

123-SG-7S82

Solar Generator
solar.123e.com/123-SG-7S82



12 kW from sixteen panels and a 30.4 kWh bank: silent power, no engine.



OVERVIEW

123-SG-7S82 is the solar-only flagship: sixteen 460 W panels making 7.36 kW, over a 30.4 kWh lithium iron phosphate bank and a 12 kW inverter, on one triple-axle trailer. No engine, no fuel, no exhaust and no noise — and enough harvest and storage to carry a real site load through the night.

The array brings in 31.6 kWh on an average day. Below 1.32 kW the site runs on the sun indefinitely, and at that load the bank alone carries 11.12 hours with no sun, which covers the night. At 2 kW it carries 7.33 hours; the usable energy is 15.2 kWh at the standard 50% reserve and 21.28 kWh at the 30% setting.

The inverter sets the 12 kW continuous rating, surges to 24 kW for 10 seconds and holds 13 kW for 30 minutes, so motors and compressors start from stored energy. Output is 120/240 V or 120/208 V at 50/60 Hz with a 5 ms transfer, from an inverter rated IP65 / NEMA 3R, for operation from -4 to 140 °F (-20 to 60 °C).

For telecom, monitoring and security sites with a steady load around a kilowatt, this is the machine that removes the fuel run entirely. For heavier steady loads, the same trailer pairs with a standalone diesel as 123-SG-7S82-40.

FEATURES AND BENEFITS

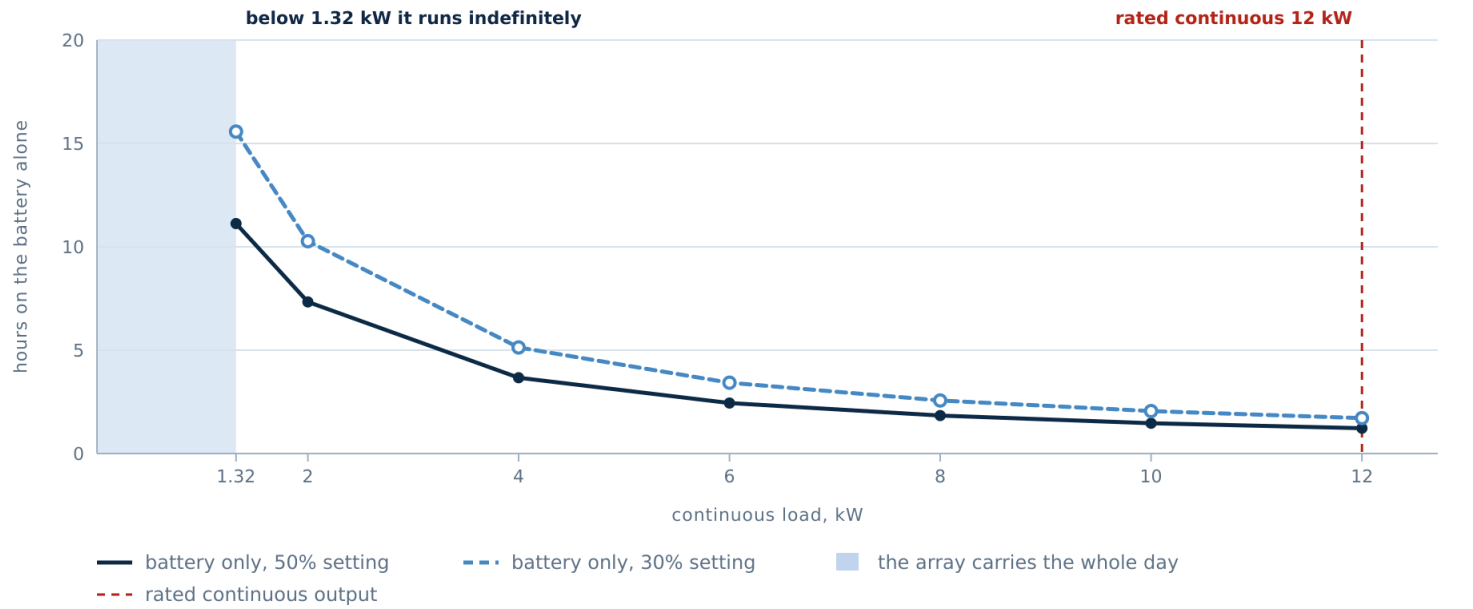
- **Sixteen 460 W panels, 7.36 kW** — Communications and monitoring sites that never need fuel.
- **30.4 kWh lithium iron phosphate bank** — The night is covered from stored sun, with nothing to hear or refuel.
- **12 kW inverter, 24 kW surge for 10 seconds** — Emission-free power for noise- and exhaust-restricted sites.
- **IP65 / NEMA 3R inverter** — Stands outdoors on site through the seasons.

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	8
Total stored energy	30.4 kWh
Usable stored energy at 50%	15.2 kWh
Silent runtime at 6 kW	2.4 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	11.12 h	31.6 kWh	covered	indefinite
2 kW	7.33 h	48 kWh	16.4 kWh	0.9 days
4 kW	3.67 h	96 kWh	64.4 kWh	0.23 days
6 kW	2.44 h	144 kWh	112.4 kWh	0.13 days
8 kW	1.83 h	192 kWh	160.4 kWh	0.09 days
10 kW	1.47 h	240 kWh	208.4 kWh	0.07 days
12 kW	1.22 h	288 kWh	256.4 kWh	0.06 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.