



	Gamesa Electric Proteus PV 4100	Gamesa Electric Proteus PV 4300	Gamesa Electric Proteus PV 4500	Gamesa Electric Proteus PV 4700
DC Input	835 - 1500 V	875 - 1500 V	915 - 1500 V	955 - 1500 V
DC Voltage Range <sup>1)</sup>	835 - 1500 V	875 - 1500 V	915 - 1500 V	955 - 1500 V
DC Voltage Range MPP <sup>2)</sup>	835 - 1500 V	875 - 1500 V	915 - 1500 V	955 - 1500 V
Number of Power Modules	2 (not galvanically isolated, 1 MPP)			
Max. DC Current @40°C [124°F]	2 x 2500 A			
Max. DC Current @50°C [122°F]	2 x 2315 A			
Max. DC Current @55°C [131°F]	2 x 2220 A			
Max. DC Current @60°C [140°F]	2 x 1110 A			
Maximum Short-circuit Current, I <sub>SC</sub> PV	Up to 5000 A			
Nr of DC Ports <sup>3)</sup>	max 24 fuse + monitored			
Fuse Dimensions	125 A to 500 A			
Max. Wire Cross Section per DC Input	2 x 400 mm <sup>2</sup> - 600 AWG	2 x 400 mm <sup>2</sup> - 600 AWG	2 x 400 mm <sup>2</sup> - 600 AWG	2 x 400 mm <sup>2</sup> - 600 AWG
Energy Production from	0.5% Pin approx.	0.5% Pin approx.	0.5% Pin approx.	0.5% Pin approx.
AC Output				
Number of phases	Three-phase	Three-phase	Three-phase	Three-phase
Nominal AC Power Total @40°C [104°F]	4205 kVA	4209 kVA	4204 kVA	4179 kVA
Nominal AC Power Total @50°C [122°F]	3700 kVA	3709 kVA	3704 kVA	3679 kVA
Nominal AC Power Total @55°C [131°F]	3637 kVA	3639 kVA	3634 kVA	3609 kVA
Nominal AC Power Total @60°C [140°F]	1819 kVA	1819 kVA	1814 kVA	1789 kVA
Maximum AC Current @40°C [104°F]	2040 Arms	2040 Arms	2035 Arms	2010 Arms
Nominal AC Voltage <sup>4)</sup>	600 Vrms	630 Vrms	660 Vrms	690 Vrms
Nominal Voltage Allowance Range <sup>5)</sup>	-10%	-10%	-10%	-10%
Frequency Range <sup>6)</sup>	47.5 - 53.57 - 63 Hz			
THD of AC Current <sup>7)</sup>	< 1% @50%	< 1% @50%	< 1% @50%	< 1% @50%
Power Factor Range	0 (reactive) - 1 - 0 (capacitive)			
Maximum Wire Cross Section per AC Output Phase	6 x 400 mm <sup>2</sup>			
Performance				
Max. Efficiency	99.45%	99.45%	99.45%	99.45%
Euro Efficiency	99.24%	99.24%	99.24%	99.24%
CEC Efficiency	99.02%	99.02%	99.11%	99.14%
Stand-by Power Consumption	< 200 W	< 200 W	< 200 W	< 200 W
General Data				
Temperature Range - Operation <sup>8)</sup>	-20°C / +60°C [-4°F / +140°F]			
Maximum Altitude <sup>9)</sup>	< 2,000 m [6,561 ft] (w/o derating)			
Cooling System	Liquid & forced air			
Relative Humidity	4% - 100% (w/o condensation)			
Seismic <sup>10)</sup>	Zone 4 IBC 2012			
Max. wind speed <sup>11)</sup>	288 km/h (179 mph)			
Draw Weight <sup>12)</sup>	2.5 kVA/m <sup>2</sup>	2.5 kVA/m <sup>2</sup>	2.5 kVA/m <sup>2</sup>	2.5 kVA/m <sup>2</sup>
Protection Class	IP55 class 1, NEMA3R			
Dimensions (W/H/D)	4,825 x 2,250 x 1,022 mm [170.3" x 88.3" x 40.2"]	4,825 x 2,250 x 1,022 mm [170.3" x 88.3" x 40.2"]	4,825 x 2,250 x 1,022 mm [170.3" x 88.3" x 40.2"]	4,825 x 2,250 x 1,022 mm [170.3" x 88.3" x 40.2"]
Weight	4,045 kg [8,918 lb]			
AC Protections				
AC Side Disconnection & Short-circuit Current Protection	Two motorized AC circuit breakers - one per each power module	Two motorized AC circuit breakers - one per each power module	Two motorized AC circuit breakers - one per each power module	Two motorized AC circuit breakers - one per each power module
AC Overvoltage Protection	Type 1 + 2 SPD			
Anti-islanding	Included (SW)	Included (SW)	Included (SW)	Included (SW)
Grid Voltage Fluctuations (LVFT, HVFT)(1)	Included (SW)	Included (SW)	Included (SW)	Included (SW)
Frequency Failure	Included (SW)	Included (SW)	Included (SW)	Included (SW)
DC Protections				
DC Disconnection	Two motorized DC switches (on-load) - one per each power module	Two motorized DC switches (on-load) - one per each power module	Two motorized DC switches (on-load) - one per each power module	Two motorized DC switches (on-load) - one per each power module
DC Short-circuit Protection	DC fuses	DC fuses	DC fuses	DC fuses
DC Overvoltage Protection	Type 1 + 2 SPD			
Reverse Polarity Detection	Included	Included	Included	Included
DC Ground Fault and Insulation Detection	Included	Included	Included	Included
Communications				
Control <sup>13)</sup>	Modbus TCP/IP (Profinet upon request)			
Monitoring <sup>14)</sup>	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP
Websave <sup>15)</sup>	Included	Included	Included	Included
Standards/Directives <sup>16)</sup>				
IEC 6100-1	IEC 62920	IEC 62929	IEC 62920	IEC 62920
IEC 62182-2	EN 50522	EN 50522	EN 50522	EN 50522
IEC 61000-6-2/4	IEC 62116	IEC 62116	IEC 62116	IEC 62116
IEEE 1547	IEC 61683	UL 1741-SA	PRC 024	PRC 024
EN 55011	IEEE 519	GSA G22.2	UL 62109-1	UL 62109-1

