

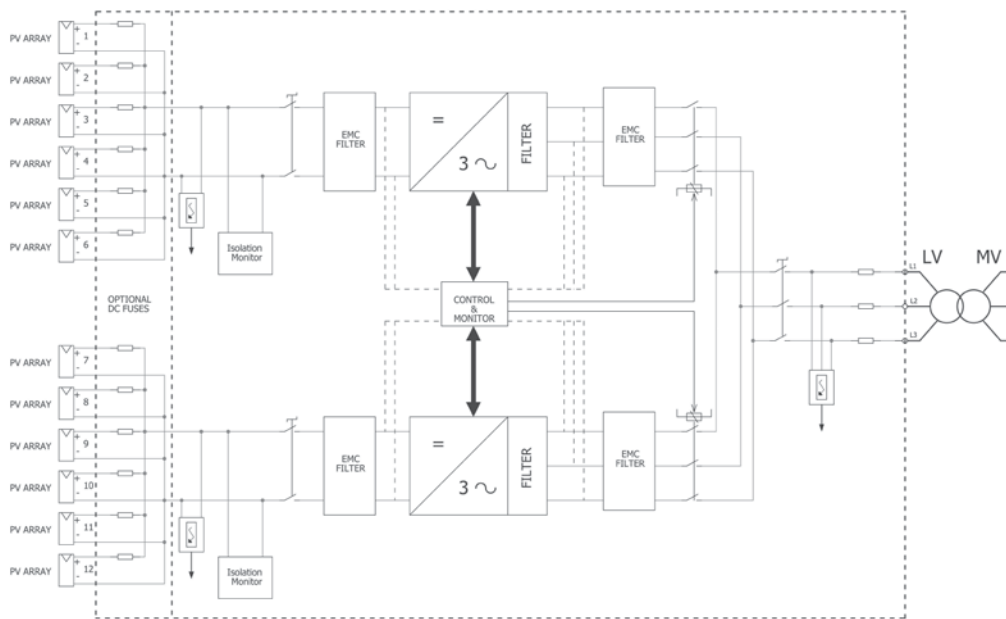
Gamesa E-1.4 MVA

Gamesa photovoltaic inverter



- ▶ Grid code compliance oriented. Voltage and power stabilizer: advanced controls for both active and reactive power: fast ramp-up (active & reactive), power factor stabilization, voltage stabilization, optional full reactive current injection at night (stat-com mode), active power regulation.
- ▶ Possibility of supplying Power Plant Controllers (PPC), to manage simultaneously various PV inverters and ensure grid code connection requirements at the PV plant Point of Common Coupling (PCC).
- ▶ Hybrid water and air cooling technology enhances operational temperature range: up to 50°C (122°F) without de-rating and up to 65°C (149°F) before shut-down.
- ▶ Specific cooling system divided in five different compartments in order to suction with no dusting concerns and work at lower Temperature Rise in the Cabinet (Reliable Electronics).
- ▶ Easy to transport and to install: compact solution housed in a 20 ft container.
- ▶ Exceptional performance in the harshest, most demanding environments.
- ▶ Easy to manufacture, easy to maintain: modular design eases access to components and facilitates maintenance.

STANDARD CONFIGURATION



TECHNICAL SPECIFICATIONS

DC input values

Recommended rated power	1,400-1,800 kWp
Max. Direct Current @ 50°C	2,100 A
Direct Current voltage range	610 - 1,000 V
DC MPPT voltage range	610 - 910 V
No. of DC inputs	12
Max. cable section per input	2 x 300 mm ²
Start of production	0.5% Pn approx.

AC output values

N° of phases	3
Apparent power	1,400 kVA
AC Active Power @ PF 1 & 50°C	1,370 kW
Nominal AC voltage	400 Vrms
Voltage allowance range	-15 % / +10%
Output frequency	50Hz/60Hz
Power Factor	See P-Q table
THD of AC current	<3% @ Pn
Max. AC current per phase @ 50°C	2020 Arms
Max. AC current per phase @ 25°C	2165 Arms
Section max. cable per phase	6 x 300 mm ²

Performance

Max. performance	98.6%
European performance	98.4%
Californian efficiency	98.4%
Power consumption on Stand-by	< 200 W

Other features

MPPT	2
LVVRT	Yes
Permissible ambient temperature	-20°C / +50°C (65°C) ⁽¹⁾
Relative humidity	95% (without condensation)
Max. Altitude	3,000 m without derating
Size (width x height x depth)	2,450 x 1,840 x 1,035 mm
Weight	1,800 kg
Heat Exchanger size	1,000 x 1,200 x 1,000 mm
Protection degree	IP-20, indoor
Cooling	Water & Forced air

Main standards

EN 61000-6-2, EN 61000-6-4, EN 50178, CE Marking.
For more information, please contact Gamesa Electric.
(1) With derating (graph at your disposal).

P-Q TABLE

Temperature	Power Factor	P. Active Power	Q. Reactive Power
50°C	PF=1	1,370 kW	0 KVAR
	PF=0.95	1,330 kW	437 KVAR
	PF=0.9	1,250 kW	600 KVAR
40°C	PF=1	1,400 kW	0 KVAR
25°C	PF=1	1,500 kW	0 KVAR

Note: Other operation points - consult Gamesa Electric.

Interfaces

Touch display.
Communication protocol.MODBUS-TCP/IP.
TCP/IP Connection.
Ethernet (CAN/PROFIBUS, etc).

Protections

Reverse polarity.
DC and AC transient overvoltage.
DC and AC shortcircuit.
Overtemperature.

Optional solution and kits

Anti-Islanding protection.
Correct phase sequence.
AC overload.
Without transformer.
Configurable DC cabinet - up to 12 DC fuses (positive pole).
Dehumidifying Kit for humidity environments.
DC ground connection kit.
SCADA monitoring system.

SPECIFIC DESIGN FOR GRID INTEGRACION

- ▶ Outstanding reactive power capabilities - see P-Q Table.
- ▶ Complies with the strictest grid connections codes including voltage dips of different countries (Germany, Jordan, UK/Scotland, Spain, Philippines, Chili, Puerto Rico,...) - voltage dips up to 100% for 1 second and nominal reactive current injection during voltage dips.
- ▶ Design for integration over weak grids and with high perturbations. Possibility of non-characteristic harmonics cancellation over distort and unbalance grids.

ADDITIONAL FEATURES

- ▶ Two independent Max Power Point Trackers (MPPT) which optimize the energy harvesting and increase overall efficiency.
- ▶ Touch screen of the inverter in several languages.
- ▶ Built-in web server for remote monitoring and control.

GLOBAL RELIABILITY

- ▶ Gamesa Electric harnesses the technological and productive capacities of a top international Group: Gamesa. With its network of maintenance services in over 30 countries spanning five continents, the company offers solutions adapted to the needs of its customers in the various sectors, ensuring maximum reliability under the most demanding conditions.
- ▶ Cutting-edge power electronics technology applied to photovoltaic products for high performance, robustness and global reliability, leveraging on our wind converter's technology.

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