EV3102-040K-HR3 Liquid-Cooling Power Module

EV3102-040K-HR3

More Efficient

- SiC components with peak efficiency ≥ 97%
- Built-in AC contactor for zero standby power consumption

More Reliable

- IP65 protection for reliability in all environments
- Automotive-grade manufacturing for durability and longer life
- Anti-condensation design for safer use
- 60+ protection & alarm functions for enhanced safety
- 0dB noise operation for silent performance

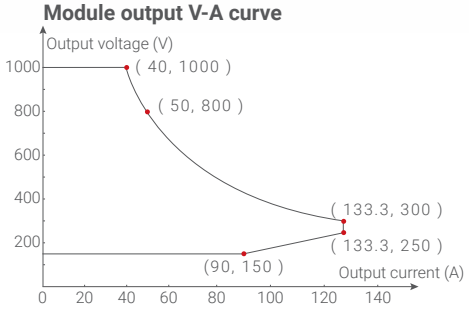
More Compatible

- 150~1000V ultra-wide output range supports a wide range of EVs
- 300~1000V ultra-wide constant power output boosts profitability
- -40~75°C working temperature, ideal for Scandinavia and the Middle East
- EMC Class B compliance streamlines charger design

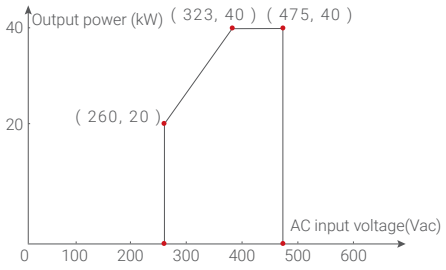
More Intelligent &convenient

- Water-electrical separation design with two-way cut-off interface for easy maintenance
- DSP digital control for fast voltage/current regulation and intuitive operation
- <1s high/low voltage switching for versatile battery charging
- Hot-swappable module design for simplified maintenance
- Supports OTA remote upgrades

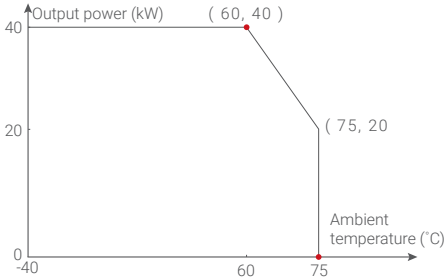
Module output V-A curve



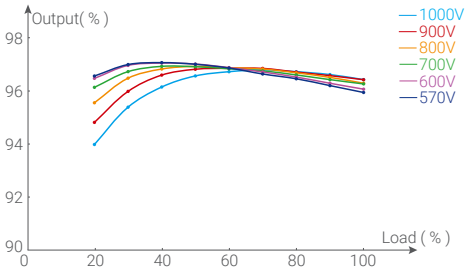
Output power and AC input voltage curve



Output power and temperture curve



Output efficiency curve



Technical Specification

Technical parameters		EV3102-040K-HR3
AC INPUT	AC input voltage range	260~475Vac（3W+PE)
	Max. input current	75A
	Frequency range	45~66Hz
	PF	≥0.99
	THDi	≤5%
DC OUTPUT	Peak efficiency	≥97%
	DC output voltage	150~1000V DC
	Constant power output voltage range	300~1000V DC
	Output power	40kW
	Max. output current	133.3A
PROTOTHER INFORMATION ECTION	Stand-by power consumption	0W
	Noise level	0dB
	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)
	Current 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%
	Boot time	<3s
	Dimension(W×D×H)	300×462×120 mm
	Weight	≤30kg
	Input standby reactive power	0Var
	EMC	Class B
	Coolant	5:5 A mixture of ethylene glycol and water
	Coolant flow rate	6L/min, ≤5 bar @25°C
	Coolant capacity	≤1L
CONFIGURATION AND PROTECTION	Operation indicator	Power, alarm, fault Nixie Tube: Display output voltage, current, ID code and error code, etc.
	Communication	CAN (500kbps) + Digital enable signal
	AC input three phase unbalance protection	Yes
	AC input over/under voltage protection	Yes
	DC output over/under voltage protection	Yes
	Over-temperature protection	Startup protection when the liquid temperature is >75°C; automatic recovery when ≤70°C;
	Output current limit protection	Yes
	Short-circuit protection	Yes
WORKING ENVIRONMENT	Altitude	≤2,000m
	Working temperature	-40~75°C (derating output for temperature above 60°C)
	Storage temperature	-40~80°C
	Relative Humidity	5%~95%