



# Gamesa Electric Stor 3X series – PCS Battery Inverters

Maximum efficiency  
for utility-scale projects



TDHi <1%




One-way efficiency 99.4%

Outdoor solution

High DC short-circuit capacity



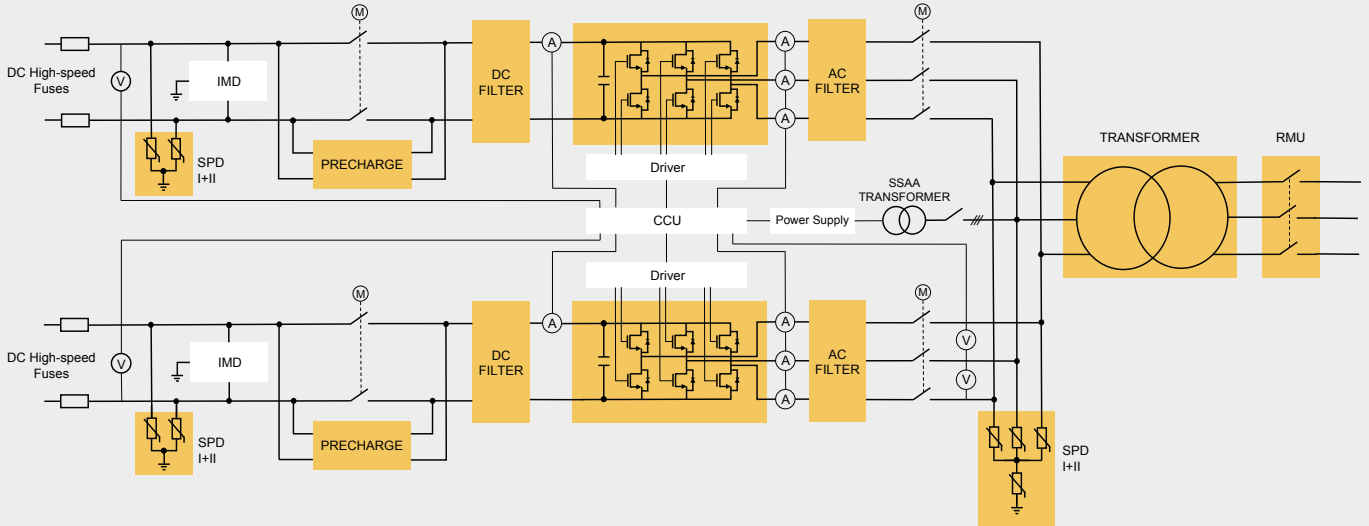
# Gamesa Electric Stor 3X series – PCS Battery Inverter

 <p><b>High Round Trip Efficiency (RTE)</b></p>	<p>Market leading efficiency of up to 99.4% (IEC 61683), improving the overall system RTE and LCoS</p>	<p>Smart liquid/air cooling system that allows critical components to work at temperature level far below their limits, guaranteeing longer product lifespan and lower thermal losses</p>	<p>Enhanced temperature derating: keeping full power up to 104°F</p>
 <p><b>Grid connection</b></p>	<p>Four quadrant operation for full active and reactive power support to comply with the most demanding grid codes</p>	<p>Fast frequency control mode with a response time below 150 ms</p>	<p>Weak grid and micro-grid configuration with a seamless transition and black start capabilities</p>
 <p><b>Battery oriented</b></p>	<p>Safety centered design with instantaneous controls and monitoring both hard-wired and through communication protocols</p>	<p>Double power module topology for two independent battery connections allowing for much lower DC short-circuit currents and increased system availability</p>	<p>Battery agnostic design to accommodate different battery technologies, including: li-ion, lead-acid, flow and others</p>

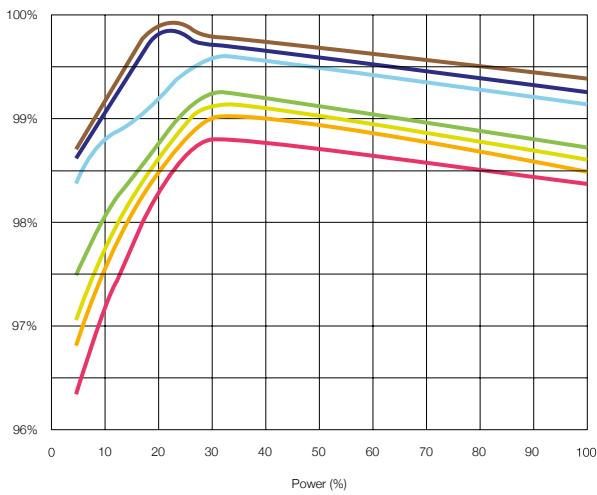


The Gamesa Electric Stor PCS 3X series combines a market leading efficiency, superior compactness and high reliability, all for a minimum LCoS.

Different product configurations available to optimize performance in demanding environments as well as different voltage levels to fit customers' needs.

