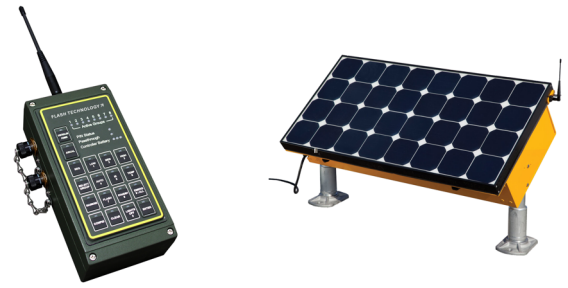


SOLAR LIGHTING

SEPS

Solar Engine Power Supply



Overview

The ADB Safegate solar systems are an ideal choice for an airfield that requires improved safety measures, but experiences difficulties with grid access. The LED Solar Runway Guard Light System (SRGLS) and LED Solar Sign System (SSS) is powered using a Solar Engine Power Supply (SEPS). The solar system is designed with the latest solar technology, hardware, and software to provide power and control to the lights or signs.

The SRGL SEPS is configured to power an Elevated Runway Guard Light fixture by driving current alternately between two LED beacons in a wig-wag flash pattern. The drive current is fixed at 350 mA and intended for continuous operation 24 hours/day.

The Sign SEPS powers up to two channels of airfield sign LED light bars at a fixed drive current of 162 mA each channel. The LED output is turned on from dusk to dawn each night based on solar panel solar detection.

One SEPS is required to power: (size 1 signs with 1, 2, 3, or 4 modules), (size 2 and 3 with 1 or 2 modules), (size 4 and 5 with 1 module). Two SEPS is required to power: (size 2 and 3 signs with 3 or 4 modules).

The SEPS is available in a wireless version that can be controlled using Flash Technology's Wireless Handheld Controller. Wireless control allows on-demand off and on control of the LEDs.

Features

- A green solution for a clean, renewable, and reliable energy source with the lightest environmental footprint
- High-efficiency monocrystalline solar panel
- High-quality rechargeable deep-cycle battery
- Easy installation and relocation
- Immediate operation upon installation
- Engineered for consistent operation and reliable performance
- The Energy Management System (EMS) monitors and adapts to environmental conditions
- Long life expectancy under tough conditions
- Minimum autonomy operation (without solar charging) 7+ days
- Available with 900 MHz or 2.4 GHz communication
- Seamless integration with Flash Technology wireless controller products

Solar Panel Orientation

Full solar exposure is critical to the performance of the solar panel system. Ensure that the solar panel has year-round, unrestricted sun exposure throughout the day. The bottom edge of the solar panels should be installed at a minimum height to clear growing vegetation and snow at the site.

Note: Shading even a small portion of the solar panel will significantly reduce performance of the SEPS.

The SEPS system is designed for operation in all global regions. However regions do exist with low sunlight exposure and the SEPS may not be compatible. If you suspect your region may not be compatible with the SEPS system, contact your local representative at ADB Safegate.

Sign Solar Power Supply SEPS - 11621 - 11

Solar Region

6 = All regions

Remote Control

- 1 = Non-wireless
- 4 = Wireless 900 MHz
- 5 = Wireless 2.4 GHz

Notes

- One SEPS is required to power (size 1 signs with 1, 2, 3, or 4 modules), (size 2 and 3 signs with 1 or 2 modules), (size 4 and 5 signs with 1 module). Two SEPS is required to power (size 2 and 3 signs with 3 or 4 modules).
- The SEPS carries the CE mark. The solar sign does not require a CE mark because it does not contain any active components.
- Mounting hardware must be purchased separately. Frangible coupling and mounting flange kit (Part No. 94A0581) and optional tether Part No. 94A0054)

RGL Solar Power Supply SEPS - 41111 - 11

Solar Region

6 = All regions

Remote Control

- 1 = Non-wireless
- 4 = Wireless 900 MHz
- 5 = Wireless 2.4 GHz

Notes

- Mounting hardware must be purchased separately. Frangible coupling and mounting flange kit (Part No. 94A0581) and optional tether Part No. 94A0054)

SOLAR LIGHTING

SEPS

Wireless Handheld Controller

The Handheld Controller contains a radio that transmits commands to a receiving radio inside a controlled product. The controlled light or sign operates in one of three modes. The most commonly used modes are Autonomous and Temporary mode. A Continuous mode is available, however special caution should be taken due to the risk of depleting the battery. Refer to the product manual for more details on modes and specific features of the wireless hand-held controller.

In Autonomous Mode, the controlled light turns on during the night and turns off during the day. The change from day-to-night or night-to-day is known as a transition. For solar signs and RGLs, the solar panel detects day/night and transitions accordingly.

