

40kW VPFC SiC Power Module

EV3102-040K-HR-VPFC(UC)



More Efficient

- SiC components with peak efficiency $\geq 97\%$
- Built-in AC contactor for ultimate energy savings, 0W standby power consumption
- Input power factor adjustment: 0.9C10.9L, VDE compliant
- Max. compensable reactive power up to 20kVar



More Reliable

- 60+ protection & alarm functions for enhanced safety
- In-position detection for improved reliability
- Integrated anti-reflux and discharge protection circuits
- Automotive-grade manufacturing, built to withstand harsh environments and extend lifespan



More Compatible

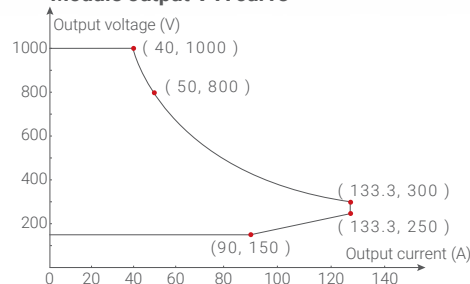
- 150~1000V ultra-wide output range supports a wide range of
- 300~1000V ultra-wide constant power output boosts profitability
- -40~75°C working temperature
- EMC Class B compliance streamlines charger design



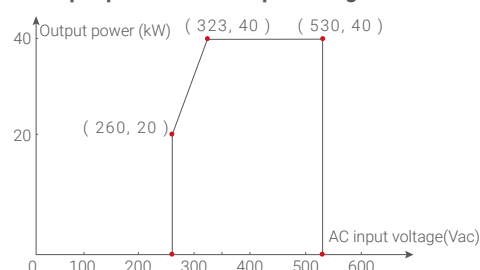
More Intelligent & convenient

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

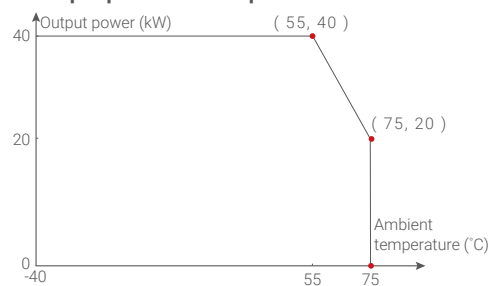
Module output V-A curve



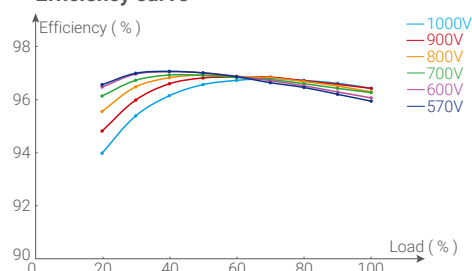
Output power and AC input voltage curve



Output power and temperature curve



Efficiency curve



Technical Specification

Technical parameters		EV3102-040K-HR-VPFC(UC)
AC INPUT	AC input voltage range	260VAC~530VAC
	Frequency range	45~66 Hz
	PF	0.9C~1~0.9L
	Compensatable reactive power	20kVar
	THDi	≤5%
DC OUTPUT	Peak efficiency	≥97%
	DC output voltage	150~1000V DC
	Output power	40kW
	Max. output current	133.3A
PROTOTHER INFORMATION ECTION	Noise level	65dB(1 m from the device)
	Current regulation accuracy	≤±1%
	Voltage regulation accuracy	≤±0.5%
	Starting impulse current	≤110%
	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
	DimensionW×D×H	300×462×86 mm
	Weight	≤17.5kg
	EMC	Class B
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 55°C
	Storage temperature	-40~75°C
	Relative Humidity	5%~95%