

8YE SMALL WIND

EEl FOR SMALL WIND TURBINES

The energy production from wind source is increasing worldwide and there is a peculiar interest for machines having low power for operation in parallel to the grid as well as for stand alone application.

EEl has undertaken development of solutions for the parallel connection of 50 - 300 kW wind turbines with asynchronous and synchronous permanent-magnet generator. This configuration allows to eliminate the gearbox as well as to supply energy even when the frequency is variable.

The control logic has been developed to manage in an active way the anomalous operation conditions (grid failure; strong winds) independently from the safety system adopted (up-hinge, pitch control, etc).

MAIN CHARACTERISTICS OF EEl CONVERTERS ARE:

- Efficiency: IGBT Active Front End,
- Reliability: Only thin film DC link capacitors and modular design for easier maintenance operations
- Safety: self-protection functions
- Quality in energy production: low THD(I), adjustable power factor.
- Flexibility: state-of-the-art solution, developed and designed according to customer needs.



MODULAR
Easy configuration for all kind of project from small to multi MW



ADVANCED
Flexible software configuration allows wide functionalities



RELIABLE
Equipped with latest power technology and design with more than 40 years of experience



FLEXIBLE
Suitable for different kind of generators





A SOLUTION FOR EVERY APPLICATION

EEL manufactures its converters for wind application in close cooperation with the generator manufacturer.

In this way generators performance are maximized and the perfect match of our inverter with other components of the energy chain increase efficiency and profitability.

Our inverters are suitable for refurbishment and update of different wind turbine technologies.

CONTRIBUTION TO THE SMART GRID

EEL inverter for wind energy application can be easily coupled with EEL Energy Storage Systems, in order to allow rural electrification or increase power plant profitability through the implementation of power plants with predictable profile or through the coupling with other energy sources.

MODEL	50 kW - 100 kW CONVERTER	200 kW - 300 kW CONVERTER
CABINET DESCRIPTION		
Dimensions (W x H x D)	1000 x 2200 x 600 (mm) 1200 x 2200 x 600 (mm)	1200 x 2200 x 600 (mm) 1400 x 2000 x 600 (mm)
Colour	RAL 7032 (Gray)	RAL 7032 (Gray)
Protection Degree	IP23/IP54	IP23/IP54
Cooling	Air Cooling	Air Cooling
Compliant with main grid connection rules		

TECHNICAL PARAMETERS		
Grid side	IGBT Active Front End	IGBT Active Front End
Output Voltage	400 Vac	400 Vac / 690 Vac
Output frequency	50/60 Hz	50/60 Hz
THD(I)	< 3%	< 3%
Generator Side	IGBT PWM Inverter	IGBT PWM Inverter
Nominal current	90 A -180 A	200 A - 550 A
Nominal Power	50 kW - 100 kW	200 kW - 300 kW
Overload	110% for 1'everyevery 10'	110% for 1'everyevery 10'
Overcurrent Protection	Included	Included
Thermal Protection	Included	Included
Efficiency	> 97%	> 97%
Communication Protocol	TCP/MODBUS (other protocols as an option)	TCP/MODBUS (other protocols as an option)
Certification	CEI 0-21	CEI 0-21 / CEI 0-16