123eSOLAR · INTEGRATED MOBILE POWER

123-SG-4S82

Solar Generator

123esolar.com/123-SG-4S82

12 kW with no engine to fuel: ten panels and 30.4 kWh of lithium storage.

Ten panels stowed on a tandem-axle trailer, ready to tow to a site with no grid.

OVERVIEW

123-SG-4S82 is a 12 kW solar generator with no engine at all: ten panels, a 30.4 kWh lithium iron phosphate bank and a 12 kW inverter on a tandem-axle trailer. It is the machine for sites where noise, exhaust or fuel handling are not acceptable, and for loads that run hard in bursts rather than flat out around the clock.

The inverter sets the 12 kW continuous rating and delivers 120/240 V or 120/208 V at 50/60 Hz, with a 5 ms transfer. It surges to 24 kW for 10 seconds and holds 13 kW for 30 minutes, so compressors, pumps and motor loads start without oversizing the system.

The 4.6 kW array harvests 19.8 kWh on an average day, and below 0.82 kW the sun carries the site indefinitely. Above that the bank does the work: 15.2 kWh usable at the standard 50% reserve and 21.28 kWh at the 30% setting — 7.33 hours at 2 kW, or 3.67 hours at 4 kW, with no sun at all.

That makes it a strong fit for lighting, camera and communications masts, and for job-site offices that work by day and idle by night. For a steady load above the break-even, the same trailer pairs with a standalone diesel as 123-SG-4S82-40.

Every 123eSolar system is SMART enabled: cloud IoT monitoring and control from your phone or desktop, so the site is watched and managed without a trip to it.

FEATURES AND BENEFITS

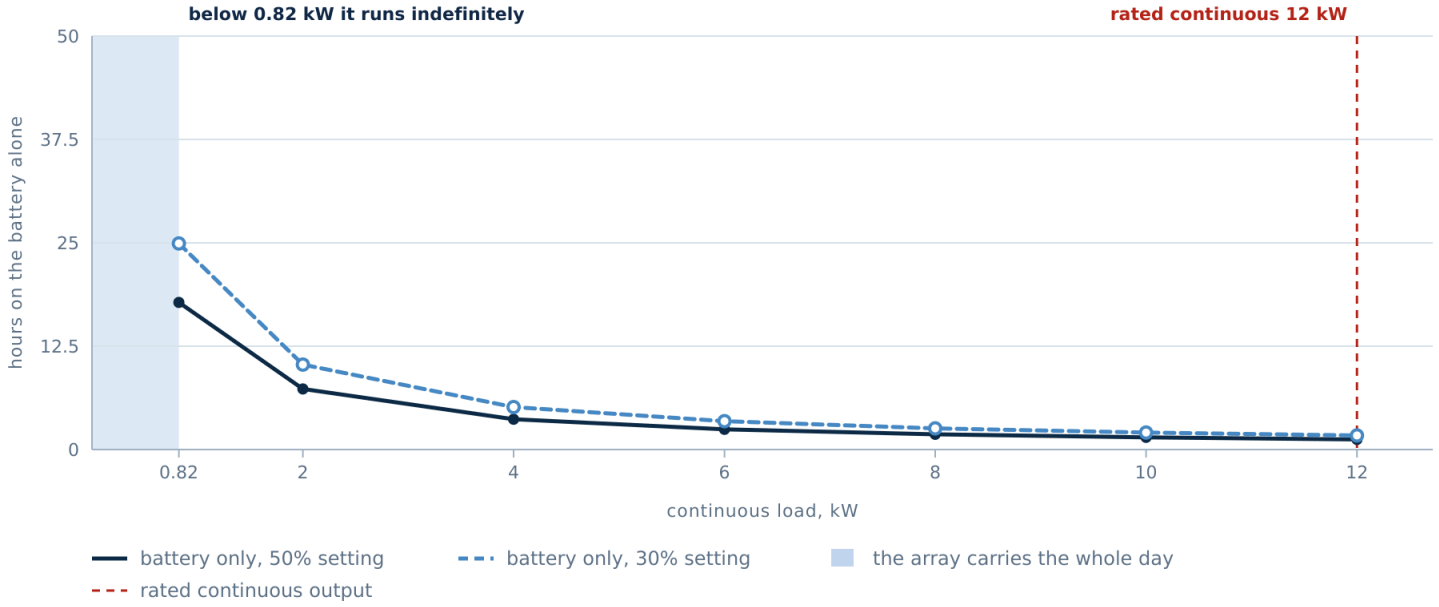
- **12 kW inverter, 120/240 V or 120/208 V** — Electronics ride through a change of source without rebooting.
- **24 kW surge for 10 seconds, 13 kW for 30 minutes** — Motor loads are covered without oversizing the system.
- **30.4 kWh lithium iron phosphate bank** — Silent night-time power with no fuel, no exhaust and no engine service.
- **Ten 460 W panels, 4.6 kW** — Lighting, cameras and communications never need a fuel run.
- **SMART cloud IoT monitoring and control** — The site is watched and managed without a trip to it.

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	**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	**-4 to 140 °F (-20 to 60 °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	**17.8 h**	**19.8 kWh**	**covered**	**indefinite**
2 kW	7.33 h	48 kWh	28.2 kWh	0.52 days
4 kW	3.67 h	96 kWh	76.2 kWh	0.19 days
6 kW	2.44 h	144 kWh	124.2 kWh	0.12 days
8 kW	1.83 h	192 kWh	172.2 kWh	0.09 days
10 kW	1.47 h	240 kWh	220.2 kWh	0.07 days
12 kW	1.22 h	288 kWh	268.2 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.