

SUNSYS C-Cab L

Native Outdoor Bidirectional Power Converter

50 to 900 kVA



The solution for

- > Building
- > Energy

Strong points

- > Highly modular
- > Easy to install
- > Maximum availability
- > Intelligent cabinet

Conformity to standards

- > UL 1741 SA
- > UL9540-2020
- > IEEE 1547-2018
- > California Rule 21
- > FCC Part 15

Approvals and certifications

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SUNSYS C-Cab L is a bidirectional power conversion cabinet that can be used to charge and discharge batteries for a variety of energy storage applications, such as demand charge management in C&I buildings, for example.

SUNSYS C-Cab L includes integrated DC/AC converters which provide protection. The solution can be delivered with multi-source piloting automation that can be easily interfaced with batteries, EMS, renewable sources and diesel generators.

A dedicated SUNSYS C-Cab L Marine version also exists to adapt salt environments.

Highly modular

- Based on 50 kVA power conversion modules, the C-Cab L is an extremely modular power converter. This modularity enables both vertical paralleling, to reach 300 kVA (up to 6 modules) per machine, and horizontal paralleling to reach 900 kVA (up to 3 machine in parallel).

Easy to install

- Native outdoor, the C-Cab L provides direct connection of up to 600 kVA and 6 battery racks without any additional combiner cabinet.

Maximum availability

- The C-Cab L hot-swappable modules enable fast and safe maintenance operations while retaining service continuity.

Intelligent cabinet

- A version of C-Cab L is available with a Power Management System that supports battery management and provides several services for on and off grid applications. This PMS includes a SunSpec compliant interface, providing compatibility with several battery brands. In addition, there are IoT features enabling remote monitoring and diagnostics.

Technical data

SUNSYS C-Cab L							
Model		50 kVA	100 kVA	150 kVA	200 kVA	250 kVA	300kVA
Power modularity		50 kVA (from 1 to 6 hot-swappable plug-in modules per rack -up to 3 racks)					
Topology		DC/AC single conversion					
Max efficiency	Discharging	96.8 %	97.6 %	97.8 %	97.9 %	97.9 %	97.9 %
	Charging	96.6 %	97.4 %	97.6 %	97.7 %	97.7 %	97.7 %
DC SECTION							
Battery voltage		570 to 860 VDC					
Maximum discharging current		87 A	174 A	261 A	348 A	435 A	522 A
Maximum charging current		82 A	165 A	248 A	330 A	413 A	495 A
DC connections		up to 2x185 mm² (350MCM) - 3x150 mm² (300MCM) or 6x50 mm² (1/0AWG)					
AC SECTION							
Rated power		50 kW	100 kW	150 kW	200 kW	250 kW	300 kW
Rated apparent power		50 kVA	100 kVA	150 kVA	200 kVA	250 kVA	300 kVA
Max continuous unbalanced load (difference between max phase load and min phase load)		16.7 kW	33.3 kW	50 kW	50 kW	50 kW	50 kW
On-Grid overload		110 % - 60 minutes*					
Off-Grid overload (symmetrical or asymmetrical)		110 % - 60 minutes, 125 % - 20 minutes, 150 % - 60 seconds¹					
Rated voltage (Un)		480 VAC (3ph+N)					
Voltage tolerance		80% Un to 120% Un					
Rated frequency		60 Hz					
Frequency range		55 to 65 Hz					
Rated current (In)		60 A	120 A	180 A	241 A	301 A	361 A
Maximum current		90 A	180 A	271 A	361 A	451 A	541 A
THDi		<3%					
THDv		<1.5%					
Output power factor rating		-1.00 to +1.00					
Response time		< 50 ms, from 0 to 90% P/Q					
AC connections		up to 2x185 mm² (350MCM) - 3x150 mm² (300MCM) or 4x95 mm² (3/0AWG)					
ENVIRONMENT							
Environment installation		Outdoor					
Degree of protection		IP 55 / NEMA 3R					
Operation temperature		-20 to +45 °C / -4 to +113 °F without derating					
		45 to +50 °C / 113 to 122 °F with derating					
Storage temperature		-20 to +60 C° / -4 to +140°F					
Relative humidity		4 to 100% non-condensing					
Acoustic level at 1 m		64.8 dB					
Maximum altitude		1000 m / 3280 ft.without derating					
Cooling system		Air forced, smart cooling/heating					
DIMENSIONS AND WEIGHT							
Width x Depth x Height		1000 x 1354 x 2150 mm / 39.4 x 53.3 x 84.6 in.					
Module weight		22.5 kg / 49.6 lbs					
Cabinet weight (without modules)		990 kg max. / 2182.6 lbs					

(1) Ambient temperature dependent