

# SOLAR LIGHTING

## Solar Sign System

### LED Solar Sign System



### Compliance with Standards

- FAA:** Designed to meet L-858Y(L), L-858R(L), L-858L(L) and L-858B(L) AC 150/5345-44 (Current Edition)<sup>1</sup>
- CE:** Complies with the requirements of the EMC Directive 2004/108/EC

### Uses

ADB SAFEGATE's LED Solar Sign System is an ideal choice for an airfield that requires improved safety measures, but experiences difficulties with grid access. ADB SAFEGATE's Solar Sign System consists of an L-858Y(L), L-858R(L), L-858L(L), or L-858B(L) Solar Sign and a Solar Engine Power Supply (SEPS). The SEPS incorporates the latest in solar technology, hardware and software to provide power and control to the solar sign. See data sheet 3082 for more information about the SEPS.

#### FAA L-858Y(L)

Informational Direction, Destination, and Boundary signs - black legend on a yellow background. Designed to guide pilots to a particular point on the airfield by identifying runway exits, taxiway directions, taxiway intersections, taxiway ending, and inbound/outbound destinations, boundaries.

#### FAA L-858R(L)

Mandatory Instruction sign – white legend with black outline on a red background. Designed to identify holding positions, runway intersections, and prohibit aircraft entry into designated areas.

#### FAA L-858L(L)

Runway and Taxiway Location signs - yellow legend and yellow border on a black background. Designed to identify taxiway and runway location on which the aircraft is located.

#### FAA L-858B(L)

Runway Distance Remaining sign - white legend on a black background. Designed to identify the runway distance remaining for takeoff and landing. They are located along the side of the runways at 1,000-foot increments with the numerals visible in a descending order to the pilots view.

#### FAA L-858H(L)

One-Half Runway Distance Remaining sign - white legend on a black background. Designed to identify the location where half of the runway distance is remaining for takeoff and landing. Type L-858H(L) signs must not be used in combination with L-858B(L) signs.

### Sign Legends

Type	Purpose	Legend/Background Color
L-858Y(L)	Direction, Destination & Boundary	Black legend on a yellow background
L-858R(L)	Mandatory Sign	White legend with black outline on a red background
L-858L(L)	Runway/Taxiway Location	Yellow legend and yellow border on a black background
L-858B(L) L-858H(L)	Runway Distance Remaining	White legend on a black background

### Features

- A green solution for a clean, renewable, and reliable energy source with the lightest environmental footprint
- LED light source virtually eliminates runway shutdowns due to the long life and reliability of LED technology
- Direct replacement for existing sign
- Creates a highly uniform distribution of light, eliminating hot spots and shadows
- Operates on solar energy
- Eliminates re-lamping expenses and reduces on-going maintenance costs
- Installs in minutes with no trenching, cabling, or external power, and can be relocated just as quickly
- 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

<sup>1</sup> To ensure autonomous operation of the Solar Sign System in all regions, a sign luminance less than the value specified in AC 150/5345-44 (Current Edition) is provided while maintaining a readily identifiable sign. For more information please contact ADB Safegate.

# Solar Sign System

## Benefits

- Easy Installation: no specialized work crews required; limited air traffic disruption and functions immediately upon installation
- Compact, self-contained design; easy deployment and relocation
- Significant cost savings: no fuel or electrical bills
- Reduced maintenance cycles: no scheduled maintenance for up to five years

## Construction

- Aluminum housing
- Acrylic sign legend panels
- Stainless steel hardware
- Retro-reflective sheeting
- Translucent plastic panel dividers used between multi-module legend panels

## Operating Conditions

<b>Temperature</b>	-40 °F to +131 °F (-40 °C to +55 °C)
<b>Humidity</b>	0 to 100%
<b>Wind</b>	Mode 2 signs withstand 200 mph (322 kph) Mode 3 signs withstand 300 mph (483 kph)

## Installation

Each sign is furnished complete with mounting flanges for installation on a concrete pad, which is the recommended method of installation. Refer to ADB Safegate solar sign manual for typical sign installations. Contact ADB Safegate Sales Department for more information on sign installation hardware.