INVERTER GAMESA ELECTRIC PROTEUS 4100 + TRASFORMATORE

DATI TECNICI GAMESA PROTEUS 4100

5,50 m.

Side views

#### Technical Data

**990 kVA MV Container with 6x bp165**

**DC input data**

Max. recommended PV generator power	1484 kW (247.5 kW per inverter)
MPP range	960 - 1300 V
Operating range	960 - 1450 V
Rated DC voltage / start voltage	1000 V / 1100 V
Max. no-load voltage	1500 V
Max. input current	6 x 183 A
Max. short circuit current I <sub>sc</sub> max	6 x 300 A
Number of MPP tracker	6
Connection per inverter	1 - 2

**AC output data**

Rated output	990 kVA
Max. power	990 kVA
Line voltage	20 kV
Voltage range (Ph-Ph)	18 - 22 kV
Rated frequency (range)	50 Hz (45 - 55 Hz)
Rated current	3 x 28.57 A
Max. current	3 x 28.57 A
Reactive power / cos phi	0 - 100 % Snom / 0.30 ind. - 0.30 cap.
Max. total harmonic distortion (THD)	≤ 3 %

**General data**

Max. efficiency (inverter)	99.1 %
Europ. efficiency (inverter)	99.0 %
CEC efficiency (inverter)	99.0 %
Standby consumption (inverters)	< 60 W
Circuitry topology	transformer less

**Mechanical data**

Display	LEDs
Control units	websave, supports mobile devices
Interfaces	Ethernet (Modbus TCP, SunSpec), RS485 (KACO-protocol), USB, optional: 4-DI
Fault signaling relay	potential-free NOC max. 30 V / 1 A
DC connection	cable lug, max. 240 mm <sup>2</sup> (0.372 in <sup>2</sup> ) Cu or Al
MV connection	M16 for 630 A
Ambient temperature	-25 °C - +55 °C <sup>1)</sup>
Humidity (inverter outside)	0 - 100 %
Max. installation elevation (above MSL)	1000 m
Min. distance from coast	500 m
Cooling	temperature controlled fan
Protection class of inverter	IP66 / NEMA 4x
Protection class of cabin	IP54
Noise emission per inverter	59.2 dB(A)
H x L x W of cabin	2600 x 5500 x 2100
Weight of cabin	9500 kg
Inverter Certifications	IEC 62109-1/-2, EN 61000-6-1/-2/-4, EN 61000-3-1/-2, EN 55011 group 1, class A EN 62920 Emission class A / Immunity class A
RMU Certifications	IEC 62271-103 and IEC 62271-102, IEC 62271-105, DIN 43625, IEC 60282-1 DIN EN 50181
Transformer Certifications	IEC 60076-1 & EU regulation 548/2014 Tier 2

<sup>1)</sup>Power derating at high ambient temperatures

CABINA COMPATTA CON INVERTER KACO BLUEPLANET 165 TL3, TRASFORMATORE E DATI TECNICI

REGIONE SICILIA

COMUNE DI LICATA

LIBERO CONSORZIO COMUNALE DI AGRIGENTO

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IL PROGETTISTA

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COLLABORAZIONE

**PROGETTO "AGV LICATA"**

Progetto di un impianto agro-voltaico denominato "AGV LICATA" di potenza complessiva pari a 39,633 MW e potenza richiesta in immissione pari a 39,6 MW, da installarsi nel Comune di Licata (AG) in C.da Sconfitta, C.da Camastrella e C.da Giovinone

Nome Elaborato: VIA2\_TAV23\_Disegni architettonici Cabine Elettriche

Devoluzione Elaborato: Particolari Cabine Elettriche

Formato: 594 x 841

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00	04/12/2023	Emissione per progetto definitivo	Regran	DREN SOLARE 13 SRL