

123-SG-4D41

Solar Generator
solar.123e.com/123-SG-4D41



10 kW of silent solar power: ten panels over a 21.2 kWh lithium bank, no engine.



OVERVIEW

123-SG-4D41 is a 10 kW solar generator with no engine: ten 460 W panels, a 21.2 kWh lithium iron phosphate bank in four arrays, and an inverter rated 10 kW continuous, all on a two-axle trailer. It is built for sites where noise, exhaust and fuel deliveries are not welcome, and for loads that work by day and ease off at night.

The inverter sets the 10 kW continuous rating and delivers 120/240 V or 120/208 V at 50/60 Hz, with a 5 ms transfer and 97.6% conversion efficiency. It surges to 24 kW for 10 seconds, enough to start compressors and pumps. The bank is programmed to deliver up to 9.62 kW, so at sustained full output it is the battery, not the inverter, that sets the pace.

The 4.6 kW array harvests 19.8 kWh on an average day, and below 0.82 kW the sun carries the load indefinitely. Above that the bank does the work: 10.6 kWh usable at the standard 50% setting, which carries 6.21 hours at 1.67 kW or 3.1 hours at 3.33 kW with no sun at all, and 14.84 kWh if it is programmed to the 30% option.

The inverter takes the array directly, so there is no separate charge controller to fit or to fail. That makes the 123-SG-4D41 a fit for camera, lighting and communications masts, and for site offices that run hard by day and idle by night, moved and set up with one tow.

FEATURES AND BENEFITS

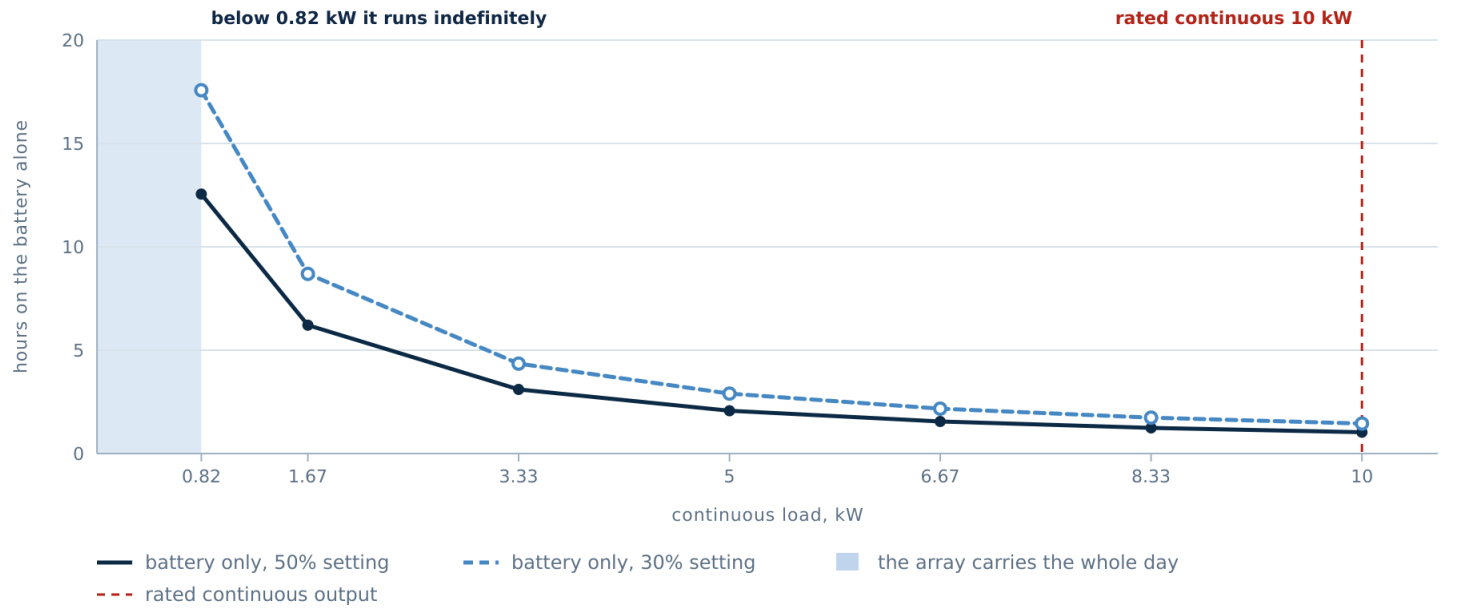
- **Inverter rated 10 kW continuous, 120/240 V or 120/208 V** — Site equipment plugs in as it would on the grid, and electronics ride through a change of source.
- **24 kW surge for 10 seconds** — Motor loads start without tripping the supply or oversizing the machine.
- **21.2 kWh lithium iron phosphate bank in four 5.3 kWh arrays** — Nights and overcast days pass silently, with no fuel, no exhaust and no engine service.
- **Ten 460 W panels, 4.6 kW nameplate** — Cameras, lighting and radios keep running without a fuel run or a site visit.
- **Array wired straight into the inverter, 97.6% conversion efficiency** — Fewer parts to fail at a remote site, and less to service.

KEY SPECIFICATIONS

POWER	
Rated continuous output	10 kW
Peak output	10 kW
Surge	24 kW
Output voltage and phase	120/240 V or 120/208 V
Output frequency	50 / 60 Hz
Transfer time	5 ms
ENERGY STORAGE	
Battery technology	Lithium iron phosphate (LFP)
Arrays installed	4
Total stored energy	21.2 kWh
Usable stored energy at 50%	10.6 kWh
Silent runtime at 5 kW	2.1 hours
SOLAR	
Array rated power	4.6 kW
Solar panels	10 x 460 W
Daily solar production	19.8 kWh/day
Load covered by solar alone	0.82 kW
MECHANICAL AND SITE	
Trailer	2-axle, towable
Ambient operating range	+14 to +131 °F (-10 to +55 °C)

PERFORMANCE ACROSS THE LOAD RANGE

How long the battery carries the load on its own. Below 0.82 kW the array carries the whole day and the machine runs indefinitely. Above it, these are the hours the bank lasts with no sun and nothing charging, at the standard 50% setting and at the 30% setting.



LOAD, CONTINUOUS	BATTERY ONLY	DAILY DRAW	AFTER SOLAR	DAYS OF AUTONOMY
0.82 kW · solar break-even	12.55 h	19.8 kWh	covered	indefinite
1.67 kW	6.21 h	40 kWh	20.2 kWh	0.51 days
3.33 kW	3.1 h	80 kWh	60.2 kWh	0.17 days
5 kW	2.07 h	120 kWh	100.2 kWh	0.1 days
6.67 kW	1.55 h	160 kWh	140.2 kWh	0.07 days
8.33 kW	1.24 h	200 kWh	180.2 kWh	0.06 days
10 kW	1.03 h	240 kWh	220.2 kWh	0.05 days

Every load runs continuously and the day is 24 hours: daily draw is the load × 24 h. Solar is a daily energy offset, not an instantaneous power match.