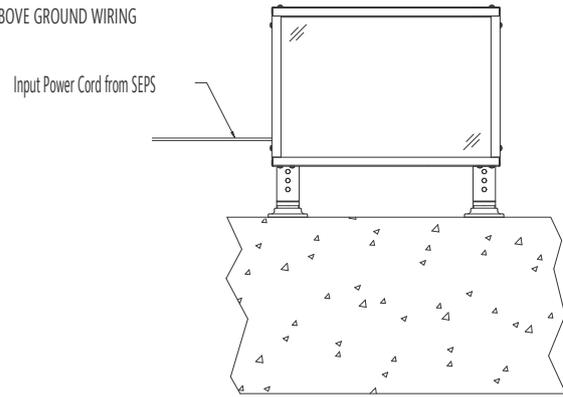
1. Mounting flanges and frangible couplings (included with sign)
2. Concrete anchor bolts (contractor supplied)
3. Side entry cable gland (included with sign)
4. Power cable (included with SEPS)

The Solar Engine Power Supply (SEPS) has to be installed on a level concrete pad within 20 feet of the solar sign. Concrete pad installation requires two frangible couplings and two floor flanges, which are ordered separately from the SEPS unit (Part No. 94A0581).

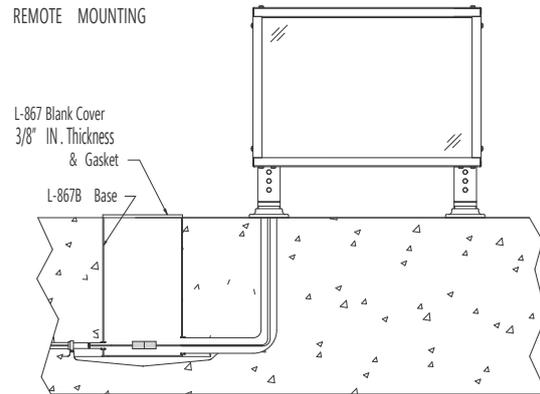
For below ground wiring, L-867B base cans need to be installed under each sign and SEPS and cabling can be routed through the legs.

For a temporary application, the wiring between the SEPS and the Sign can be above ground. Both the Sign and SEPS contain compression fittings for power cable access.

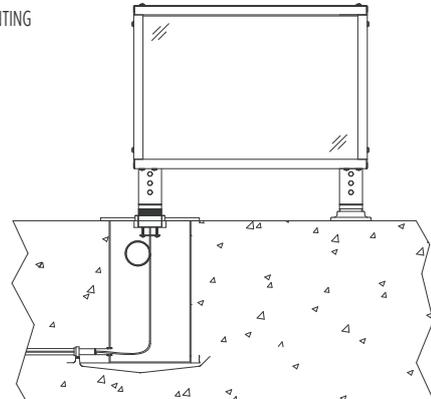
ABOVE GROUND WIRING



REMOTE MOUNTING



DIRECT MOUNTING



# Solar Sign System

## Sign Heights - Inches (Centimeters)

Size	Type	Sign Face Height	Legend Height	Sign Style No.	Sign Class No.	Overall Mounting Height
1	L-858Y/R/L	18 (45.7)	12 (30.5)	2,3,5	1,2	29.7 (75.5)
2	L-858Y/R/L	24 (61)	15 (38.1)	2,3,5	1,2	35.7 (90.8)
3	L-858Y/R/L	30 (76.2)	18 (45.7)	2,3,5	1,2	41.7 (106)
4	L-858B	48 (122)	40 (101.6)	2,3,5	1,2	58.2 (147.8)
5	L-858B	30 (76.2)	25 (63.5)	2,3,5	1,2	41.7 (106)

## Sign Lengths - Inches (Centimeters)

Size	1 Module	2 Module	3 Module	4 Module
1	29.4 (75)	58.6 (149)	87.9 (223)	117.2 (298)
2	35.9 (91)	71.6 (182)	107.4 (273)	143.2 (364)
3	42.4 (108)	84.6 (215)	126.9 (323)	169.2 (430)
4	47.9 (122)	N/A	N/A	N/A
5	42.4 (108)	N/A	N/A	N/A

