



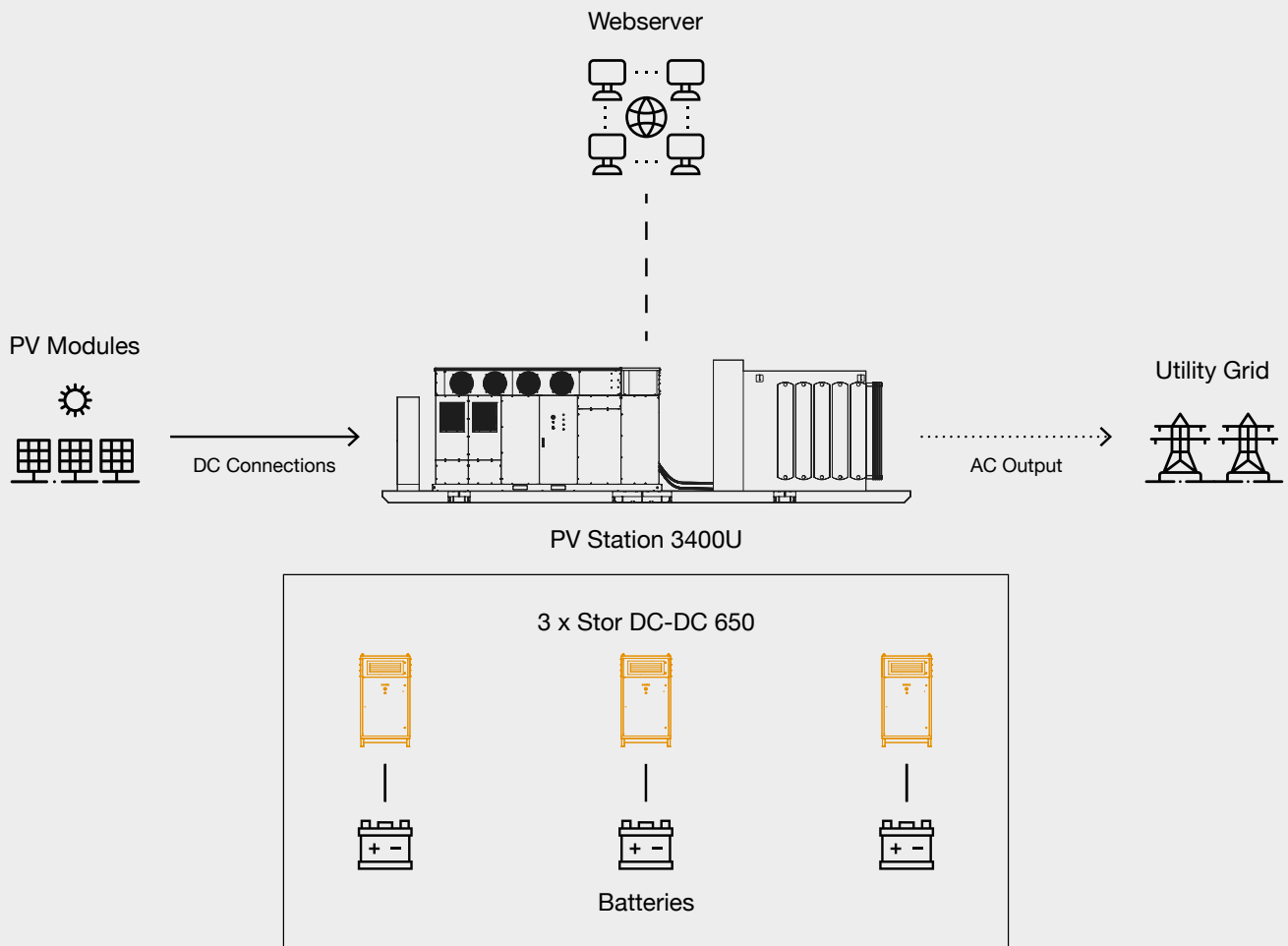
# Gamesa Electric

## Stor DC-DC 650




DC-to-DC converter  
for utility-scale solar + storage



Designed and  
certified for  
USA market

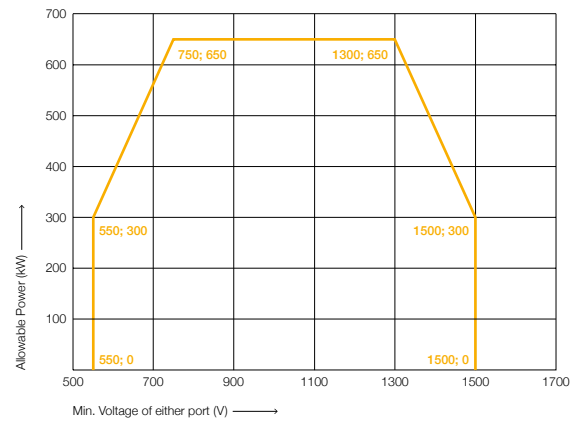


## Gamesa Electric Stor DC-DC 650 DC-DC Converter

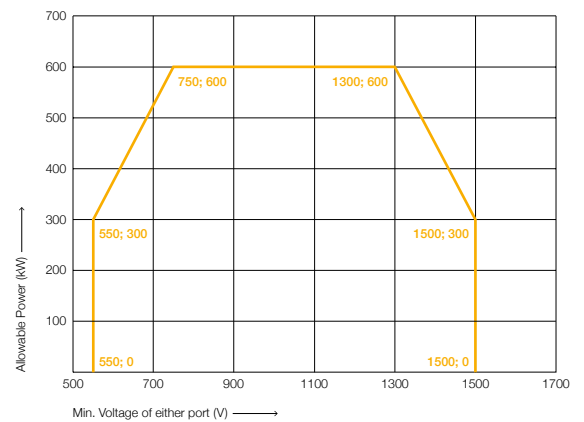
 <p><b>Higher revenues</b></p>	<p>Allows to shift otherwise clipped PV energy, increasing overall PV plant revenues</p>	<p>CAPEX optimization, by using existing PV Plant hardware (PV inverter / station)</p>	<p>Eligibility for Investments Tax Credits (ITCs) applicable in USA</p>
 <p><b>Maximum performance</b></p>	<p>Extended DC Voltage range at battery and inverter level</p>	<p>Enhanced P-V curve, achieving optimum conversion at whole operation range</p>	<p>Maximum efficiency at every working point (even at low load)</p>
 <p><b>Flexibility</b></p>	<p>Fully compatible with different PV panels, battery technologies</p>	<p>Modular and scalable design to accommodate for different PV+BESS configurations</p>	<p>Designed to be easily integrated with Gamesa Electric PV 3400U inverter and Gamesa PV station 3400U with up to 3 units on the same skid platform</p>

DC/DC 650 kW	
<b>Electrical Specifications</b>	
DC Voltage Range (Battery Port)	550-1500 V <sub>DC</sub>
DC Voltage Range (PV Port)	550-1500 V <sub>DC</sub>
DC Voltage Range (Battery Port)	750-1300 V <sub>DC</sub> at full power
DC Voltage Range (PV Port)	750-1300 V <sub>DC</sub> at full power
Rated Continuous Power Rating @25°C	650 kW
