

Product Introduction

BEG1K0110G/1K086U is the bidirectional ACDC power module used to connect the battery or DC bus to the AC Grid. It is specially designed for bidirectional applications in battery energy storage systems with multiple battery groups in parallel to achieve safety isolation and flexible capacity expansion. It can also be used in retired battery utilization and AC Micro Grid applications. By employing the high frequency SiC MOSFET switch technology, it can achieve excellent performance, high power density, high efficiency and high reliability.



Unique function :

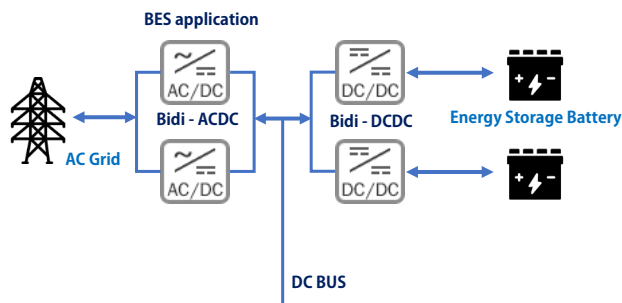
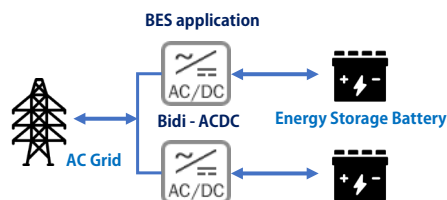
- Bidirectional ACDC inverter
- None isolation design for more than 98.7% efficiency
- Wide voltage range at the AC Bus and Battery or DC Bus side, suitable for different battery racks, DC Bus and Grid
- Smooth transition when the direction of power flow changes

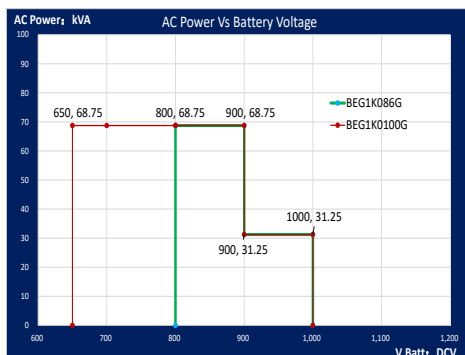
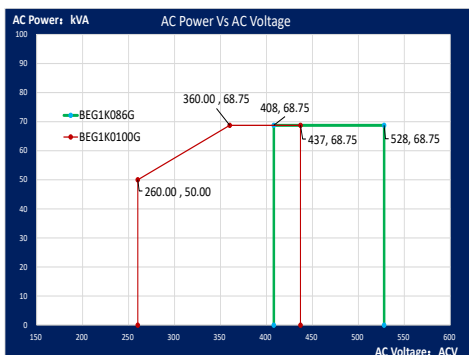
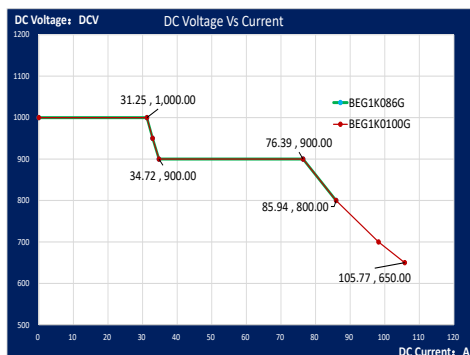
Main feature :

- High power density
- TUV CE/US and Various grid conformity with certifications
- Inner spraying tech for high protection and high reliability
- Maximum 16 inverters in parallel work
- Max efficiency is higher than 98.7%
- Plug & play

Application:

- Battery Energy Storage
- Retired Battery Utilization
- AC Micro Grid
- DC Bus





Technical Specification		BEG1K0110G	BEG1K086U
Environment	Ambient Temperature	-40°C ~ +75°C, derating from 55°C	
	Storage Temperature	-40°C ~ +75°C	
	Humidity	≤95%RH, non-condensing	
	Altitude	2000m	
On Grid Mode	AC Side	Rated Voltage, Power and current	
		380V/400V/62.5kVA/95A, 3L+PE	480V/62.5kVA/75A, 3L+PE
		Frequency	
		45Hz~65Hz	
		Voltage range	
		260 ~ 437Vac	408 ~ 528Vac
	DC Side	Power factor	
		≥0.99 Rated AC, @50% ~ 100% power, ≥0.97 @20% ~ 50% power	
		Power factor correction	
		-1~+1 Adjustable	
		THDi	
		≤3% Rated AC @50% ~ 100% power	
Off Grid Mode	DC Input	Voltage and Power	
		650Vdc ~ 1000Vdc	800Vdc ~ 1000Vdc
	AC Output	Max current	
		110A	85.95A
		Output AC Voltage and Output power	
		380Vac/400Vac/62.5kW	480Vac/62.5kW
		Rated power and current	
		62.5kVA / 95A	62.5kVA / 75A
		Output AC Frequency	
		50 Hz/60 Hz	
	Control	Communication	
		CAN2.0	
		Indication Light	
		Green LED: ON for AC2DC Mode, Breathing for DC2AC Mode. Yellow LED: alarm. Red LED: failure	
Alarm and protection	Input/output over/under voltage protection		Automatic shutdown, automatic restart when voltage returns to normal
	Over current and short circuit protection		Automatic shutdown and lock, power off to start and unlock
	Over temperature protection		Automatic shutdown, automatic restart when the temp returns to normal
Reliability	MTBF		>300,000 h
EMC	TUV CE certification, EN61000-6-2/-4		
Safety	TUV UL/CE certification, EN62477-1:2012/A12:2021; UL1741		
Grid connection	VDE-AR-N 4105, UL 1741SB: 2021, IEEE 1547: 2018, IEEE 1547.1: 2020		
Mechanical	Dimension / Weight		110mm (H) ×385mm (W) ×395mm (D), ≤22 kg
Ordering Information	Type		TUV CE Version: BEG1K0110G TUV US Version: BEG1K086U

*DC side voltage needs to be higher than the AC peak line voltage+30V.
For example, the actual AC line voltage is 528V, the module is running in the on/off-grid mode, the DC side voltage must be higher than 528*1.414 + 30V = 776.6V

*The power module can not be connected to the Neutral line from the Grid side.
In the off grid mode, the BEG1K0110G will output the Neutral line to load, but the BEG1K086U doesn't support it
But in the system inner, the power module's neutral line need to be connected to together