## Packaging Dimensions (Height x Length x Depth) - Inches (Centimeters)

Size	1 Module	2 Module	3 Module	4 Module
1	34 x 34 x 13 (87 x 86.4 x 33)	34 x 63 x 13 (87 x 160 x 33)	34 x 92 x 13 (87 x 234 x 33)	34 x 121 x 13 (87 x 307 x 33)
2	40 x 40 x 13 (102 x 102 x 33)	40 x 72 x 13 (102 x 193 x 33)	40 x 112 x 13 (102 x 285 x 33)	40 x 147 x 13 (102 x 374 x 33)
3	46 x 46 x 13 (117 x 117 x 33)	46 x 89 x 13 (117 x 226 x 33)	46 x 131 x 13 (117 x 333 x 33)	46 x 173 x 13 (117 x 440 x 33)
4	62 x 52 x 13 (158 x 132 x 33)	N/A	N/A	N/A
5	46 x 46 x 13 (117 x 117 x 33)	N/A	N/A	N/A

## Packaging Weight (estimated) - Pounds (Kilograms)

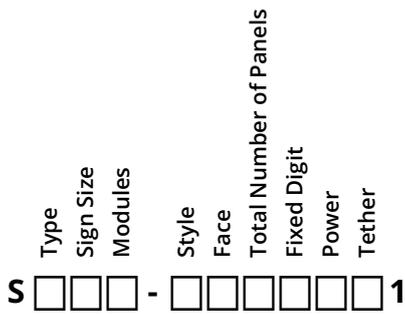
Size	1 Module	2 Module	3 Module	4 Module
1	46 (21)	78 (35)	115 (52)	169 (77)
2	71 (32)	104 (47)	153 (70)	220 (100)
3	81 (37)	131 (60)	199 (90)	252 (114)
4	122 (56)	N/A	N/A	N/A
5	81 (37)	N/A	N/A	N/A

### Note:

- Sign depth is 9.4 in (23.9 cm). See [www.adbsafegate.com](http://www.adbsafegate.com) for additional installation information.
- Signs are shipped with frangible couplings, and floor flanges – ready for installation.

# Solar Sign System

## Solar Sign Ordering Codes



### Type

R = LED Standard (Mode 2)  
S = LED High Wind (Mode 3)<sup>1</sup>

### Sign Size

1 = Size 1  
2 = Size 2  
3 = Size 3  
4 = Size 4  
5 = Size 5

### Modules

1 = 1 Module<sup>2</sup>  
2 = 2 Modules<sup>2</sup>  
3 = 3 Modules<sup>2,3</sup>  
4 = 4 Modules<sup>2,3</sup>

### Style

S = Solar

### Face

1 = Single  
2 = Double

### Total Number of Panels

X = To be determined by the ADB Safegate sales department based on legend and module configurations.

### Fixed Digit

3 = 3

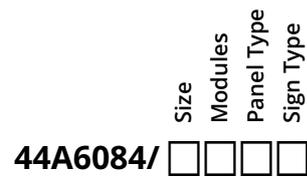
### Power

C = Solar power through side without ON/OFF switch<sup>4</sup>

### Tether

0 = No tether  
1 = One tether, one end of sign  
2 = Two tethers, one on each end of sign  
3 = One tether on all legs

## Legend Panel Replacement



### Size

1 = Size 1  
2 = Size 2  
3 = Size 3 and 5  
4 = Size 4

### Modules

1 = 1 Module  
2 = 2 Modules

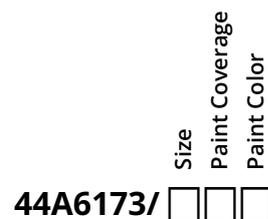
### Panel Type

1 = With legend (retroreflective)  
2 = Black

### Sign Type

0 = Mode 2 and Mode 3

## Legend Panel Divider



### Size

1 = Size 1  
2 = Size 2  
3 = Size 3 and 5

### Paint Coverage

A = Solid black<sup>5</sup>  
C = Clear front (paint back side only)

### Paint Color

R = Red  
Y = Yellow  
B = Black<sup>5</sup>

## LED Light Engine Tester: 44A7264/1

LED Light Engine Tester Battery-powered tester is used during maintenance activities to separately test a single LED light bar. Uses four size D batteries and outputs 350 mA. Output is activated using a momentary switch.

<sup>1</sup> High Wind signs require 4-bolt high wind mounting flanges, except size 1 signs which require 2-bolt mounting flanges.

<sup>2</sup> 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).

<sup>3</sup> Two SEPS are required to power (size 2 and 3 signs with 3 or 4 modules).

<sup>4</sup> Cord set not provided. Cable gland is provided for side entry.

<sup>5</sup> For paint coverage (Solid black), paint color (Black) must be selected.