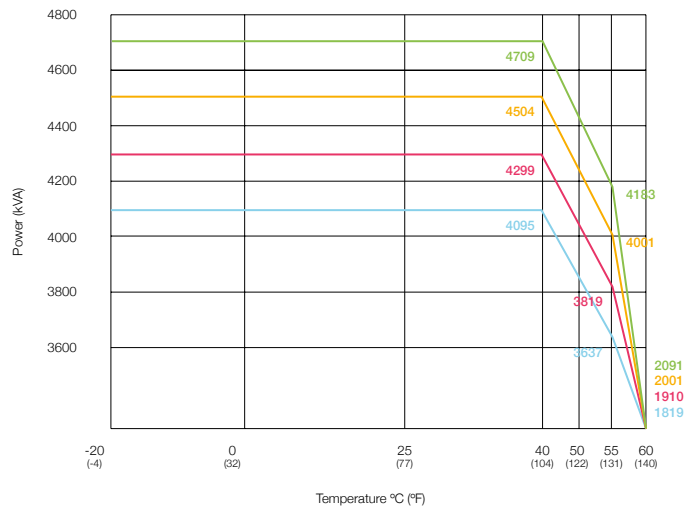


### Efficiency



- 1300 Vdc
- 1110 Vdc
- 935 Vdc
- 1220 Vdc
- 950 Vdc
- 915 Vdc
- 1175 Vdc

### Configurations Up to 4700 kVA at 1300 V



- PCS 4700
- PCS 4500
- PCS 4300
- PCS 4100

	Stor PCS 4100	Stor PCS 4300	Stor PCS 4500	Stor PCS 4700
<b>DC Input</b>				
DC Minimum Voltage*	835 V	875 V	915 V	955 V
DC Maximum Voltage (w/o derating)	< 1300 V			
DC Maximum Voltage (with derating)	< 1500 V			
Number of Independent Power Modules per PCS	2			
Max. DC Current @25°C [77°F]	2 x 2500 A			
Max. DC Current @40°C [104°F]	2 x 2500 A			
Max. DC Current @50°C [122°F]	2 x 2313 A			
Max. DC Current @55°C [131°F]	2 x 2220 A			
Max. DC Current @60°C [140°F]	2 x 1110 A			
Number of Fused DC Inputs per Power Module/Total*	Up to 3+ & 3- / 6+ & 6-			
DC short-circuit capacity	2 x 250 kA, 1 msec			
<b>AC Output</b>				
Number of Phases	Three-phase w/o neutral point			
Nominal AC Power Total @25°C [77°F]	4095 kVA	4299 kVA	4504 kVA	4709 kVA
Nominal AC Power Total @40°C [104°F]	4095 kVA	4299 kVA	4504 kVA	4709 kVA
Nominal AC Power Total @55°C [131°F]	3637 kVA	3819 kVA	4001 kVA	4183 kVA
Nominal AC Power Total @60°C [140°F]	1819 kVA	1910 kVA	2001 kVA	2091 kVA
Maximum AC Current per Power Module / Total @25°C [77°F]	1970 Arms / 3940 Arms			
Nominal AC Voltage*	600 Vrms	630 Vrms	660 Vrms	690 Vrms
Nominal Voltage Allowance Range*	+/-10%			
Frequency Range*	47.5 - 53 / 57 - 63 Hz			
THD of AC Current	< 1% @Sn			
Power Factor Range	0 (reactive) - 1 - 0 (capacitive)			
<b>Performance</b>				
Max. Efficiency	99.45%			
Californian Efficiency	99.02%	99.07%	99.11%	99.14%
Stand-by Power Consumption	< 200 W			
<b>General Data</b>				
Temperature Range - Operation**	-20°C / +60°C [-4°F / +140°F]			
Maximum Altitude***	< 2000 m [6561 ft] (w/o derating)			
Cooling System	Liquid & forced air			
Relative Humidity	4% - 100% (w/o condensation)			
Protection Class	IP55 class 1, NEMA3R			
Dimensions (W/H/D)	4325 x 2250 x 1022 mm [170.3" x 88.5" x 40.2"]			
Weight	4045 kg [8918 lb]			
<b>AC Protections</b>				
AC Side Disconnection & Short-circuit Current Protection	Two motorized AC circuit breakers - one per each power module			
AC Overvoltage Protection	Type 1 + 2 SPD			
Anti-islanding	Included (SW)			
Grid Voltage Fluctuations (LVRT, HVRT)*	Included (SW)			
Frequency Failure	Included (SW)			
<b>DC Protections</b>				
DC Disconnection	Two motorized DC switches (on-load) - one per each power module			
DC Over-voltage Protection	Type 1 + 2 SPD			
Reverse Polarity Detection	Included			
DC Ground Fault and Insulation Detection	Included			
<b>Other Protections</b>				
Over-temperature Protection	Included			
Emergency Push Button	Included			
<b>Communications</b>				
Control*	Modbus TCP/IP (Profinet, CAN upon request)			
Monitoring*	Modbus TCP/IP			
Webserver	Included			
<b>Standards / Directives****</b>				
IEC 62920	IEEE 519	UL 1741-SA	Rule 21	
EN 50530	IEC 60529	CSA C22.2	Rule 14	
IEC 62116	IEC 61727	UL 62109-1	PRC 024	
IEC 61683	PO12.2	NEC		
<b>Optionals</b>				
Low Temperature Kit up to -40 °C [-40°F]				
DC Input Current Monitoring				
Factory-fitted DC fast fuses				

