Specification for SK signet

SE03P1KUFC/NHK

30kW EV Charging Module

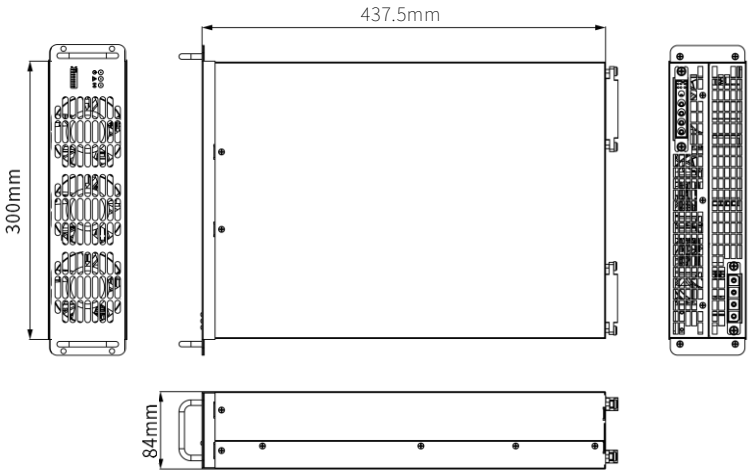
Product Description

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

- Highest efficiency>96.4%, @600V/20A
  rated efficiency>95.2%@1000Vdc/30A
  Over 40% Load efficiency>94%@300~1000Vdc
  Under 40% Load efficiency>92%@300~1000Vdc
  Min. efficiency>89%@150Vdc~200Vdc
- Over 40% Load PF≥0.99@300~1000Vdc
  Min. PF≥0.82
- 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: ~17W
- 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
- Selectable fixed identification and verification of new addresses
- High life-time and high ripple current capacitor

Dimensions

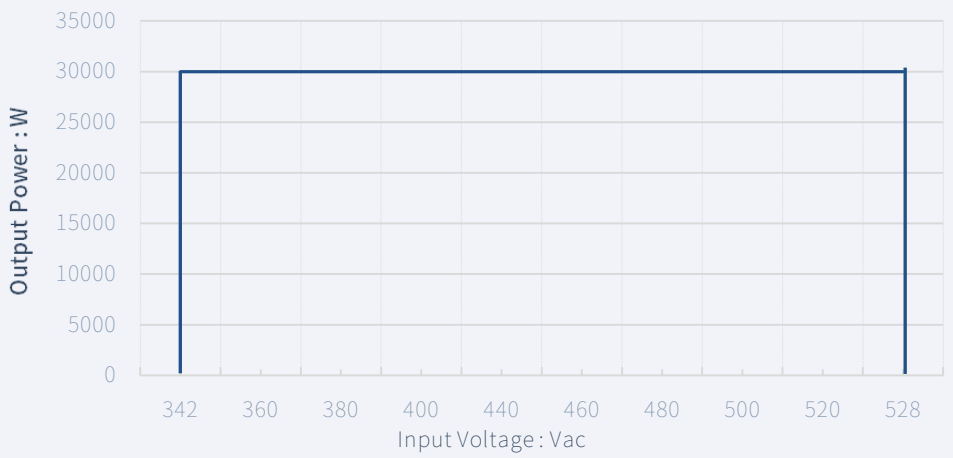


Product Specifications (Preliminary)

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	130V±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 Max 2s
	Efficiency	Highest efficiency>96.4%, @600V/20A rated efficiency>95.2%@1000Vdc/30A Over 40% Load efficiency>94%@300~1000Vdc Under 40% Load efficiency>92%@300~1000Vdc Min. efficiency>89%@150Vdc~200Vdc
AC Input	Input voltage	380 / 400 / 480VAC (Nominal)
	Input frequency	50Hz / 60Hz
	Number of phases	Three-phase + Protected earth wire
	Power factor	Over 40% Load PF≥0.99@300~1000Vdc Min. PF≥0.82
	THD	≤5%@ over 15kW, 380Vac
	Max. input current	58A (For UL/cUL 49A max)
	Input undervoltage protection	318V ±5V
	Input overvoltage protection	535V ±5V
Communication & Alarm	Communication	CAN (125kbps)
	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, KS C 9610-6-4 : 2022
	Safety	EN 61851-1, EN 61851-23, UL2202, CSA C22.2 NO. 346:22
Physical Characteristics	Noise	<55dB @1.5M, Low Speed Mode
	Cooling method	Fan cooling
	Weight	<16Kg
	Dimensions (W*H*D)	300mm * 84mm * 437.5mm

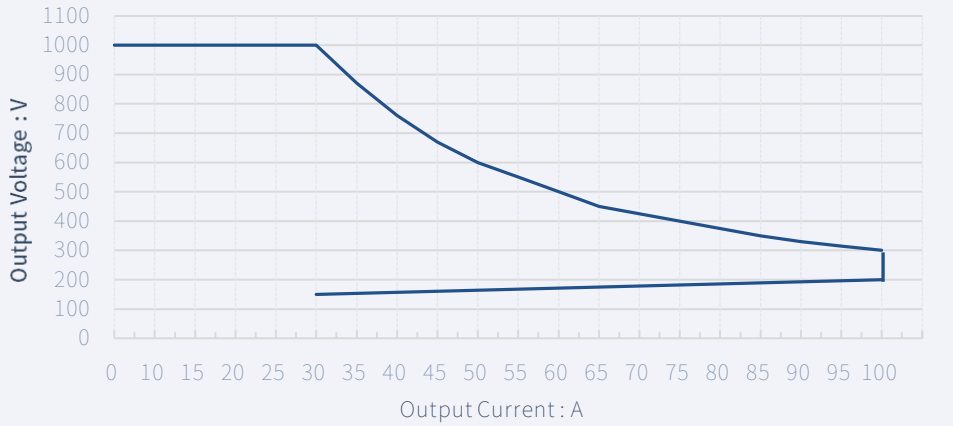
Input Characteristics

Output power VS Input voltage



Output Characteristics

Output voltage VS Output current



Temperature Limited Power Characteristics

Output power VS Ambient temperature