

BEC900280G

150kW/900Vdc Bidirectional Non-isolated DC/DC Conversion Module



Product Introduction

The BEC900280G is a non-isolated bidirectional DC/DC conversion module specifically designed to meet the applications of energy storage devices, DC microgrids, and the cascaded utilization of retired batteries. This module can be used to connect batteries and DC buses. Adopting the third-generation semiconductor SiC devices, it achieves excellent performances such as high efficiency, high power density, high scalability, extremely low electromagnetic radiation and interference, and high reliability. It is a power conversion module with an international leading level.

Product Features



High Efficiency & Energy Saving

- High efficiency : SiC power devices are applied in batches, and the maximum energy conversion efficiency can reach 99.5%.
- High power density: It reaches up to 68.2W/in³ and saves installation space.



Safety and Reliability

- Isolated air duct and potting: The design of the isolated air duct can improve the heat dissipation efficiency, and the potting process can significantly enhance the module's protection capabilities against salt spray, moisture and mildew.
- Emergency Power Off (EPO) shutdown.: It is equipped with an emergency shutdown interface and has the function of emergency shutdown.



Intelligent and Convenient

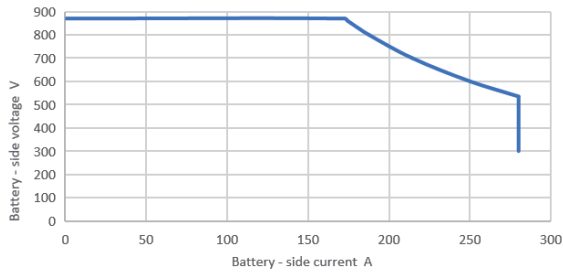
- Fully digital control: Dual DSP design, with high-reliability control.
- Parallel connection of multiple modules: It supports the parallel connection of up to 32 modules. With flexible capacity expansion, it can be adapted to the simultaneous use of retired batteries of different models.



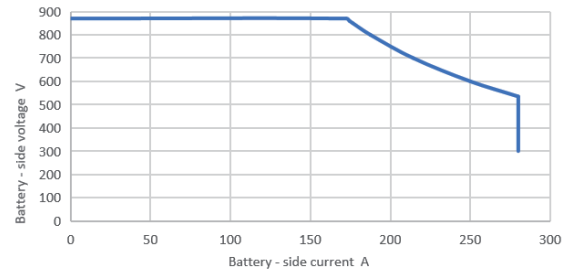
Widely Compatible

- Wide battery-side voltage range: 300Vdc~870Vdc, compatible with various power batteries and energy storage batteries.
- Wide temperature range: -40°C ~ +75°C, compatible with applications in various scenarios.

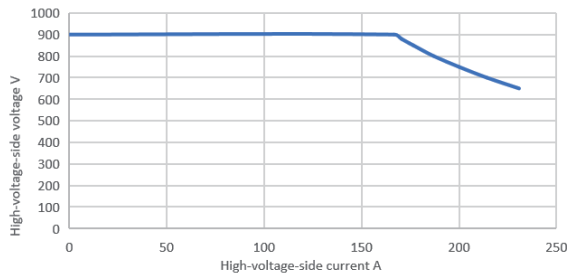
External charging characteristic curve on the battery side



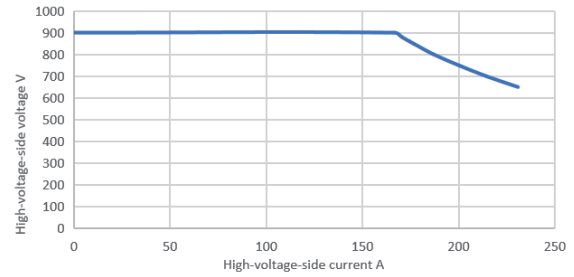
External discharging characteristic curve on the battery side



External charging characteristic curve on the high-voltage side



External discharging characteristic curve on the high-voltage side



Model		BEC900280G
Working Conditions	Operating Temperature	-40°C ~ +75°C, derating shall be applied when the temperature is above +55°C.
	Relative Humidity	≤95%RH, condensation-free
	Cooling Method	Intelligent air cooled
	Altitude	2000m, derating should be considered when the altitude is above 2000 meters.
Battery Side	Rated Power	150kW
	Voltage Range	300Vdc~870Vdc (535Vdc~870Vdc full power output)
	Current Range	0~280A
	Accuracy of Current Stabilization	≤±1%
	Efficiency (Full Load)	> 99.5%
High-voltage Side	Rated Power	150kW
	Voltage Range	650Vdc~900Vdc
	Current Range	0~230A
	Current-sharing	Unbalance Degree<±5%
	Accuracy of Voltage Stabilization	<±0.5%
	Accuracy of Current Stabilization	≤±1%
	Efficiency (Full Load)	>99.5%
Appearance	Dimension	154mm (H) ×385mm (W) ×600mm (D)
	Weight	≤30kg
Others	Connect Method	CAN
	MTBF	>500,000h
	Satisfied Standards	TUV CE/UL