

123-SG-1A10

Solar Generator
solar.123e.com/123-SG-1A10



2.88 kW of DC power on a single axle: three panels, 9.6 kWh, no engine.



Three panels tilted to the sun on a single-axle trailer: 48 V DC power with no engine to fuel.

OVERVIEW

Most remote telecom and control equipment already runs on 48 V DC, so the most efficient way to power it is not to convert at all. 123-SG-1A10 delivers 48 V DC straight from its battery bank, up to 60 A and 2.88 kW continuous — the charge controller sets that limit — with no inverter in the path to waste energy or to fail.

Three 490 W panels make a 1.47 kW array that harvests 6.3 kWh on an average day. Below 0.26 kW the sun carries the site on its own, indefinitely: radios, sensors, cameras and gateways that draw a few hundred watts never need a fuel delivery.

When the sun is down, the 9.6 kWh sealed gel lead-acid bank carries the load: 10 hours at 0.48 kW, or 3.33 hours at 1.44 kW, with 4.8 kWh usable at the standard 50% reserve and 6.72 kWh at the 30% setting. The bank can discharge up to 5.88 kW for short demands.

It all rides on one single-axle trailer, small enough to tow behind a light pickup and set down at the edge of a road, a well pad or a construction fence line. Size a continuous load at or under the solar break-even and it runs unattended; above it, the table below shows exactly how long the bank lasts.

FEATURES AND BENEFITS

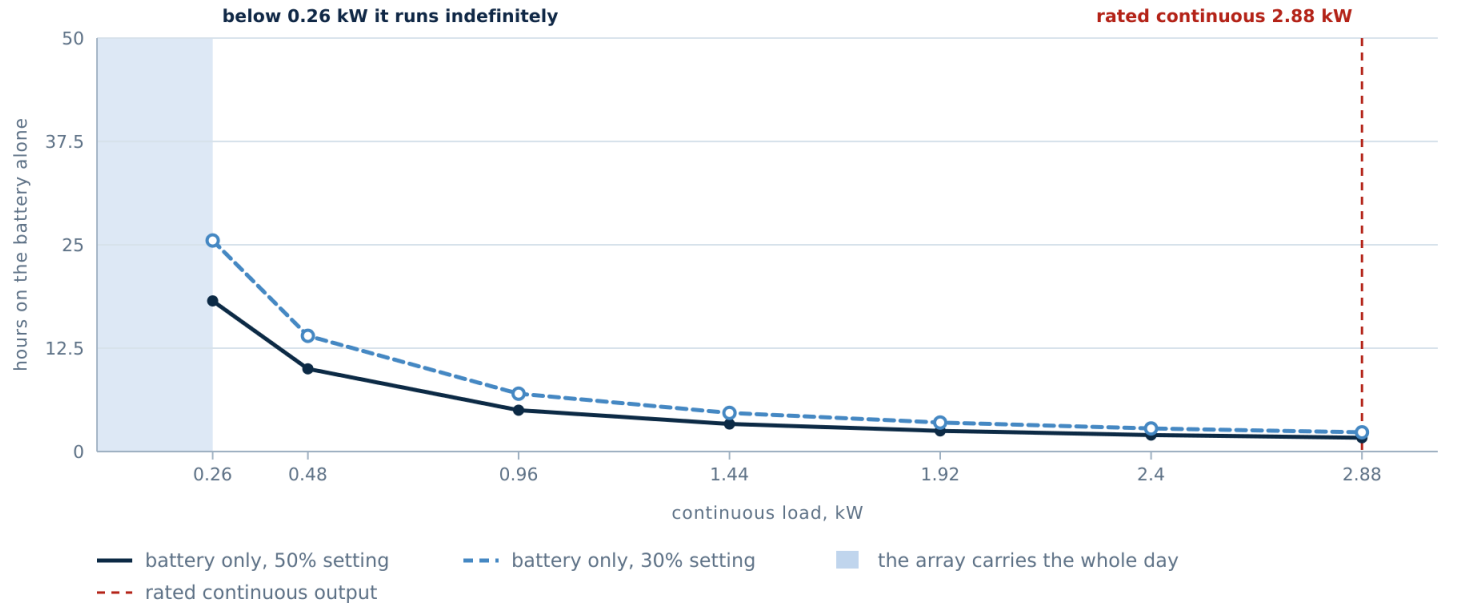
- **48 V DC output, 60 A** — No conversion losses, and one less component to fail at a remote site.
- **Three 490 W panels, 1.47 kW** — Sensors, radios and cameras stay up indefinitely with no fuel run.
- **9.6 kWh sealed gel lead-acid bank** — Nights and overcast days pass without a site visit.
- **Single-axle trailer** — Power where it is needed, without a crane or an installation crew.

KEY SPECIFICATIONS

POWER	
Rated continuous output	2.88 kW
DC output voltage	48 V
DC output current	60 A
Maximum discharge	5.88 kW
ENERGY STORAGE	
Battery technology	Sealed gel lead-acid
Arrays installed	1
Total stored energy	9.6 kWh
Usable stored energy at 50%	4.8 kWh
Usable stored energy at 30%	6.72 kWh
Silent runtime at 1.44 kW	3.3 hours
SOLAR	
Array rated power	1.47 kW
Solar panels	3 x 490 W
Daily solar production	6.3 kWh/day
Maximum PV input	3120 W
Load covered by solar alone	0.26 kW
MECHANICAL AND SITE	
Trailer	1-axle, towable

PERFORMANCE ACROSS THE LOAD RANGE

How long the battery carries the load on its own. Below 0.26 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
0.26 kW · solar break-even	18.22 h	6.3 kWh	covered	indefinite
0.48 kW	10 h	11.5 kWh	5.2 kWh	0.92 days
0.96 kW	5 h	23 kWh	16.7 kWh	0.29 days
1.44 kW	3.33 h	34.6 kWh	28.2 kWh	0.17 days
1.92 kW	2.5 h	46.1 kWh	39.8 kWh	0.12 days
2.4 kW	2 h	57.6 kWh	51.3 kWh	0.09 days
2.88 kW	1.67 h	69.1 kWh	62.8 kWh	0.08 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.