



ITALIAN
POWER
TECHNOLOGY



ENERGY EQUIPMENT

INNOVATIVE SOLUTIONS CREATORS

EEI

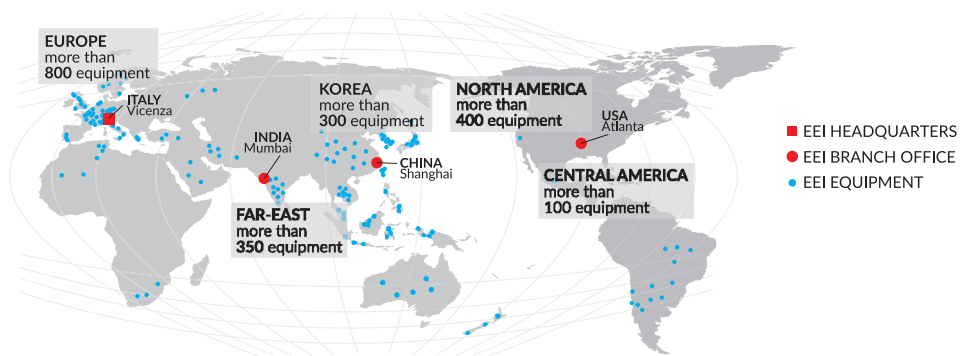
EXPERIENCE, EFFICIENCY, INNOVATION

SINCE 1978 EEI IS A LEADER COMPANY

active in the international market with a background of different and consolidated experiences in power electronics, automation systems and production technologies in many industrial and energy fields.

From experiences of collaboration with the major worldwide manufacturers and the special knowledge acquired, EEI is able to work with quality and expertise in various fields:

- Ropeway systems
- Drive and control of industrial systems
- Static Energy Conversion
- Marine applications
- Research Laboratories



EEI SERVICE AFTER SALES AND TECHNICAL SUPPORT

EEI offers a superior support for the wide range of its products with an effective and professional After Sales Service, with the aim of a full customer satisfaction.

EEI Service can provide a full set of services:

- On-site intervention
- Preventive maintenance contracts
- Spares
- Repairs
- Training





SOLUTIONS FOR BIOGAS APPLICATIONS

STATIC CONVERTER

EEI has developed solution for parallel connection of MW biogas generator to the grid in order to reduce the short circuit current contribution. This configuration allows the realization of a Type A power-generating module in accordance with the Commission Regulation (EU) 2016/631, establishing a network code on requirements for grid connection of generators. This power-generating module is composed by MW genset that supplies a LV a.c. line, the EEI product that transfers the input power to an external LV/MV transformer, and the protection and control devices required to meet the requirements of the said Regulation. The EEI product supplies its output LV a.c. line in the voltage range and frequency range required by the said Regulation

MAIN FEATURES

- Efficiency: IGBT power circuit
- Reliability: only thin film DC link capacitors, low inductance connections and modular design for easier maintenance operations
- Safety: self-protection functions
- Quality Energy: low THD(I), adjustable power factor
- Digital management of control parameters, alarm diagnostics, analogue and digital I/O signals from dedicated microcontroller and DSP software
- Flexibility: state-of-the-art solution, developed and designed according to customer needs
- Converter enclosure made of 20/10mm steel panels. Front and rear opening through lockable doors to ease access to all parts
- Air cooled
- 400V three-phase AC output

FIELDS OF APPLICATION

EEI developed the best skills in the areas in which it worked: competent engineering, high flexibility and attention to high efficiency and energy saving solutions.

EEI is able to design and manufacture its converters for different applications in close cooperation with the generator manufacturer in order to optimize the performance, increasing efficiency and profitability system. The modular architecture allows to connect in parallel several units on the same secondary transformer in order to manage different power size of plant

SAFETY AND RELIABILITY

Inverters are manufactured following systematic and rigorous production and testing processes ISO 9001 and ISO 14001 certificate

INTERFACE AND COMMUNICATION

The 8YH series converters could be equipped with a data-logger unit and a touch-screen display that provides storage of past log files and alarm list.

Communication protocol available: RS-485, CAN Open, MODBUS TCP/IP, ProfiNet ect.

Additional parts provided:

- Manually operated switches
- Signal lights for voltage presence
- Emergency push-button



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MODEL

8YH211Q03AF00

Topology FULL CONVERTER

GENERATOR SIDE PARAMETERS

Nominal power	1000kW/1250kVA
Nominal current @40°C	1800A
Nominal voltage	400V
Nominal frequency	50Hz
Overload	120% for 1' every 10'

GRID SIDE PARAMETERS

Nominal power	1000KW/1100kVA
Nominal current at continuous regenerative mode (999kW)	1442A
Nominal voltage	400V ±10%
Nominal frequency	50Hz±5%
Type grid	TN
Maximum regenerative current adjustment	2700A
Regenerative short circuit cut off time	0,001ms
Ramp current configuration at regenerative mode	Yes
Range ramp-up time (regenerative mode)	0÷100sec. (0÷100% of nominal regenerative current)
Range ramp-down time (regenerative mode)	0÷100sec. (0÷100% of nominal regenerative current)
Continuous regenerative continuous operation	Yes - 100%
Regenerative current adjustment	0÷2250 A
THD% of regenerative current	<5%
THD% of regenerative voltage	Depends on grid impedance
Suitable for synchronous AC alternator grid feed	Yes with embedded sine filter in case of synchronous generator

Power Factor Adjustable according to CEI 0-16/ other upon request

GENERAL DATA

Max Efficiency	≥97%
Operating temperature	-5°C / +40°C
Storage Temperature	-5°C / +55°C
Max humidity (non-condensing) / Max altitude	90 %@20°C/ <1000m asl
Protection degree	IP21
Dimensions (W / H / D)	5600 / 2200 / 1000 mm
Cooling Type	Forced air

Colour RAL 7035 (light grey)
 External auxiliary supply 24Vdc / 400Vac 3PH+N

Communication protocol MODBUS TCP/IP, RS-485, CAN Open, PROFINET
 Other protocols upon request

PROTECTIONS

Self-protections Included
 Overcurrent, short circuit, current leakage, voltage out of range , thermal protection over temperature.
 Other functions upon request

EN harmonized standards

EN 60204-1, EN 61800-2, EN 61800-3, EN 61800-5-1

www.valiadis.gr

Valiadis S.A.
Hellenic Motors
T +30.2102817217
F +30.2102814277
valiadis@valiadis.gr

www.eei.it

EEI
Equipaggiamenti Elettronici Industriali S.p.A.
T +39.0444.562988
F +39.0444.562373
staff@eei.it

