



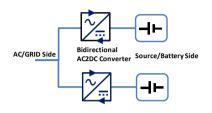
BEG1K075G

22kW1000V Bidirectional AC2DC Converter

Product Introduction

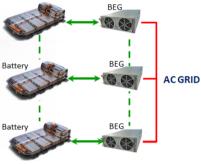
BEG1K075G is the bidirectional AC2DC converter, been used for connecting the battery or DC bus to the AC grid, are specially designed for bidirectional applications in V2G and VPF function EV charger, Retired Battery Utilization and Micro Grid. Can instead of the traditional PCS in the energy storage system. With the high frequency MOSFET/SiC switch technology can get the excellent performance, high power density, high expansion ability and high reliability.







Retired Battery utilization



Max 32 Groups

Unique function:

- Bidirectional converter for AC2DC
- Inside high frequency transformer isolation
- Wide voltage range in source side, suitable for multiple battery racks
- Smooth transition when power flow changing direction

Main feature:

- Constant current keeps the larger power in source side
- Max efficiency is higher than 96%
- Low standby power consumption, less than 20W
- Maximum 32 converters in parallel work
- Plug & play
- Duo CAN communication interface

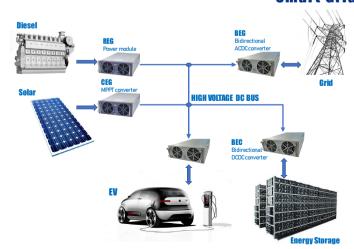
Application:

- Energy storage instead of traditional PCS
- Energy storage EV charger
- V2G EV charger
- VPF function EV charger
- Retired battery utilization

V2G Charger



Smart Grid

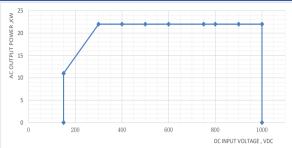


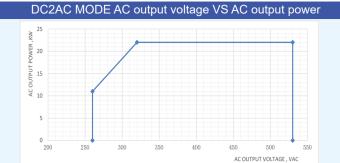
Address: First Floor, No.1 Building, Linoya Industrial Park, Tangtou No.1 Road, Shiyan, Bao'an District, Shenzhen, China

