

# SCB Shore Power Converter

From 40 to 300 kW

Borri SCB is a compact and robust shore power converter designed for marine applications. The system relies on Borri great expertise in industrial power protection solutions.

The converter can be connected to the most used AC supply sources thanks to its extremely wide input voltage and frequency range. It works in double conversion using state-of-the-art IGBT technology with DSP controls. This allows to minimize the input harmonics and to obtain the best output performance.

The overall efficiency is optimized thanks to the Borri patented Green Conversion technology.

The dual input configuration can be achieved using two independent converters connected in parallel with the Borri advanced parallel control.

Borri power converters are built to fit in the narrowest spaces of super, mega and giga yachts, providing highly reliable power at different voltages and frequencies.



CONVERTER

## Industrial Power

### Applications

- Superyacht.
- Megayacht.
- Gigayacht.

### Main features

- Air cooling.
- Galvanic isolation for maximum safety.
- Full output power (kVA=kW).
- Wide selection of alarms, indications and measurements.
- Easy to handle and install.
- Full front access.
- Seamless transfer control.
- Worldwide service support and assistance.

### SCB technical data

Rating (kW) PF 1						
Single input	40	60	80	100	125	150
Dual input	80	120	160	200	250	300
<b>Input</b>						
Nominal voltage	170 – 520 V 3P					
Frequency	40 – 70 Hz					
Harmonics	<3% THDi (at rated load)					
Power Factor	>0,99 at rated load					
<b>Output</b>						
Voltage and frequency	3 x 400 V + neutral 50 Hz / 3 x 208 V + neutral 60 Hz					
Voltage harmonics	<1% THDv (linear load)					
Overload capacity	120% for 5 min; 150% for 30 s			120% for 1 min; 150% for 30 s		
Short circuit current limit	200% for 50 ms					
Voltage accuracy	+/- 1 %					
Frequency accuracy	+/- 0,1%					
<b>System</b>						
Dimensions WxDxH (mm)	600 x 636 x 1705 (up to 100 kVA @400 V out, single input)*					
Cooling	Forced air					
Colour	RAL 9010 (others on request)					
Protection degree	IP23 (higher protection up to IP44 on request)					
Efficiency	up to 93%					
<b>Environmental</b>						
Operating temperature	0 - 45°C (up to 55°C with derating)					
Humidity	< 95% non - condensing					
Audible noise at 1 meter (dBA)	<68					
<b>User interface</b>						
Front panel	Graphic display, mimic LED panel, function keys					
Connectivity	Modbus RTU (other protocol on request)					
Digital outputs (relè)	Running (NO); Warning (NO); Fault (NC)					
Relè output ratings	230 Vac 1 A					
<b>Standards</b>						
Quality assurance, environment, health and safety: ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007; Safety: IEC/EN 62040-1; EMC: IEC/EN 62040-2; Environmental aspects: IEC/EN 62040-4; Test and performance: IEC/EN 62040-3; Protection degree: IEC 60529; Marine classifications (on request): DV, DNV, GL, ABS, CCS (++); Marking: CE						

\*for higher ratings and different configurations, please contact our sales team

## Standard features

- Automatic input phase sequence control.
- Low input current distortion THDi < 3%, pf > 0,99.
- Input voltage auto-sensing.
- Auto-restart from shore brownout or blackout.
- Precise out voltage and frequency regulation.

