequency transformer input design that maximises power availability from shore and delivers continuous clean power at the lowest possible weight.

#### Connection to any shore supply, one or three phases

The VSP<sub>4</sub> Shore Power Converter can be connected to any of the common worldwide shore voltages and frequencies, single or three phases. As a result, connection can be made to shore quickly and without fuss, no matter where the yacht is berthed.

#### Maximises power availability

Connection to shore can be via single or multiple cords thanks to the modular nature of the VSP<sub>4</sub> input stage. The shore power is isolated via state of the art high-frequency transformers. This technology ensures the most compact and light-weight converter possible.

#### Continuous clean output power

The output module delivers a clean, stable supply suitable for all types of onboard loads from utility services (heating, lighting and air conditioning) to entertainment (television and audio) to marine (winch, pumps and navigational equipment).



### Technical Overview

**Part number** VSP<sub>4</sub> / 2144-108  
**Description** 108kVA Shore Power Converter  
 Dual Cord Input

**Input Supply**  
**Rectifier** Active front end  
**Cord inputs** Two  
**Type** 1 or 3 phases  
**Voltage** 180 to 520Vac  
**Frequency** 47 to 64Hz  
**Power factor** Unity  
**Rated cord current** 144 Amps / 48kW

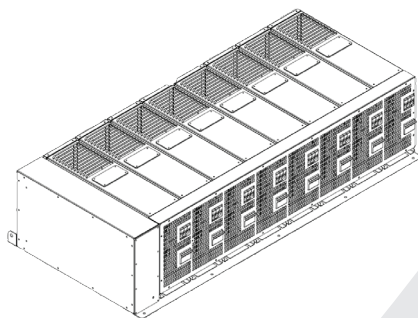
**Output Supply**  
**Type** 3 phases, neutral, isolated earth  
**Voltage** 400Vac L-L / 230Vac L-N  
**Distortion** < 1.5% linear load  
**Frequency** 50Hz  
**Frequency regulation** < 0.01% in standalone mode  
**Power @ 0.85PF** 108kVA  
**Overload** 150% for 30 seconds

**Environment**  
**Cooling** Forced ventilation / fan assisted  
**Environment** 0 to 45 deg C  
**Efficiency** > 90% at rated load

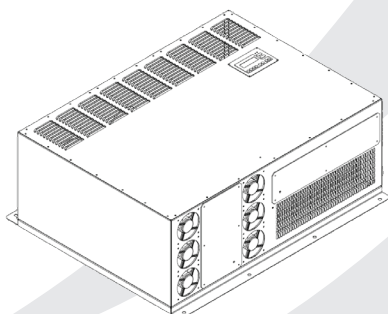
**Mechanical**  
**Enclosure** RAL9003  
**Protection** IP23  
**Input module** H: 710 W: 1,496 D: 362 mm 248 kg  
 Option: split into two 144 Amp modules  
 H:710 x W:774 D: 362mm 130kg  
**Output module** H: 916 W: 1,096 D: 430 mm 186 kg  
**Total weight** 434 kg

**Supporting Documentation**  
**Service level** Service Levels Agreements 2010  
**Electrical** (single) VSP41288108 E001  
 (dual) VSP42144108 E001  
**Mechanical input** (single) VSP4IP288LH1 M001  
 OR VSP4IP288RH1 M001  
 (dual) VSP4IP144RH1 M001  
 OR VSP4IP144RH1 M001  
**Mechanical output** VSP4OP108XX1 M001

### Input Module



### Output Module



### Benefits

- » No interference with sensitive equipment
- » No compromises when connecting to low or high voltage supplies
- » Protection from shore supply faults
- » Quiet trouble-free operation
- » Full isolation from the shore to avoid galvanic corrosion
- » Easy connection for crew
- » Light weight so will not affect yacht performance
- » Unique design maximises available space in engine room or lazarette also improving ventilation

### Top 3 Selling Points

1. Single or three phase, Plug and Play connectivity
2. Full output power available even in the US on a 208V supply pedestal
3. Light weight compact modular design