

123-SG-7S42

Solar Generator
solar.123e.com/123-SG-7S42



12 kW from sixteen panels: 31.6 kWh of sun a day, and no engine to fuel.



Sixteen panels folded into a triple-axle trailer, arriving on a desert site with no grid.



OVERVIEW

123-SG-7S42 carries the full sixteen-panel array — sixteen 460 W panels, 7.36 kW — over a deliberately lean 15.2 kWh lithium iron phosphate bank, on a triple-axle trailer. It is built for work that happens in daylight: the array feeds the load as it harvests, and the bank bridges clouds, the evening and the first hours of the morning.

On an average day the array brings in 31.6 kWh, and below 1.32 kW the sun carries the site indefinitely with nothing to fuel. The 12 kW inverter sets the continuous rating, surges to 24 kW for 10 seconds and holds 13 kW for 30 minutes for motor starts, and delivers 120/240 V or 120/208 V at 50/60 Hz with a 5 ms transfer.

With no sun, the bank carries 5.56 hours at 1.32 kW and 3.67 hours at 2 kW, with 7.6 kWh usable at the standard 50% reserve and 10.64 kWh at the 30% setting.

Choose it where the load follows the sun — daytime construction, events, agricultural pumping — and harvest matters more than storage. Where the load runs through the night, 123-SG-7S82 carries the same array over twice the bank.

FEATURES AND BENEFITS

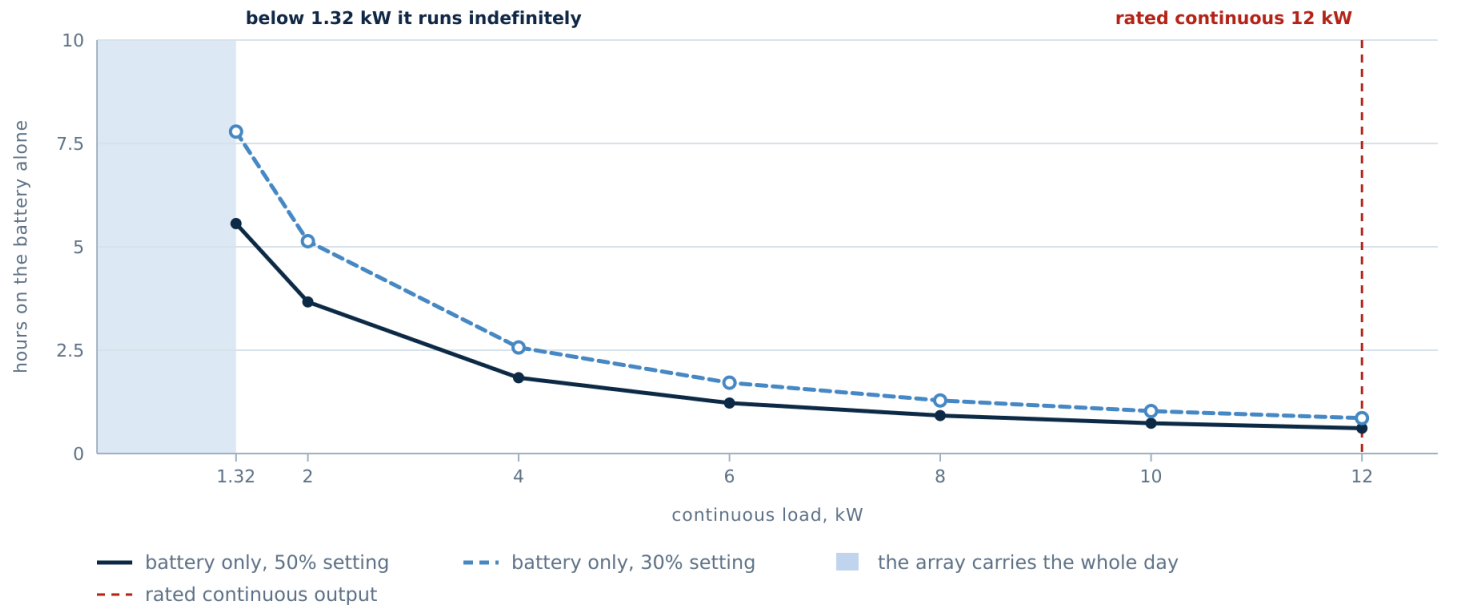
- **Sixteen 460 W panels, 7.36 kW** — Daytime work runs on sunlight, not on fuel.
- **A lean 15.2 kWh lithium iron phosphate bank** — The array does the heavy lifting; the bank covers the gaps.
- **12 kW inverter, 24 kW surge for 10 seconds** — One machine for tools, lighting and motor loads.
- **A folding array on a triple-axle trailer** — Moves between sites with one tow.

KEY SPECIFICATIONS

POWER	
Rated continuous output	12 kW
Peak output	12 kW
Surge	24 kW
Surge, 30 minutes	13 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	15.2 kWh
Usable stored energy at 50%	7.6 kWh
Silent runtime at 6 kW	1.2 hours
SOLAR	
Array rated power	7.36 kW
Solar panels	16 x 460 W
Daily solar production	31.6 kWh/day
Load covered by solar alone	1.32 kW
MECHANICAL AND SITE	
Trailer	3-axle, towable
Ambient operating range	-4 to 140 °F (-20 to 60 °C)

PERFORMANCE ACROSS THE LOAD RANGE

How long the battery carries the load on its own. Below 1.32 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
1.32 kW · solar break-even	5.56 h	31.6 kWh	covered	indefinite
2 kW	3.67 h	48 kWh	16.4 kWh	0.45 days
4 kW	1.83 h	96 kWh	64.4 kWh	0.11 days
6 kW	1.22 h	144 kWh	112.4 kWh	0.07 days
8 kW	0.92 h	192 kWh	160.4 kWh	0.05 days
10 kW	0.73 h	240 kWh	208.4 kWh	0.04 days
12 kW	0.61 h	288 kWh	256.4 kWh	0.03 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.