Max. Continuous Current @25°C	±866 A <sub>DC</sub>
Rated Continuous Power Rating @50°C	600 kW
Max. Continuous Current @50°C	±800 A <sub>DC</sub>
Max. Power Regardless Voltage Inputs Level	Defined in P-V curve
Max. Number of DC Ports – PV	Single port (+ and -) up to 240 mm <sup>2</sup>
Max. Number of DC Ports – Battery	Single port (+ and -) up to 240 mm <sup>2</sup>
Max. Efficiency	98.8% (Pending cert.)
Battery Technology	Compatible with all common battery technologies
<b>Protective Devices</b>	
PV Port	DC circuit breaker and fusing inside DC converter
Battery Port	DC circuit breaker and fusing inside DC converter
Oversoltage Protection PV DC	SPD type 1 + 2 inside the INV 3.X
Oversoltage Protection Battery	SPD type 1 + 2
Ground Fault Detection Battery Side	Insulation monitoring device
Ground Fault Detection PV Side	Use of monitoring inside the INV 3.X
Oversoltage Protection for Auxiliary Monitoring	Use of SPD type 2 inside the aux cabinet
<b>Other Features</b>	
Storage Temperature	-20°C to 70°C / -4°F to +158°F
Operating Temperature	-5°C to 55°C / 23°F to 131°F
Max. Relative Humidity	95% non-condensing
Max. Altitude	2000 m / 6562 ft without derating
Dimensions (Depth x Width x Height)	1250 x 1070 x 2053 mm / 49.2 x 42.1 x 80.8 in
Acoustic Rating	<80dBA at 1 m (TBC)
Weight	<2200 lbs.
Degree of Protection of Enclosure	Outdoor Nema 3R
Cooling	Forced air cooling
<b>Communications</b>	
Monitoring	Modbus TCP/IP
<b>Main Standars</b>	
UL 1741	
CSA C22.2#107.1	
UL-62109-1	
CE	