## Options

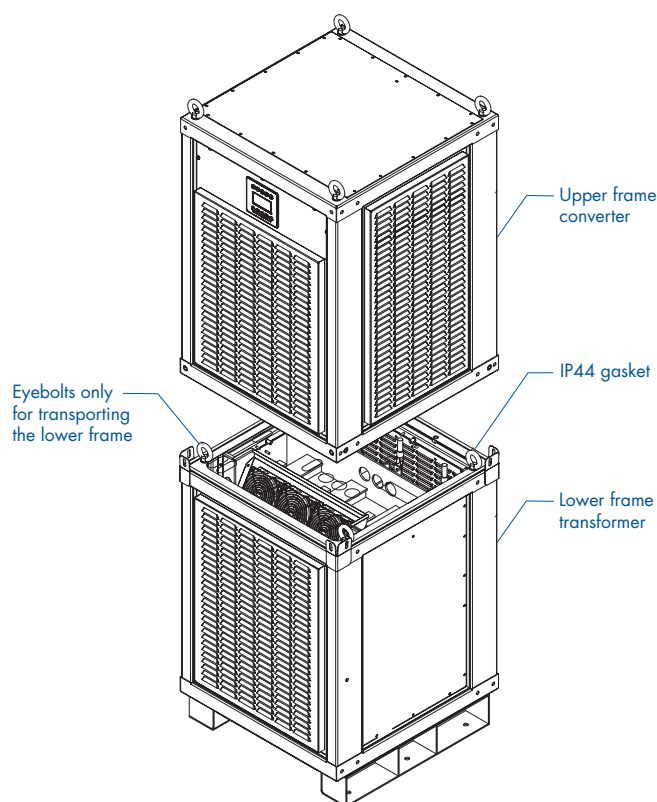
- Dual Input Master /Slave configuration.
- Parallelable with twin units for increased power.
- Seamless transfer box.



## System Construction

The SCB shore converter has been designed to optimize electrical performance in a compact and robust design.

The system includes 2 pieces (the upper frame converter and the lower frame transformer) that can be transported separately by means of eyebolts. This construction makes handling easier especially in small places. The mechanical assembly and the electrical connection can take place directly in the installation room.



## Seamless Transfer Control Box

The Seamless Transfer Control Box is the logic unit that interfaces the SCB Shore Power Converter with the ship distribution system and the onboard generators. It features a microprocessor-based control logic that manages the converter start-up and the load transfer from the generators to the Converter and vice-versa.

During the load transfer, the Seamless Control Box manages the converter synchronization with the generators minimizing the parallel time between the two power sources and ensuring the continuity of the load power supply.

The Seamless Transfer Control Box also performs an accurate diagnostic of the whole system reporting the presence of latched alarms and showing the actual statuses of the Converter and of the generators.

An internal non-volatile memory records all the events providing the system history.

- Data acquisition from up to 4 diesel generators.
- Output signal for driving up to 4 motorized switch.
- Local controls on digital panel.
- MODBUS RTU interface for external commands' acquisition.
- Measures and diagnostics on LCD display.
- User programmable alarms and statuses.
- Programmable digital IN/OUT contacts.
- System events history with up to 500 records.
- Optional detachable LCD panel.



## Service

Customer's expectation defines Borri's priority from the early analysis of the project requirements to a worldwide commissioning and service.

Many thousands of systems have been successfully installed and maintained globally; with continuous support from a highly trained team of expert, certified technicians and engineers.

From the professional set-up of Borri's training center or on site, the training and service team provide support and tailored training at Borri or at your site. You can be assured of Borri support to the highest standards no matter where in the world you are.

- Planning, installation, commissioning
- Maintenance and Service
- Analytical testing
- Battery tests
- Spare parts
- Training



## Who we are

Borri has been developing and building uninterruptible power systems since 1932 and is a global provider of power electronics systems and solutions for harsh industrial and demanding critical power requirements.

Borri is a brand of Legrand, a publicly traded company and a global specialist in electrical and digital infrastructures, offering high-value -added products and solutions for commercial, residential and industrial buildings.

Borri's R&D vast expertise in all facets of firmware, power electronics and mechanical design provides innovative solutions for tomorrow's problems in Industrial and Critical Power applications.

The company prides itself on its first-class service and superior engineering disciplines. To ensure sustained quality, Borri manages all its processes in house from feed studies to design, production and after sales service technology.

Based in Bibbiena, Italy with over 15,000 m<sup>2</sup> production area, Borri operates across all five continents with subsidiaries in USA, Canada, Germany, UAE, India and Malaysia.

It has also established a strong distributor network, able to deliver on site support and technical guidance indicative of our own capabilities.