

# EEI LV1000 SERIES

## SHORE POWER CONVERTER FOR MW-SCALE



The EEI-LV1000 Series for shore power converters allow full operation of the vessels on board electrical system without generators. Connection to the shore can be via one or multiple cords thanks to the modular design of the SPC input stage. Thanks to the input transformers shore power is isolated to avoid tripping shore earth leakage circuit breakers. Voltage back conversion to the desired AC voltage and frequency for the vessel is fully filtered and stable, suitable for onboard loads.

EEI-LV series converters are characterized by:

- Modular design: EEI LV drives are made of modular stacks, for an easy maintenance and reduced MTTR.
- Keypad interface for setup drive parameters for easy commissioning.
- Easy access for service operations.
- Liquid cooled
- EEI-LV Series are suitable for using in a wide variety of activity fields, for applications in both 2Q and 4Q and for the connection toward the grid of generators.

### SUITABLE FOR MARINE ENVIRONMENT

Coated print circuit boards, appropriate protection degree, stainless steel, all it needs for marine environment and suitable to be integrated in container solution.

### SYSTEM ARCHITECTURE

- Solution 2Q – SCR DUAL FEED 1kV
- Solution 4Q – 2 Level 1kV

### FUNCTIONAL FEATURES

- Multiple shore cords: thanks to modular structure it is possible the connection to several shore cords without restriction (no pre assigned master connection).
- Seamless Transfer: power transfer from shore to vessel and vice versa.
- Remote touch panel control
- Other options can be implemented on demand thanks to our staff

### ADDITIONAL COMPONENTS

- Capacitor bank
- Braking system
- Transformer
- Common mode filters



#### MODULAR

Suitable for stack mounting for bigger capacity of compensation



#### ADVANCED

Flexible software configuration allow wide functionalities



#### READY

Turn-key cabinet solution with easy accessibility and maintenance

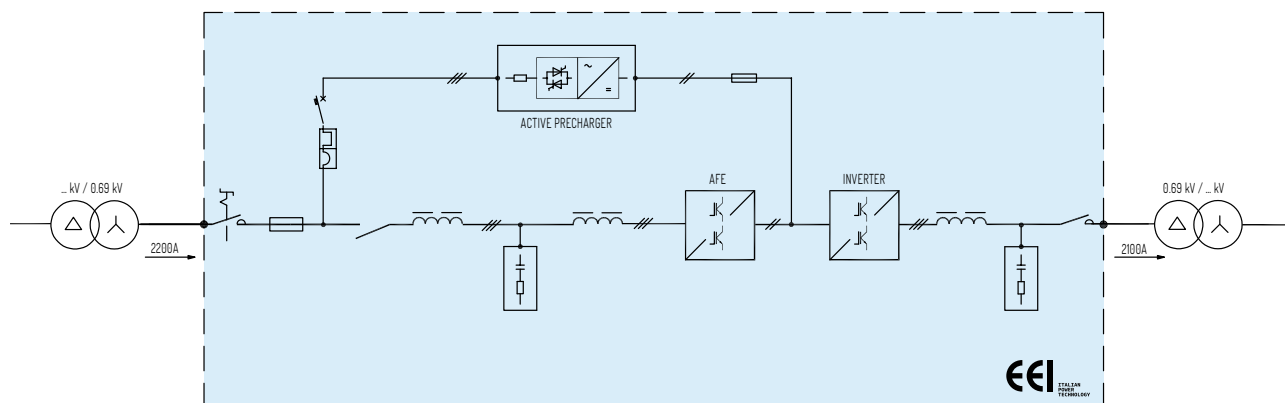


#### ADAPTIVE

Wide product range LV and MV solutions



## 4Q CONVERTER – (AFE+INVERTER)



### COMPLETE CABINET LV 4Q AFE CONVERTER 1KV, LIQUID COOLED MADE BY EEI

The unit is composed by IGBT LV AFE+INVERTER suitable for MV connection through transformers

There are included also the following parts:

- Set drive (front end and inverter) with own display panel
- Dc-link capacitor bank
- Set of dc-link chokes
- Set internal fitting for hydraulic plant (stainless steel manifolds and fitting + internal flexible pipes in kynar)
- Kit PCBs
- HMI
- braking unit (optional)
- LCL Filters grid side
- Common mode filters

