



50kW EV Charging Module SE05Q1KUFA/WCT

Next Generation Power Module for
Electric Vehicle Fast Charger

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Product Description

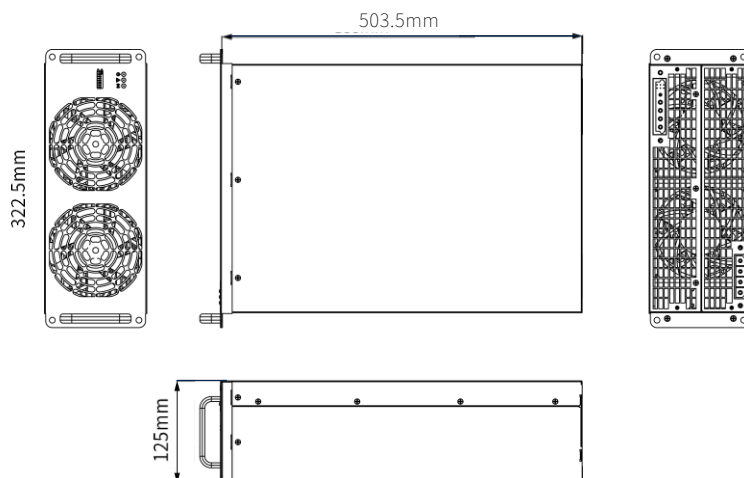
SE05Q1KUFA/WCT is an Ultra high-performance 50kW power module for EV chargers with advanced features. It has a compact design and high power density with a wide output voltage range and minimal ripple. It is equipped with various protection and alarm functions for safe and reliable operation.



Key Features

- Ultra-high efficiency > 97%,
rated efficiency > 95.7% @ 1000V, 50A
- Compatible with the CCS Standard
- Compact Form Factor (W*H*D):
322.5mm*125mm*503.5mm
- Ultra-high-power density:
up to 40.36W/in³
- Ultra-wide output voltage range:
from 200VDC ~ 1000VDC
- Ultra-small output ripple voltage, peak-to-peak ripple = 2V
- Ultra-small standby power consumption:
~16W
- 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
- CAN Bus speed : 500kbps
- Group/module individual ID can be set
(group 7, individual 14, total 98 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
- Easy F/W update via OTA (Over-the-air)
system

Dimensions

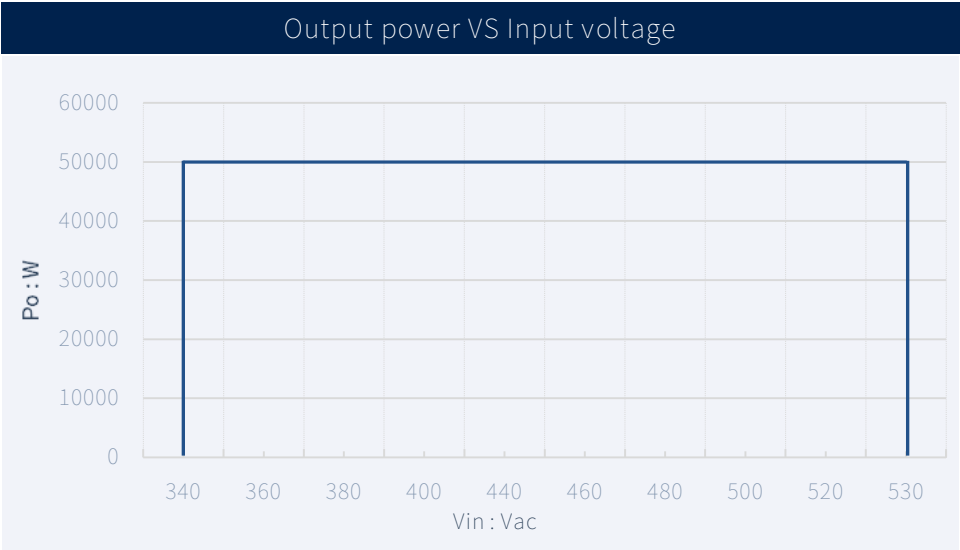


Product Specifications (Preliminary)

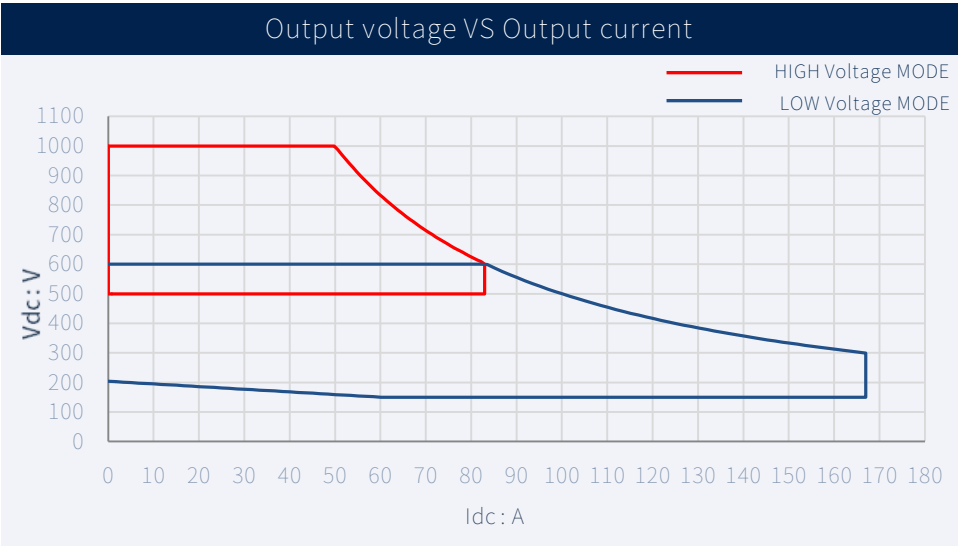
DC Output	Output	1000V/50A
	Output rated power	50KW
	Output voltage range ¹⁾	200~1000V
	Output current range	0~167A
	Output overvoltage protection	1010±5V
	Output undervoltage alarm	140V±5V
	Short circuit protection	In event of a short circuit, module can automatically restore.
	Output voltage tolerance	≤±0.5%
	Max. startup overshoot	≤±1%
	Boot time	Start time Max 2s
AC Input	Efficiency	Highest efficiency>97.0%, rated efficiency>95.7%@1000V, 50A
	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	<89A
	Input undervoltage protection	340V±5V
Communication & Alarm	Input overvoltage protection	535V±5V
	Communication	CAN (500kbps)
	Max. No. of parallel machines	Group 7ea, individual 14ea Total 98ea
Operating Environment	Alarm and status	Report to monitor via CAN bus and LED
	Operating temperature	From -40°C to 75°C
	Over temperature protection	On temperature>75°C±3°C or <-40°C±3°C, module will shut down automatically
	Storage temperature	From -40°C to 85°C
	Humidity	≤95% without condensation
Certification	Pressure / Altitude	70kPa~106kPa / ≤3000m
	EMI	IEC/EN 61851-21-2, Class B
	Safety	EN 61851-1, EN 61851-23, UL2202, CSA C22.2 NO. 346:22
Physical Characteristics	Noise	<59dB@Low speed mode
	Cooling method	Fan cooling
	Weight	<30Kg
	Dimensions (W*H*D)	322.5mm * 125mm * 503.5mm

¹⁾ Working output current is from 60A to 167A at 150V of output voltage.

Input
Characteristics



Output
Characteristics



Temperature
Limited
Power
Characteristics