STOR DC/DC 650 kW Power Curve. @77°F/ 25°C



STOR DC/DC 650 kW Power Curve. @122°F/ 50°C





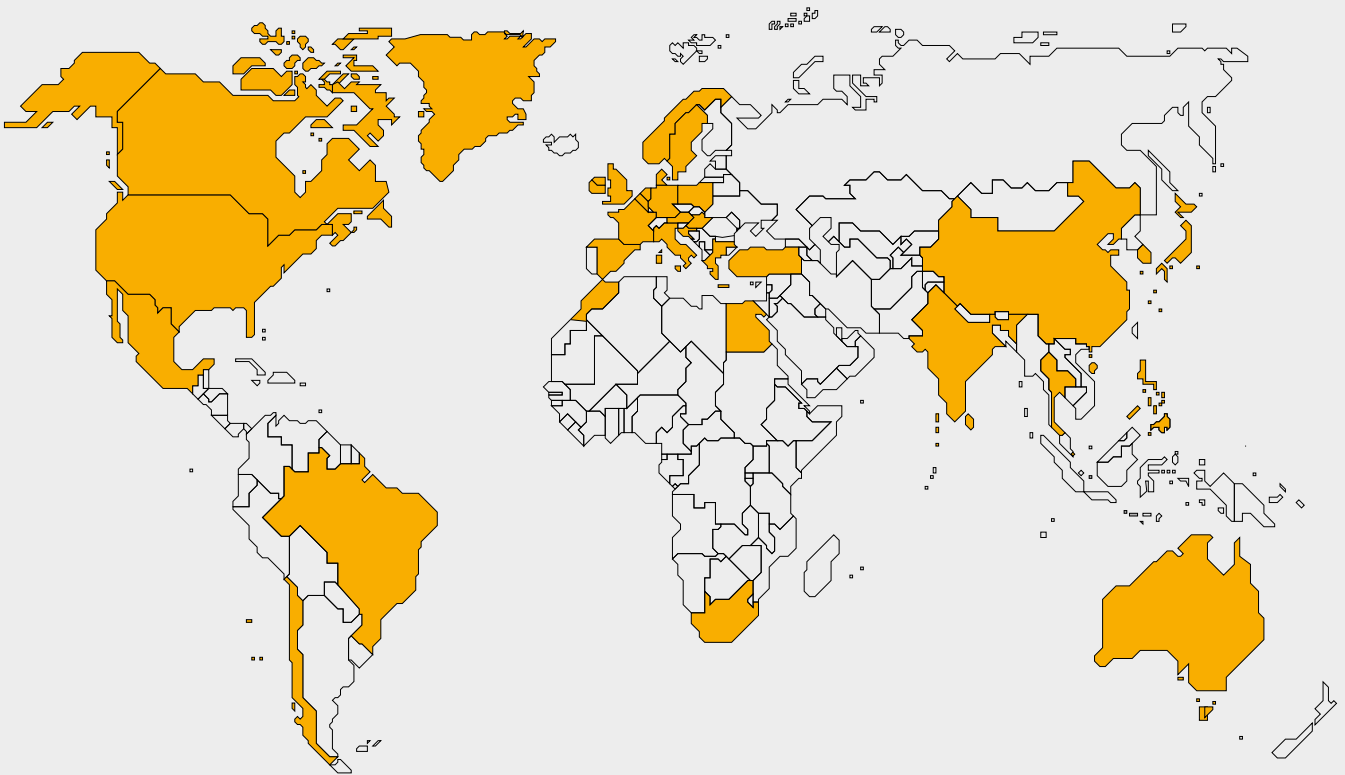
**+2400**  
PV INVERTERS



**+90 GW**  
Wind & Solar  
INSTALLED



**+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