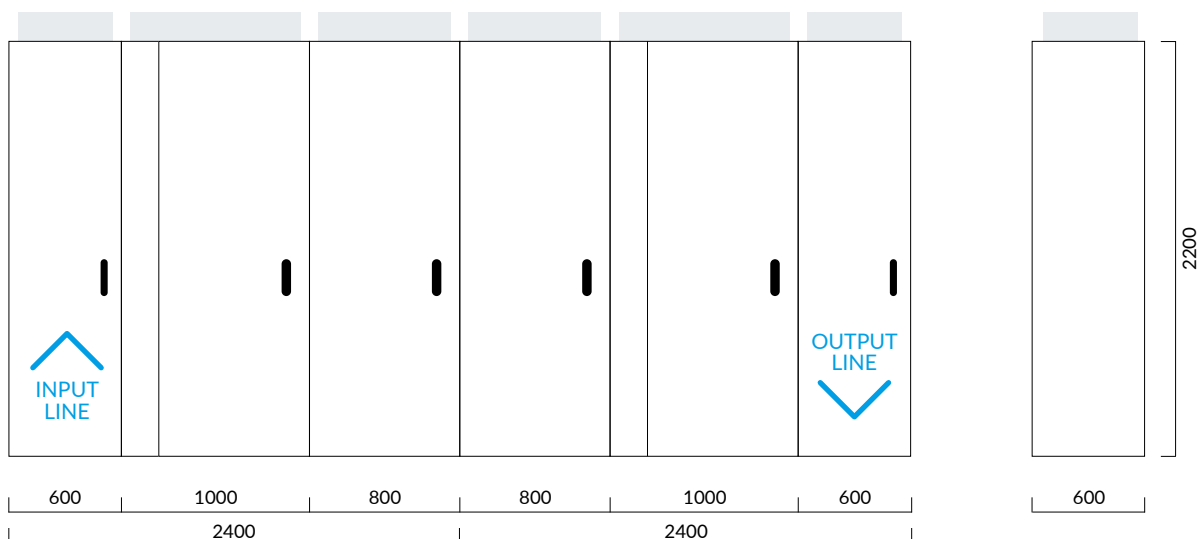
<b>MODEL</b>	<b>9LV104Q-250-EC</b>
<b>GENERAL SPECIFICATIONS</b>	
Rated power	2,5 MVA
Input voltage	0,69KVac ±10% 3Ph
Input frequency	50Hz ±5%
Rated output current	2100 A
Output voltage	0,69KVac ±1% 3Ph
Output frequency	50/60Hz ±0,1%
Power factor	0,85
Overload	150% for 30 seconds every 10 minutes
Auxiliary voltage	Aux. supply circuit voltage: 400Vac- 24Vdc
System architecture grid side	4Q – Active Front End LV IGBT (THDI < 3%)
System architecture load side	LV IGBT Inverter 2 level
<b>COMUNICATION</b>	
Communication Protocol	CAN Bus RS485 Ethernet Modbus TCP/IP (TBD)
<b>PROTECTIONS</b>	
Self-diagnost.	Overcurrent, short-circuit, current leakage , voltage out of range, over-temperature. Other functions upon request range,sovratemperatura. Altre funzioni su richiesta

MODEL	9LV104Q-250-EC
OPTIONAL	
Set start, stop, reset push button	Included
Emergency push button	Included
Set lamps	Included
HMI 7"- Touch panel	Included

PROTECTIONS	IEC EN 60204-1 (safety)
	IEC EN 64-8/4 (safety)
	IEC EN 61439-1 (test according to)
	IEC EN 61439-2 (test according to)
	IEC EN 61000-6-2 (EMC)
Directive 2014/35/EU	IEC EN 61000-6-4 (EMC)
Directive 2014/30/EU	

INSTALLATION	
Operating temperature	-5°C ÷ +45 °C
Storage temperature	-10 °C ÷ +55 °C
Relative humidity	90% @ 20°C no condensing
Altitude	< 1000 m a.s.l.
Protection degree	IP 51 (with close doors) – IP 20 (with open doors)
Efficiency (@full load)	≥96%
Cabinet dimensions (WxHxD)	4800x2300x600 mm
Weight	3400Kg
Cooling system type	Liquid
Cooling power	90kW
Liquid flow / pressure	240 l/min 3,5 bar
Range liquid temperature	45-50 °C
Input/Output cable	From bottom
Environment	Indoor
Painting	Colour RAL 7035
Noise level @1m	≤78dB (A)
Accessibility	Frontal and rear through doors fitted lock and key, side accessibility trough bolted panels

## LAY-OUT





---

[www.eei.it](http://www.eei.it)

**EEI**  
Equipaggiamenti Elettronici Industriali S.p.A.  
T +39.0444.562988  
F +39.0444.562373 (6 linee r.a.)  
@ staff@eei.it