\* Consult Gamesa Electric for a specific configuration

\*\* With derating from 40°C / 104°F

\*\*\* Up to 4000 m [13123 ft] with derating as optional

\*\*\*\* Consult Gamesa Electric for other Standards / Directives



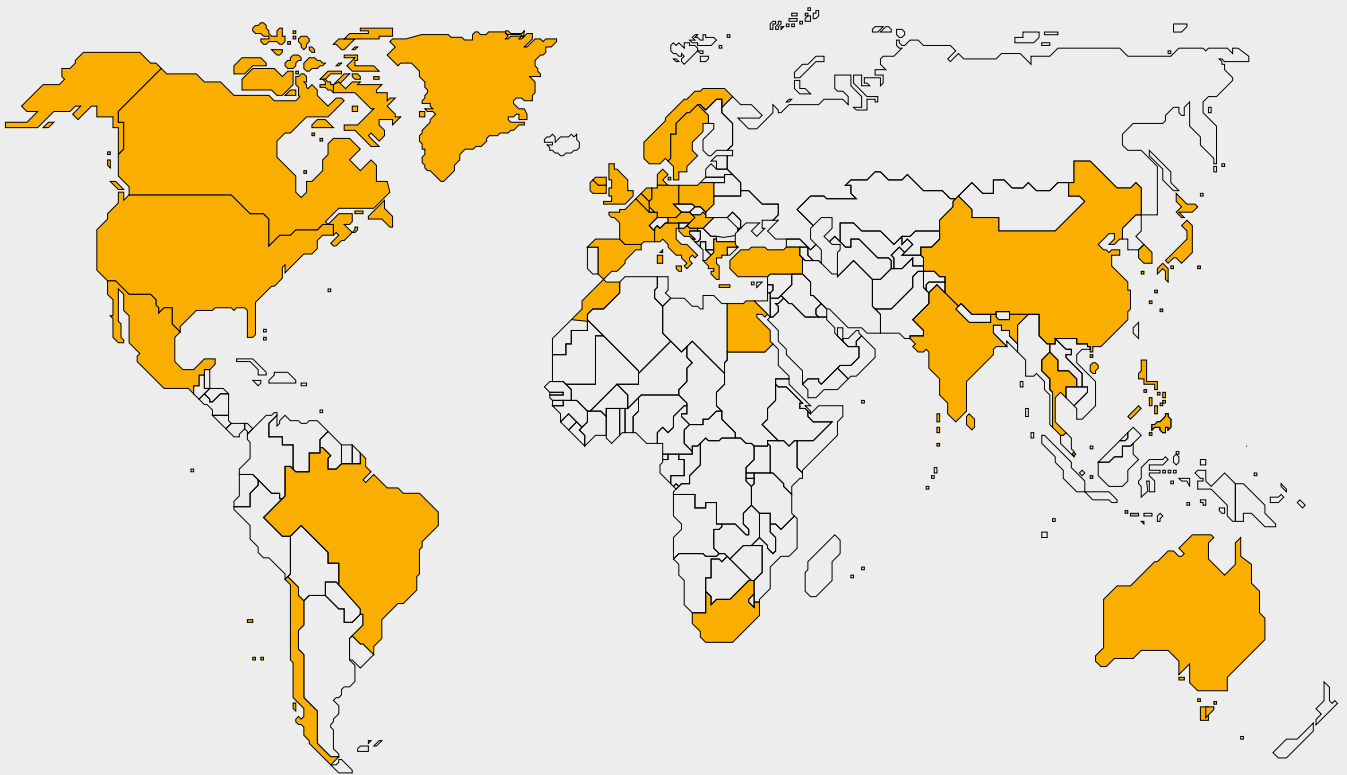
+3.7 GW  
SOLAR ENERGY



+112 GW  
WIND POWER



+90  
COUNTRIES



**Worldwide presence**

Australia  
Austria  
Belgium  
Brazil  
Canada

Chile  
China  
Croatia  
Denmark  
Egypt

France  
Germany  
Greece  
Hong Kong  
Hungary

India  
Ireland  
Italy  
Japan  
Korea

Mexico  
Morocco  
Netherlands  
Norway  
Philippines

Poland  
Singapore  
South Africa  
Sri Lanka  
Sweden

Thailand  
Turkey  
UK  
USA

