

30kW V2G Bidirectional Power Module

EV3102-030K-GR



More Efficient

- $\geq 95\%$ peak efficiency for minimal energy losses
- 100A industry-leading max charging/discharging current
- Hardware emergency stop circuit supports high/low voltage ride-through



More Reliable

- 60+ protection and alarm functions for better overall safety
- Module in-position detection enhances reliability
- Automotive-grade manufacturing ensures durability in harsh environments



More Compatible

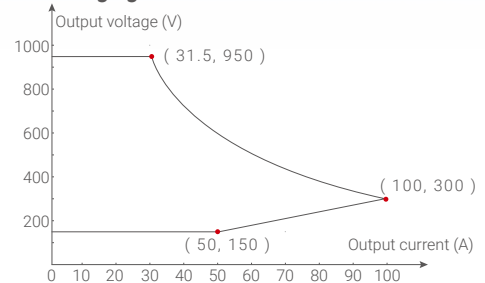
- 200~950V ultra-wide charging/discharging voltage range
- 300~950V ultra-wide constant power charging/discharging range
- Smart fast charge/discharge switching, transition time $< 10\text{ms}$



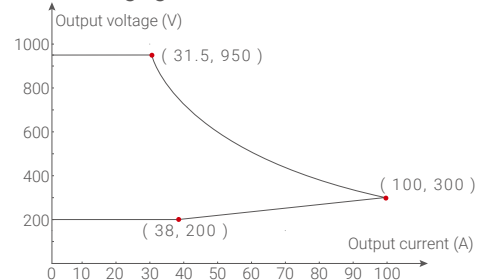
More Intelligent

- DSP digital control for faster voltage/current regulation
- Four-dimensional fan with intelligent speed control, supporting silent mode
- Hot-swappable module design simplifies maintenance

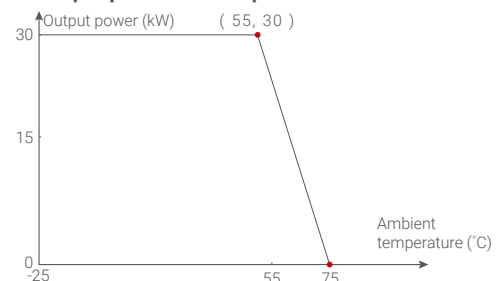
Charging direction



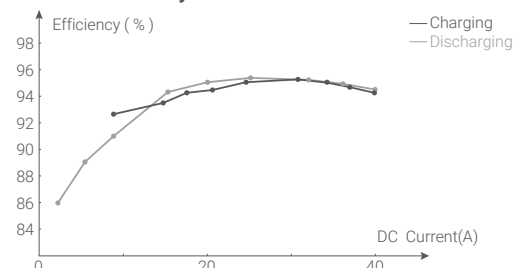
Discharging direction



Output power and temperature curve



750V efficiency curve



Technical Specification

Technical parameters		EV3102-030K-GR
AC2DC MODE-AC INPUT	AC input voltage range	323~437Vac
	Frequency range	45~55Hz
AC2DC MODE-DC OUTPUT	Output power	30kW
	DC output voltage range	150~950V DC
	Constant power output voltage range	300~950V DC
	Max. input current	100A
DC2AC MODE-DC INPUT	DC input voltage range	200~950V DC
	DC input voltage range	300~950V DC
DC2AC MODE-AC OUTPUT	AC output voltage range	323~437Vac
	Frequency range	49~51Hz
	Power factor	>0.99 (100% load)
	THDi	≤5% (50% load)
	Current direct component	<0.5%
OTHER INFORMATION	Peak efficiency	≥95%
	Stand-by power consumption	≤15W
	Noise level	<65dB (Rated)
	Current regulation accuracy	≤±1%
	Voltage regulation accuracy	≤±0.5%
	Starting impulse current	<110%
	Temperature coefficient	≤±0.02% (Reference value +20°C)
	Boot time	3~8s (stable rated input to required output voltage)
	Dimension (W×D×H)	385×500×110mm
	Weight	≤26kg
CONFIGURATION AND PROTECTION	Operation indicator	Power, alarm, fault
	Communication	(125kbit/s)+Digital enable signal
	AC input three phase unbalance protection	Yes
	Input over/under voltage protection	Yes
	Output over/under voltage protection	Yes
	Over-temperature protection	Protect on temperature over 75°C, and automatically recover when ≤70°C
	Current limit protection	Yes
	Short-circuit protection	Yes
WORKING ENVIRONMENT	Altitude	≤2,000m (derate when altitude >2,000m)
	Working temperature	-25~75°C, derating output for temperature above 55°C
	Storage temperature	-40~75°C
	Humidity	5%-95% (non-condensing)