

SOLAR LIGHTING

SSS

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) and the FAA Engineering Brief No. 67.
- CE:** Complies with the requirements of the EMC Directive 2004/108/EC

Uses

ADB's LED Solar Sign System (SSS) is an ideal choice for an airfield that requires improved safety measures, but experiences difficulties with grid access. ADB's SSS consists of an L-858Y(L), L-858R(L), L-858L(L), or L-858B(L) solar-powered sign (SS) 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)	Direction, Destination, and Boundary (Informational Sign)
FAA L-858R(L)	Mandatory Sign
FAA L-858L(L)	Runway/Taxiway Location Sign: These signs are designed to guide pilots to a particular point on the field, identify holding positions, identify taxiway and runway intersections, and prohibit aircraft entry into designated areas.
FAA L-858B(L)	Runway Distance Remaining Sign: The L-858B is used at 1,000-foot intervals adjacent to the runway edge in order to provide runway distance remaining information to pilots during takeoff and landing operations.

Features

- Virtually eliminates runway shutdowns due to LED light source
- 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
- The SSS installs in minutes with no trenching, cabling, or external power, and can be relocated just as quickly.
- Battery daily depth of discharge is sized for a minimum of five years of service.
- Unprecedented reliability: microprocessor Energy Management System (EMS) monitors and adapts the brightness to environmental conditions for consistent operation and long life under the toughest conditions.

Features (Continued)

- The minimum autonomy or operational period without charging is seven days.
- Protect personnel and assets: Optional hand-held wireless control allows for remote operation of a solar sign including mode changes for enhanced visibility in poor weather conditions
- Green solution: a clean, renewable and reliable energy source with the lightest environmental footprint.

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

Sign Legends

Type	Purpose	Legend Color	Background Color
L-858Y	Direction, Destination & Boundary	Black	Yellow
L-858R	Mandatory Sign	White with Black Outline	Red
L-858L	Runway/Taxiway Location	Yellow	Black
L-858B	Runway Distance Remaining	White	Black

Operating Conditions

Temperature: -40 °F to +131 °F (-40 °C to +55 °C)

Humidity: 0 to 100%

Wind: Mode 2 signs withstand wind velocities up to 225 mph

Construction

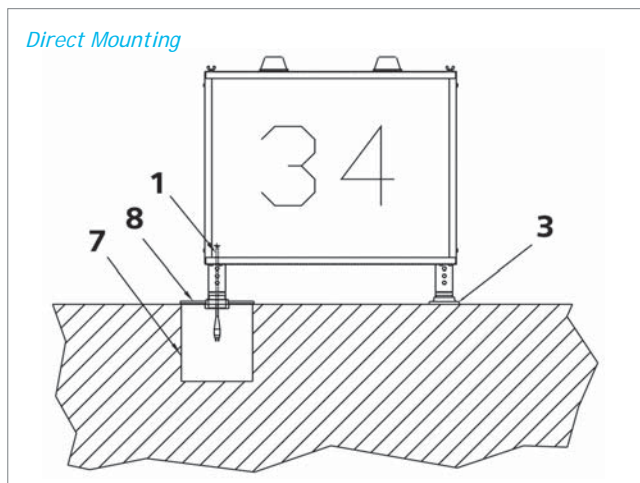
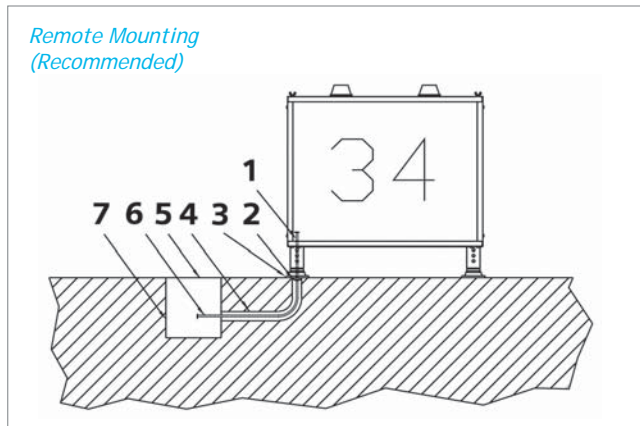
Corrosion-resistant sign construction requires minimal maintenance.

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

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 sign manual for typical sign installations. Contact ADB Sales Department for more information on sign installation hardware.

