

RELIANCE

Approach Centerline, Crossbar, Siderow, Threshold, Wingbar, End, Stopbar - L-862S(L), L-862E(L)



Compliance with Standards (current Versions)

FAA	L-862S(L) AC 150/5345-46 and the FAA Engineering Brief No. 67
ICAO	Annex 14 Volume I
EASA	CS-ADR-DSN
US MIL	UFC 3-535-01, section 3-1.4
NATO	STANAG 3316
Canada	TP 312

Uses

ICAO

- Approach Centerline and Cross Bar
- Approach Siderow
- Runway Threshold and Threshold Wing Bar
- Runway End
- Stop Bar

FAA

- Stop Bar L-862S(L)
- Runway Threshold L-862E(L)
- Runway End L-862E(L)

Features and Benefits

- RELIANCE™ unidirectional elevated light fixtures are available in three versions:
 - IQ with integrated ILCMS
 - Monitored with integrated fail-open technology
 - Non-Mon without monitoring functionality

Efficiency

- High-intensity
- Use less than 50 W, with a Power Factor of 0.95, compared to incandescent fixtures that require 150 W or 200 W lamps.
- Installation on same mounting device as most elevated halogen lights, for a straightforward replacement.
- Leveling and aiming in azimuth of the light are easily performed with the dedicated aiming device.

- Two opposite screws ensure easy and stable leveling.
- Fully dimmable lights, respecting the response curve of traditional halogen lights.
- Available in IQ 2A functionality for use in RELIANCE Intelligent Lighting (ILCMS) for further power savings and individual intensity control.

Sustainability

- Average MTBF of 56.000 hours at full-intensity and more than 200.000 hours under typical operating conditions, resulting in significant reduction of ongoing maintenance costs and periodic relamping expenses.
- Low-profile and small in size to withstand heaviest jet blast, even when installed at threshold / runway end.
- When quartz-incandescent fixtures are replaced with LED fixtures, airport staff can add more lights without increasing CCR size.
- Limits cost for supporting equipment such as isolation transformers and CCRs to strict minimum.
- Use of LED light source eliminates filter replacement and color shifts when viewed at various angles or CCR step settings.
- IP67 design prevents water, dust and insect entry.

Safety

- Rugged lightning protection that complies with ANSI/IEEE C62.41-1991 Location Category C2 given in FAA Eng. Brief 67. Category C2 is defined as a 1.2/50 μ S – 8/20 μ S combination wave, with a peak voltage of 10.000 V and a peak current of 5.000 A.
- Optionally, LED lights can be equipped with an internal monitoring function of the individual light source. In case of a defect, the LED light automatically disconnects from the secondary side of the isolation transformer, resulting in an open circuit condition. Therefore external lamp fault detection devices of Constant Current Regulators and Individual Lamp Control and Monitoring Systems (ILCMS) can be used to monitor failed lights.

Accessories

Refer to the user manual for the RELIANCE elevated lights.

RELIANCE

Power Supply

Lights have been designed to work with any IEC- or FAA-compliant transformer up to 150 W. See the manual for calculation of actual circuit VA loads.

Note:

- Refer to the appendix of user manual for the RELIANCE elevated lights for a complete power table and the cable loss formula.
- Refer to the annex section.

Maintenance and Installation

The light is made of a body, adjustable in elevation and azimuth, on which two cartridges are mounted. All optical components are grouped in the front cartridge, while the main electronic board is in the rear cartridge.

Dimensions and Weight

Dimensions (Height × Width × Depth)	285 × 135 × 200 mm / 11.22 × 5.31 × 7.87 in
Weight	5.5 kg / 12.1 lb

Operating Conditions

Operating temperature	-55°C to +50°C / -58°F to 122°F
Storage temperature	60 °C to +80 °C / -76 °F to +176 °F
Humidity	<95% non condensing

Ordering Code

Application	Cover	Cable and Connector	Color	Mounting Interface	Power Supply and Monitoring	Standard	Options	Enhanced Corrosion Resistance	Version
E					NO			0	

Application

AP = Approach centerline, Crossbar and Side rows
TH = Threshold and Wing bars
EN = Runway end
TS = Supplementary stop bars

Cover

S = Glass

Cable and Connector

2 = 1 FAA L-823 plug (2 pins)

Color

W = White

R = Red

G = Green

Mounting Interface

0 = See Note below⁴

Power Supply and Monitoring

S = 6.6 A - 50/60 Hz series supply, w/out monitoring

M = 6.6 A - 50/60 Hz series supply, with monitoring

P = IQ0 version¹

Q = IQ1 version¹

Standard

F = FAA only^{2,4}

I = ICAO only

Options

0 = No option

4 = With bird deterrent³

Enhanced Corrosion Resistance

1 = Included

Version

2 = Enhanced

Ordering Code Notes

¹ The IQ functionality allows control and monitoring of the fixture. IQ1 fixtures are pre-configured for the specific position at delivery. This function is disabled in IQ0 fixtures but could be enabled later.

² For all EAP, ETH, and EEN lights, use I.

³ Not defined by FAA, hence not ETL certified.

⁴ For FAA compliant L-862S(L) & L-862E(L), a frangible column is included per the customer's height requirements from 14" to 30" OAH (Part number 60A2444/X to be ordered).

ANNEX

Fixture type	Fixture load	Isolation transformer			CCR load
		Rating	Loss	Efficiency	
EAPxxW - white approach	49 VA	65 W	9 VA	0.85	58 VA
EAPxxR - red approach	25 VA	45 W	4 VA	0.85	29 VA
ETHxxG - green threshold	35 VA	45 W	6 VA	0.85	41 VA
EENxxR - red runway end	18 VA	45 W	3 VA	0.85	21 VA
ETSxxR - red stop bar	13 VA	45 W	2 VA	0.85	15 VA

Note:

- Extra losses in secondary cables or due to extra equipment (e.g. ILCMS remotes) are not included in above table; these extra losses will result in a higher required size of isolation transformers.
- Extra losses in primary cables are not included in above table; these extra losses will result in a higher required CCR load.
- Efficiency of the secondary transformer depends on the supplier of secondary transformers.

For IQ fixtures:

- The minimum dimension for the isolation transformer is 65 W
- The isolation transformer must have an extra 12 VA available on top of the load for communication bandwidth

For fail-open fixtures:

- The maximum dimension for the isolation transformer is 150 W

For a 2A power system, refer to the 2A power system description for further explanation:

- The 2A power system requires the isolation transformer to be 3.3 times the rating for an IQ-fixture on a 6.6A constant current power system with a minimum of 200 W
- The regulator load is correct as indicated in the table, but the size of the regulator must be 3.3 times the load that is needed

For more information about the product, including manuals and certifications, please see the ADB SAFEGATE Product Center at www.adbsafegate.com.