In Temporary Mode, activation interrupts other modes and ignores transitions. This activation lasts for a preset time and then the light reverts to its previous Autonomous Mode. This preset time is specific to each light and is not stored in the Handheld Controller.

WARNING: Continuous selection of the temporary mode may exceed the maximum allocated time period of operation and may cause the battery to discharge below critical levels.

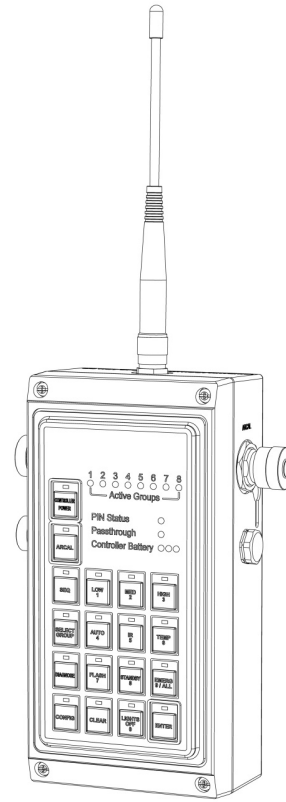
Features

- Water-resistant LED keypad and indicators
- Sealed, rugged aluminum body with MIL-spec connectors
- Meets MIL-SPEC-810E environmental requirements
- 900 MHz and 2.4 GHz frequency available
- 900 MHz control range of up to 2.5 miles (4 km)
- 2.4 GHz control utilizes mesh networking to control all airfield lights
- Uses an encrypted secure wireless RF signal
- Compatible with stand-alone aviation band VHF receiver
- 24-hour operation on a single fully charged battery
- Controls up to eight independent groups of lights
- Rechargeable lithium-ion battery (included)
- Aircraft Radio Control of Aerodrome Lighting (ARCAL)
- Advanced configuration and diagnosis commands
- Compatible with stand-alone aviation band VHF receiver
- Administrator and user password controls
- Made by Flash Technology for ADB Safegate solar lighting systems

Ordering Codes

83227 900 MHz Wireless Handheld Controller

90506 2.4 GHz Wireless Handheld Controller



Equipment Data

Solar Engine Power Supply (SEPS)	
Installed Weight	132 lb (59.8 kg)
Installed Dimensions	29.9H x 42.9W x 17.4D inches (75.9H x 108.9W x 44.1D cm) with wireless antenna at 55° tilt
Temperature	Operating: -22 °F to +122 °F (-30 °C to +50 °C) Storage: -40 °F to +176 °F (-40 °C to +80 °C)
Chassis	Weather and corrosion-resistant construction of stainless steel and powder coated aluminum
Mounting	ADB Safegate frangible couplings and floor flange mounts
Wind loading	300 mph (480 kph) minimum, installed at 55° tilt
Tilt	15°, 35°, 55°
Diagnostics	On-board feedback indicators for PV charging status Low-voltage disconnect Radio status (where optionally equipped)

Shipping	
Shipping Weight	Box 1 (SEPS): 76 lb (34.4 kg) Box 2 (Battery): 68 lb (30.8 kg)
Shipping Dimensions	Box 1 (SEPS): 25.5H x 46.9W x 14.0D inches (64.7H x 119.1W x 35.56D cm) Box 2 (Battery): 8.3H x 13.1W x 7.4D inches (21H x 33.2W x 18.8D cm)

Battery	
Power	12 VDC 88 Ahr
Disposal	Replaceable and recyclable
Hazmat Control	Absorbent glass mat (AGM) SLA
Lifetime	4,000 cycles to 20% depth of discharge at +68 ° F
Charger	Morningstar PWM

LED Driver	
Sign SEPS	Channel A: 18–38 VDC 162 mA Channel B: 18–38 VDC 162 mA
RGL SEPS	Channel A: 18–38 VDC 350 mA Channel B: 18–38 VDC 350 mA
Control Modes	Sign: Dusk-to-dawn RGL: Continuous 24-hour flashing
Load Cabling	22 ft (6.7 m) cable can exit onto the surface or down into a ground pot

PV Panel	
Power	Minimum 17 VDC, 100 W
Type	High Efficiency Monocrystalline, IEC 61215
Lifetime	10 years at 90% output

Wireless Control	
Frequency	900 MHz (902 - 928 MHz) FHSS 1 W transmission 2.4 GHz DSSS 6.3 mW transmission
Range	900 MHz: Up to 2.5 miles (4 km) 2.4 GHz: Utilizes mesh networking to control all airfield lights
Control, On-Demand Mode	Seamless integration with existing ADB wireless solar products. Up to 8 independent groups. On-demand Temporary Mode Aircraft Radio Control of Aerodrome Lighting (ARCAL)

SEPS Dimensions