2021.02 VER:1.2

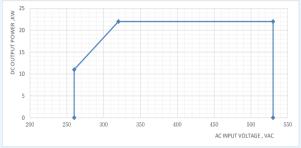
Bidirectional AC2DC Converter

DC2AC MODE DC input voltage VS AC output power

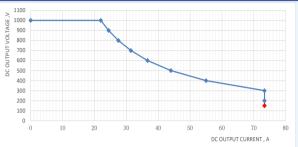




AC2DC MODE AC input voltage VS DC output power







84mm (H) × 300mm (W) × 395mm (D), ≤17 kg

Environmental Ambient Temperature					
Storage Temperature	Technical Spe	cification			
Humidity	Environmental		Ambient Temperature		$-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$, derating from 45°C
Humidity			Storage Temperature		100
A C I I I I I I I I I I I I I I I I I I	Livironinentai		Humidity		≤95%RH, non-condensing
A			Altitude		2000m
AC Input			Input voltage & current range		400/480Vac, 3L+PE; 0 ~ 43A
Power factor	AC to DC Mode	AC Innut	Input voltage/frequency range		260 Vac ~ 530 Vac, 45 Hz ~ 65 Hz
AC to DC Mode		AC Input	Power factor		≥0.99 Full-load output power of @50% ~ 100%
DC Output Voltage and current range			THD		≤5% Full-load output power of @50% ~ 100%
C Output Current stabilized accuracy ≤±0.5%		DC Output	Rated power		22kW
Current stabilized accuracy Efficiency (max) AC2DC and DC2AC Mode convert time (Battery test) DC Input DC Input Max Input current Ax Output AC Voltage and Output power Cutput AC Voltage and Output power Ax Output AC Frequency ThDi Cutput Power Factor Output Power Factor Output Power Factor Output Power factor Doff Grid Power factor Dynamic voltage stability and recovery time Alarm and protection Alarm and protection Alarm and protection Reliability MTBF Accurrent Cutrout Safety MTBF Accurrent (Battery test) Accurrent (Battery test) Power factor Over certification (in progress) Safety TUV UL/CE certification (in progress) Policies of the set of			Voltage and current range		150Vdc ~ 1000Vdc, 0 ~ 73.3A
Efficiency (max) \$96% AC2DC and DC2AC Mode convert time (Battery test) 10mS From 300 to 1000Vdc, ouput power is 22kW From 300 to 150Vdc, output power is 22kW From 300 to 150Vdc, output power is linear derating to 11kW 73.3A From 320 to 530Vac, output power is linear derating to 11kW From 320 to 530Vac, output power is 22kW; From 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is linear derating to 11kW Prom 320 to 260Vac, output power is 22kW; Prom 320 to 260Vac, ou			Voltage stabilized accuracy		<±0.5%
No			Current stabilized accuracy		≤±1% (output power in 20% ~ 100%)
DC Input DC input voltage and Output power Max Input current 73.3A From 300 to 530Vac, output power is 22kW; From 320 to 260Vac, output power is linear derating to 11kW Rated power and current 22kVA / 33.3A Output AC Prequency 50 Hz/60 Hz HIDI 4C Output Power Factor Efficiency (max) Voltage accuracy and distortion Off Grid Power factor Dynamic voltage stability and recovery time 5% and 20mS Communication Indication Light Alarm and protection Alarm and protection			Efficiency (max)		≥96%
DC Input DC Input	AC2DC and DC2A	C Mode con	nvert time (Battery test)		10mS
DC Input		DC Input	DC input voltage and Output power		From 300 to 1000Vdc, ouput power is 22kW
Note to AC Mode Note to AC Mode AC Output AC Frequency AC Output Power Factor Efficiency (max) Power factor Powe					From 300 to 150Vdc output power is linear derating to 11kW
DC to AC Mode AC Output AC Voltage and Output power Rated power and current Output AC Frequency THDi Software Factor Efficiency (max) Voltage accuracy and distortion Off Grid Power factor Dynamic voltage stability and recovery time Indication Light Alarm and protection Reliability MTBF Safety Output AC Voltage and Output power From 320 to 260Vac, output power is 22kW; From 320 to 260Vac, output power is linear derating to 11kW 22kV/A / 33.3A Output Power Factor User Setting scale, 0.8 ~ 1, -0.8 ~ -1 **Befficiency (max) **Soft of AC Output Power is linear derating to 11kW **Description of Account Power			May Input current		
DC to AC Mode AC Output AC Voltage and Output power Rated power and current 22kVA / 33.3A Output AC Frequency 50 Hz/60 Hz THDi < 5% Output Power Factor User Setting scale, 0.8 ~ 1, -0.8 ~ -1 Efficiency (max) > 96% Voltage accuracy and distortion 1% and <3% // Off Grid only support 400Vac Off Grid Power factor >0.7 Ommunication Light Green LED: ON for AC2DC Mode, Breathing for DC2AC Mode. Yellow LED: alarm. Red LED: failure Alarm and protection Over current and short circuit protection Automatic shutdown, automatic restart when voltage return to normal Reliability MTBF > 300,000 h EMC/EMI TUV CE certification (in progress) UL2202, EN61851-1, EN61851-23		AC Output	Output AC Voltage and Output power		
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Reliability MTBF >300,000 h EMC/EMI TUV CE certification (in progress) EN61851-21-2, class B Safety TUV UL/CE certification (in progress) UL2202, EN61851-1, EN61851-23					,
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Safety TUV UL/CE certification (in progress) UL2202, EN61851-1, EN61851-23	*				
	EMC/EMI		TUV CE certification (in progress)		
Grid connection Different country certification (in progress) VDE-AR-N 4105, G83/2, G59/3 (UK), DIN V VDE V 0126-1-1	Safety		TUV UL/CE certification (in progress)		UL2202, EN61851-1, EN61851-23
	Grid connection		Different country certification (in progress)		VDE-AR-N 4105, G83/2, G59/3 (UK), DIN V VDE V 0126-1-1

Address: First Floor, No.1 Building, Linoya Industrial Park, Tangtou No.1 Road, Shiyan, Bao'an District, Shenzhen, China.

