

40kW CE/UL SiC Charging Module

EV3102-040K-HR (UC)



More Efficient

- Uses SiC components with peak efficiency $\geq 97\%$
- $<7.5\text{W}$ standby power consumption minimizes idle power usage
- EMC Class B compliance streamlines charger design



More Reliable

- 60+ protection and alarm functions for better overall safety
- Module in-position detection enhances reliability
- Integrated battery reverse-current and discharge protection circuits
- Automotive-grade potting for durability in harsh environment



More Compatible

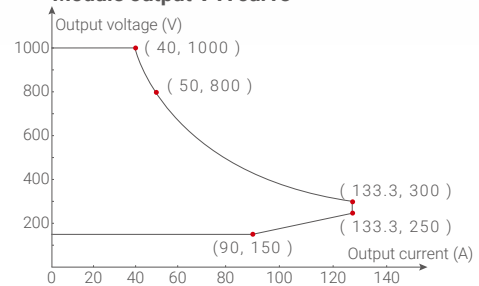
- 150~1000V ultra-wide output range supports a wide range of EVs
- 300~1000V ultra-wide constant power output boosts profitability
- $-40\sim 75^{\circ}\text{C}$ working temperature, ideal for Scandinavia and the Middle East
- Compliant with IEC 61851-23:2023 standards



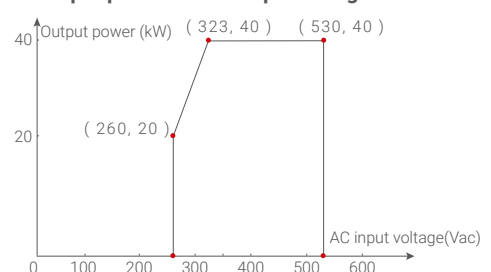
More Intelligent

- DSP digital control for faster voltage/current regulation
- Four-dimensional fan with smart speed control minimizes noise
- Three silent modes, minimum $\leq 55\text{dB}$
- Hot-swappable module design simplifies maintenance

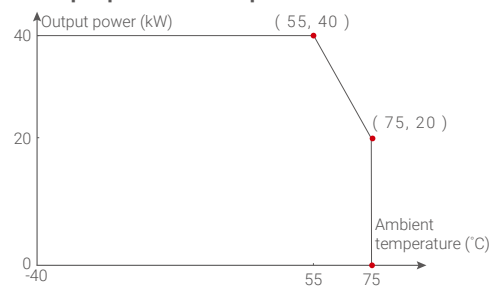
Module output V-A curve



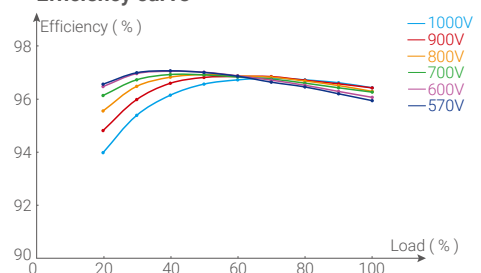
Output power and AC input voltage curve



Output power and temperature curve



Efficiency curve



Technical Specification

Technical parameters		EV3102-040K-HR (UC)
AC INPUT	AC input voltage range	260~530Vac (3W+PE)
	Max. input current	75A
	Frequency range	45~66Hz
	PF	≥0.99
	THDi	≤5%
DC OUTPUT	Peak efficiency	≥97%
	DC output voltage range	150~1000V DC
	Constant power output voltage range	300~1000V DC
	Output power	40kW
	Max. output current	133.3A
OTHER INFORMATION	Stand-by power consumption	≤7.5W
	Noise level	<65dB (Rated)
	Current regulation accuracy	≤±1%
	Voltage regulation accuracy	≤±0.5%
	Output voltage error	≤±0.5%
	Output current error	≤±0.3A, load current less than 30A; ≤±1%, load current no less than 30A, load current within 20%~100%
	Starting impulse current	<110%
	Temperature coefficient	≤±0.02% (Reference value +20°C)
	Uniform flow unbalance	≤±3.0% (≥20A) with load within the range of 50%~100%
	Output voltage ripple	Ripple voltage peak coefficient <1% Effective value coefficient <0.5%
	Dimension (W×D×H)	300×462×86mm
	Weight	≤17.5kg
	Input standby reactive power	750Var
	EMC	Class B
CONFIGURATION AND PROTECTION	Operation indicator	LED: Power,alarm,fault; Nixie Tube: Display output voltage, current, ID code and error code, etc.
	Communication	500kbit/s (125/250/500 kbit/s Baud rate can be set)
	AC input three phase unbalance protection	Yes
	AC input over/under voltage protection	Yes
	DC output over/under voltage protection	Yes
	Over-temperature protection	Protect on temperature over 75°C, and automatically recover when ≤70°C
	Output current limit protection	Yes
	Short-circuit protection	Yes
WORKING ENVIRONMENT	Altitude	≤2,000m (derate when altitude >2,000m)
	Working temperature	-40~75°C, derating output for temperature above 55 °C
	Storage temperature	-40~75°C
	Humidity	5%-95% (non-condensing)