SOLUM
EV Power

30kW EV Charging Module

SE03P1KUFC/NHK

Next Generation Power Module for Electric Vehicle Fast Charger

For more inquiries,
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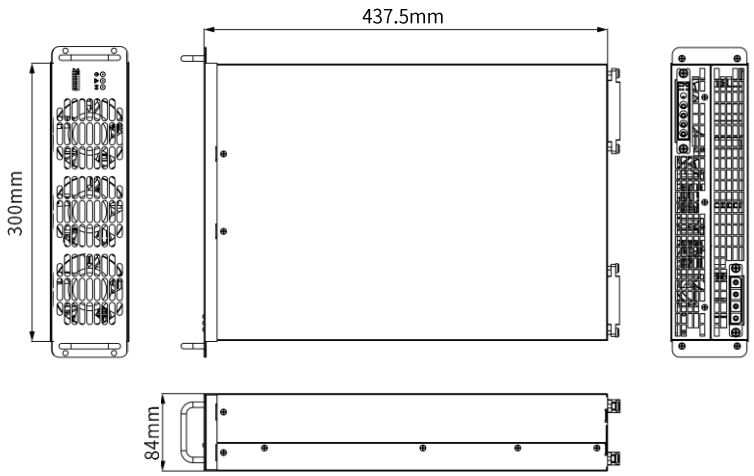
Product Description

SE03P1KUFC/NHK is an Ultra high-performance 30kW power module for EV chargers with advanced features. It has a compact design and high power density with a wide output voltage range and minimal ripple. It is equipped with various protection and alarm functions for safe and reliable operation.

Key Features

- Ultra-high efficiency > 96.5%, rated efficiency> 95.5%@1000V, 30A
- Compatible with the CCS Standard
- Compact Form Factor (W*H*D): 300mm*84mm*437.5mm
- Ultra-high-power density: up to 44.6W/in^3
- Ultra-wide output voltage range: from 150VDC ~ 1000VDC
- Ultra-small output ripple voltage, peak-to-peak ripple = 2V
- Ultra-small standby power consumption: ~10W
- Complete protection and alarm features: input over/under voltage protection, output over voltage protection, over current protection, over-temperature protection, output under-voltage alarm, output short circuit protection, and fan failure alarm
- RGB LED for operation information
- CAN Bus communications with RJ45 : Easy to connect communication line through RJ45 connector and Tx/Rx can be checked with LED
- Group/module individual ID can be set (group 8, individual 32, total 256 can be connected)
- DSP digital control and supports voltage and current adjustments
- Built-in anti-battery reverse current protection circuit that supports Hot-Swapping
- Selectable fixed identification and verification of new addresses
- Reliability secured by not using a relay for the output voltage stage
- High life-time and high ripple current capacitor

Dimensions

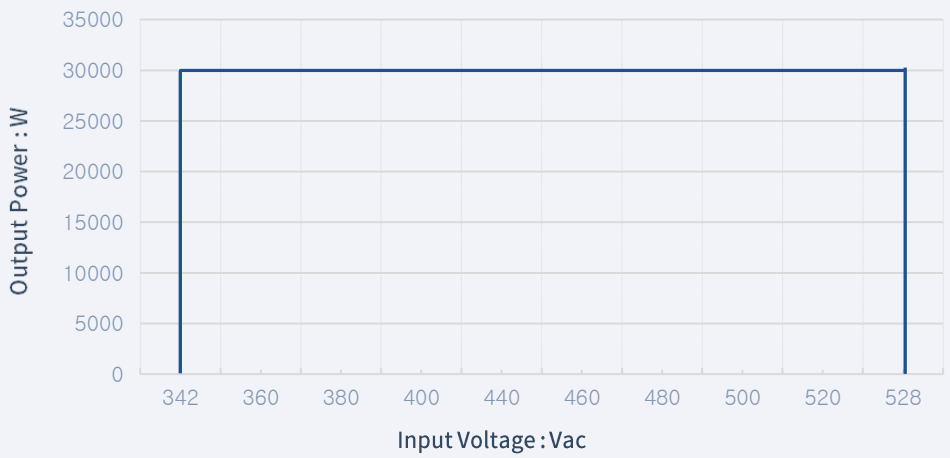


Product Specifications (Preliminary)

DC Output	Output	1000V/30A
	Output rated power	30KW
	Output voltage range	150~1000V
	Output current range	0~100A
	Output overvoltage protection	1010±5V
	Output undervoltage alarm	140V±5V
	Short circuit protection	In event of a short circuit, module can automatically restore.
	Output voltage tolerance	≤±0.5%
	Max. startup overshoot	≤±1%
	Boot time	Start time 3s≤t≤8s
	Efficiency	Highest efficiency>96.5%, rated efficiency>95.5%@1000V, 30A
AC Input	Input voltage	380 / 400 / 480VAC (Nominal)
	Input frequency	50Hz / 60Hz
	Number of phases	Three-phase + Protected earth wire
	Power factor	Rated output load PF≥0.99
	THD	≤5%
	Max. input current	58A (For UL/cUL 49A max)
	Input undervoltage protection	318V ±5V
	Input overvoltage protection	535V ±5V
	Input power limit	Input voltage Vin is 320V ±5V, output power is derated linearly to 66%
Communication & Alarm	Communication	CAN
	Max. No. of parallel machines	Group 8ea, individual 32ea Total 256ea
	Alarm and status	Report to monitor via CAN bus and LED
Operating Environment	Operating temperature	From -40°C to 70°C
	Over temperature protection	On temperature >70°C±5°C or <-40°C±5°C, module will shut down automatically
	Storage temperature	From -40°C to 85°C
	Humidity	≤95% without condensation
	Pressure/Altitude	79kPa~106kPa, <3000m
Certification	EMI	IEC/EN 61851-21-2
	Safety	EN 61851-1, EN 61851-23, UL2202, CSA C22.2 NO.1701-16
Physical Characteristics	Noise	<67dB
	Cooling method	Fan cooling
	Weight	<16Kg
	Dimensions (W*H*D)	300mm * 84mm * 437.5mm

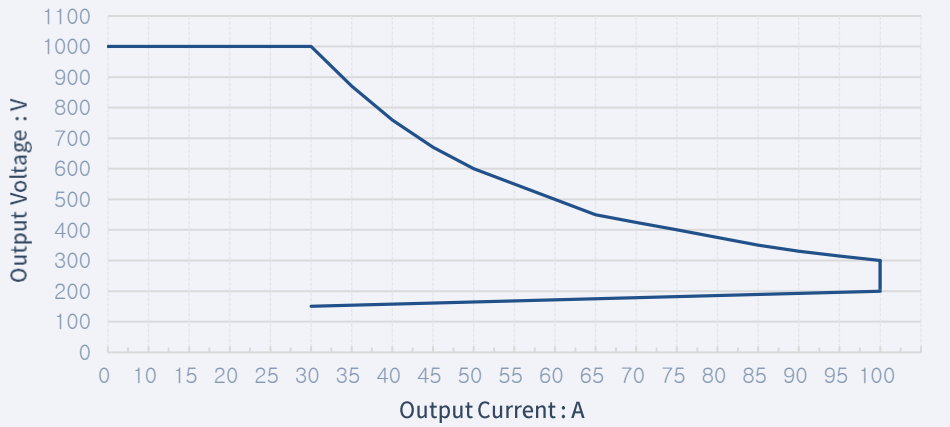
Input Characteristics

Output power VS Input voltage



Output Characteristics

Output voltage VS Output current



Temperature Limited Power Characteristics

Output power VS Ambient temperature