Dimension / Weight

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Mechanical

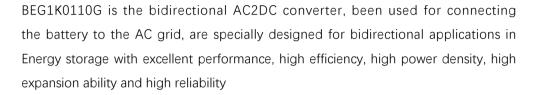




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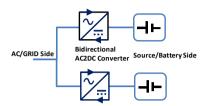
62.5kW1000V Bidirectional AC2DC Converter

Product Introduction













Unique function:

- Bidirectional converter
- Non isolation design
- Wide voltage range in source side, suitable for multiple battery packs
- Smooth transition when power flow changing direction

Main feature:

- Constant current keeps the larger power in source side
- Max efficiency is higher than 98.7%
- Less than 12W standby power consumption and less than 300W no load power consumption
- Maximum 16 converters in parallel work
- Plug & play

Application:

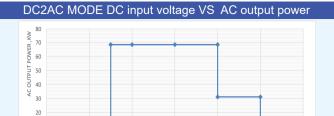
- Retired battery utilization
- Smart grid with DC bus and energy storage

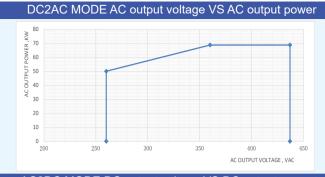
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Bidirectional AC2DC Converter







DC INPUT VOLTAGE, VDC







Technical Spe	cification	1	
		Ambient Temperature	-40°C ~ +75°C, derating from 55°C
Environmental		Storage Temperature	-40°C ~ +75°C
		Humidity	≤95%RH, non-condensing
		Altitude	2000m
		Input voltage	380Vac, 3L+PE;
	AC Input	Input voltage/frequency range	260 Vac ~ 437 Vac, 45 Hz ~ 65 Hz
	AC IIIput	Power factor	≥0.99 Rated AC, @50% ~ 100% power, ≥0.97 @20% ~ 50% power
AC to DC Mode		THD	≤3% Rated AC @50% ~ 100% power
		Rated power	62.5kW
		Voltage and current range	650 Vdc ~ 1000 Vdc, 0 ~ 110A
	DC Output	Voltage stabilized accuracy	<±1%
		Current stabilized accuracy	≤±2%, @20% ~ 100% power
		Efficiency (max)	≥98.7% ,Rated AC&DC @50% ~ 100% power
AC2DC and DC2A	C Mode con	nvert time (Battery test)	10mS
	DC Input	DC input voltage and Output power	From 650 to 1000Vdc
		Max Input current	110A
		0	From 360 to 437Vac, ouput power is 62.5kW;
	AC Output	Output AC Voltage and Output power	From 360 to 260Vac, output power is linear derating to 50kW
		Rated power and current	62.5kVA / 95A
		Output AC Frequency	50 Hz/60 Hz
DC to AC Mode		THDi	< 3%
		Output Power Factor	User Setting scale, 0.8 ~ 1, -0.8 ~ -1
		Efficiency (max)	≥98.7% ,Rated AC&DC @50% ~ 100% power
		Grid connection function	SVG, VSG, Grid island, Zero voltage crossing function, Grid countercurrent protection
		Voltage accuracy and distortion	1% and <3%
		Off Grid Power factor	>0.7
		Dynamic voltage stability and recovery time	5% and 20mS
Control		Communication	CAN2.0
Control		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 return to normal
		Over current and short circuit protection	Automatic shutdown and lock, need the input restart to unlock
		Over temperature protection	Automatic shutdown, automatic restart when the temp return to normal
Reliability		MTBF	>300,000 h
EMC/EMI		TUV CE certicification (in progress)	EN61851-21-2, class A
Safety		TUV CE certicification (in progress)	EN61851-1, EN61851-23
Grid connection		Different country certification (in progress)	VDE-AR-N 4105, G83/2, G59/3 (UK), DIN V VDE V 0126-1-1
Mechanic	al	Dimension / Weight	110mm (H) ×385mm (W) ×395mm (D), ≤22 kg

Address: First Floor, No.1 Building, Linoya Industrial Park, Tangtou No.1 Road, Shiyan, Bao'an District, Shenzhen, China.

