

# 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

| <b>SUNSYS C-Cab L</b>   |             |  |         |         |         |         |         |
|---|-------------|--|---------|---------|---------|---------|---------|
| 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 %  |
| <b>DC SECTION</b>   |             |  |         |         |         |         |         |
| 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 mm <sup>2</sup> (350MCM) - 3x150 mm <sup>2</sup> (300MCM) or 6x50 mm <sup>2</sup> (1/0AWG) |         |         |         |         |         |
| <b>AC SECTION</b>   |             |  |         |         |         |         |         |
| 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 seconds <sup>1</sup>                                |         |         |         |         |         |
| 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 mm <sup>2</sup> (350MCM) - 3x150 mm <sup>2</sup> (300MCM) or 4x95 mm <sup>2</sup> (3/0AWG) |         |         |         |         |         |
| <b>ENVIRONMENT</b>  |             |  |         |         |         |         |         |
| 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  |         |         |         |         |         |
| <b>DIMENSIONS AND WEIGHT</b>  |             |  |         |         |         |         |         |
| 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