1. L-823 Cord Set
2. Cable Clamp
3. Floor Flange
4. 2-inch Conduit Elbow (contractor supplied)
5. L-867 Blank Cover Plate with Gasket
6. L-823 Extension Cord (purchased separately)
7. L-867 Base (purchased separately)
8. L-867 Base Plate (special - purchased separately)



Installation (Continued)

The Solar Engine Power Supply (SEPS) has to be installed on a level concrete pad within 20 feet of the solar sign. For below ground wiring, L-867B base cans need to be installed under each SS and SEPS. Concrete pad installation requires two frangible couplings and two floor flanges to be ordered separately from the SEPS unit (Part No. 94A0581).

For a temporary application, the wiring between the SEPS and the SS can be above ground. Both the SS and SEPS contain side conduits for cabling access.

Spare Components

Description	Part No.
Floor flange (2-bolt)	62A2142
Frangible coupling, size 1	60A2678-10
Frangible coupling, size 2	60A2678-20
Frangible coupling, size 3 or 5	60A2678-30
Frangible coupling, size 4	60A2678-40
Tether	94A0054
LED light engine (tube), Size 1, 2, 3, and 5	48A0408 ²
LED light engine (tube), Size 4	48A0409 ³
LED light engine (bar), Size 1 and 4	48A0442-16
LED light engine (bar), Size 2	48A0442-24
LED light engine (bar), Size 3 and 5	48A0442-32
LED sign power supply lead assy	44A6920
LED sign lead terminator assy	44A6921
LED sign lead jumper assy 18"	44A6922-18
LED sign power supply ass'y, single (tube)	44A7086-LT ²
LED sign power supply ass'y, dual (tube)	44A7088-10 ^{1,2}
LED sign power supply assembly (bar)	44A7260-010

¹ Use a dual LED sign power supply assembly for sign sizes 2 and 3 that are 3 and 4 modules. For all other configurations, use a single power supply assembly.

² For all signs shipped before January 1, 2013, use these spare parts.

³ No longer in stock. Use LED Retrofit Kit 94A0628 for replacement purposes. See data sheet 3006 for more details.

Packaging Data

Signs are shipped with L-823 cord set(s), frangible couplings, and floor flanges-ready for installation.

Description	Gross Weight ¹		Carton Dimensions	
	(lb)	(kg)	(in)	(cm)
Size 1, Module 1	46	21	34 x 34 x 13	87 x 86.4 x 33
Size 1, Module 2	78	35	34 x 63 x 13	87 x 160 x 33
Size 2, Module 1	71	32	40 x 40 x 13	102 x 102 x 33
Size 2, Module 2	104	47	40 x 76 x 13	102 x 193 x 33
Size 3, Module 1	81	37	46 x 46 x 13	117 x 117 x 33
Size 3, Module 2	131	60	46 x 89 x 13	117 x 226 x 33
Size 4, Module 1	122	56	62 x 52 x 13	158 x 132 x 33
Size 5, Module 1	81	37	46 x 46 x 13	117 x 117 x 33

¹ Estimated weight

Ordering Codes

Legend Panel Replacement

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

Number of Modules

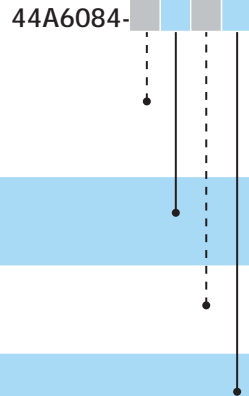
- 1 = 1 module
 2 = 2 modules

Panel Type

- 1 = With legend (retroreflective)
 2 = Black

Sign Type

- 0 = Standard
 1 = High Wind



Dimensions

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

Sign Lengths Inches (Centimeters)				
Size No.	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

Notes

- Sign depth is 9.39 in (23.85 cm).
- See our website for additional dimension and installation information.

Ordering Code

- Lamp Type**
 R = LED
 S = LED High Wind¹

Sign Size

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

Module

- 1 = 1 Module
 2 = 2 Modules

Style

- S = Solar

Face

- 1 = Single
 2 = Double

Total Number of Panels

- 2 = 2 panel sign
 3 = 3 panel sign
 4 = 4 panel sign

3

Power

- 8 = Solar - Power through leg/power through side with ON/OFF switch

Tether

- 0 = No tether²
 1 = One tether on one end of sign

Notes

- Customer to provide legend information and power connection side. It is important to match power cord exit location with legend side.

¹ Use high wind signs in locations where actual wind speed exceeds FAA specifications (Mode 3). High wind signs are tested to a minimum wind load of 327 mph as recommended by FAA technical paper DOT/FAA/AR-TN00/32: Evaluation of Wind-Loading on Airport Signs. High wind signs require four anchor bolts per floor flange except Size 1, which uses the standard 2-bolt foot.

² Not ETL Certified.