2021.09 VER:1.2





CEG1K0100G

30kW1000V Charger DC2DC Power Module

Product Introduction

CEG1K0100G is specially designed for EV DC input type chargers. It has high efficiency, low fan noise, high power density and high reliability advantage. Up to 825V DC input, DC output voltage range is from 150 to 1000VDC with 30kW output power, EMC/EMI satisfy TUV CE certicification with class B level, and safety satisfy TUV CE certicification.





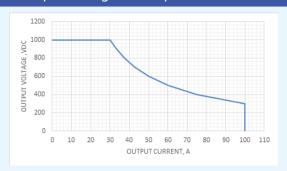
Main feature:

- Inside high frequency transformer isolation
- Full hot plug design
- TUV CE Certicification, EMC class B level
- Air duct isolation design for high protection and high reliability for harsh environment
- Wide output voltage range, 150-1000VDC, suitable for a wide range of EVs
- Constant current for higher output power at low output voltage
- Super denoise mode can get less 55 dB fan audio noise
- An internal patented intelligent discharge circuit automatically discharges residual charge, simplifying system designs
- Low standby power consumption with 12W. Super standy power consumption with 2W.
- Wide input DC voltage from 300V to 825V DC
- Dual DSP design, provides the full digital control ,less components means higher reliability
- Totally compatible with REG1K0100G AC2DC power module in the size, interface and protocol
- Wide operating temperature range, -40°C--+75°C

Application:

- DC Charger for EV with modular design, easily maintenance, cost efficiency, high power density and high quality
- DC input Charger

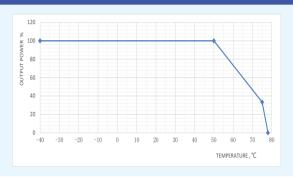
Output Voltage Vs Output Current Curve



Input Voltage Vs Output Power Curve



Ambient Temperature Vs Output Power Curve



Technical Specific	Technical Specification					
	Ambient Temperature	-40°C ~ +75°C, derating from 55°C				
	Storage Temperature	$-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$				
Environmental	Humidity	≤95%RH, non-condensing				
	Cooling	Fan cooling				
	Altitude	2000m				
Input Side	Input Voltage range	300Vdc ~ 825Vdc				
	Max Input current	50A				
	Efficiency (top)	≥95%, @350~500V/680~1000Vdc/60%~100% Load current, Max point≥95.5%				
Output Side	Output power	30kW@ voltage >300Vdc				
	Voltage range	150Vdc ~ 1000Vdc				
	Current range	0~100A				
	Current sharing	< ±1 A				
	Voltage stabilized accuracy	< ±0.5%				
	Current stabilized accuracy	$\leq \pm 1\%$ (output power in 20% ~ 100%)				
	Communication	CAN bus, Max 48 power modules parallel				
	Indication Light	Green LED: normal operation Yellow LED: alarm Red LED: failure				
Control	Address Indication	Automatic address identification, Panel dial switch for group setting				
	Noise Setting	Power mode with max 75 dB , Denoise mode with max 65 dB , Quiet mode with max 55 dB				
	Super Standby	Outerside 12V or 5V DO control				
	Input/output voltage protection	Over/under voltage will automatic shut down and restart when voltage return to normal				
Alarm and protection	Over current/short circuit protection	Automatic shutdown and lock, need power off to restart to unlock				
	Over temperature protection	Automatic shutdown, automatic restart when the temperature return to normal				
EMC/EMI	TUV CE certicification	EN61851-21-2, class B				
Safety	TUV CE certicification	EN61851-1, EN61851-23				
Reliability	MTBF	>300,000 h				
Mechanical	Dimension	110mm (H) ×385mm (W) ×395mm (D)				
	Weight	≤22.5 kg				
Onderine lafe are '	Type	CE Version: REG1K0100G				
Ordering Information	1,900	de Version. Redirectore				

Address: First Floor, No.1 Building, Linoya Industrial Park, Tangtou No.1 Road, Shiyan, Bao'an District, Shenzhen, China.

2020.10 VER:1.0

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