

RELIANCE

Runway Edge, Stopway and Threshold / End

Bidirectional elevated



Compliance with Standards (current Versions)

FAA	L-862(L) and L-862E(L) AC 150/5345-46 and the FAA Engineering Brief No. 67; ETL certified
ICAO	Annex 14 Volume I
EASA	CS-ADR-DSN
NATO	STANAG 3316
Canada	TP 312
Australia	MOS 139

Uses

ICAO

- Runway Edge for runways up to 60 m wide
- Runway End
- Runway Threshold
- Runway Threshold / End
- Runway Stopway

FAA

- Runway Edge L-862(L)
- Runway End L-862E(L)
- Runway Threshold L-862E(L)
- Runway Threshold/End L-862E(L)

Features and Benefits

Available in three versions:

- RELIANCE® IQ with integrated ILCMS
- Monitored with integrated fail-open technology
- Non-Mon without monitoring functionality

Efficiency

- Very low energy consumption (typically 30 W for a bidirectional light, and 25 W for an unidirectional light, compared to 120, 150 or 200 W for tungsten halogen lights)
- Greatly reduced maintenance: calculated MTBF of 56,000 hours at 6.6A
- Fully dimmable lights, respecting the response curve of traditional halogen lights. Operates on the full range of 2.8 A to 6.6 A
- When turned on, light rise time is low. The light is perfectly adapted for any incursion protection system

- Optional 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
- Compatibility between RELIANCE IQ version and RELIANCE Intelligent Lighting 2A system for further power savings and ILCMS
- Leveling and aiming in azimuth of the fixture are easily performed with the dedicated aiming device
- Three screws allow a 4° leveling adjustment of the fixture after installation
- Upper body can be replaced without realignment of the fixture
- Omnidirectional beam for circular guidance is standard for bidirectional Runway Edge fixture. No need for additional optical system

Sustainability

- Installation on same mounting device as most elevated halogen lights, for a straightforward replacement
- Substantial investment reduction for new installations, resulting from a lower installed load
- Very low working temperature, ensuring longer component life
- Low-profile and small in size to withstand heaviest jet blast, even when installed at threshold/runway end
- Options for either glass or UV-resistant polycarbonate outer lens
- Use of LED light source eliminates filter replacement and color shifts when viewed at various angles or CCR step settings
- Sealed entry at cord set to optical assembly interface prevents insect entry. IP 66 protection degree
- Finishing: All hardware in stainless steel. The aluminum body phosphating with a baked polyester electrostatic powder coating, aviation yellow

Safety

- Increased availability of the runway thanks to the reduction of maintenance
- Optimum and homogeneous light distribution along the lights installed on the same runway
- High discrimination between functions thanks to the saturated colors, their stability at the different brightness steps and under all viewing angles
- 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 1.2/50µS - 8/20 µS combination wave, with a peak voltage of 10,000 V and a peak current of 5.000 A

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Accessories

Refer to the user manual for RELIANCE unidirectional and bidirectional elevated lights.

Aiming Device	1408.35.130
Snow Rod (10 pcs)	SP.4072.28.670

Power Supply

Non-MON and MON lights have been designed to work with any IEC- or FAA-compliant transformer up to 150 W. Refer to the user manual for calculation of actual circuit VA loads. IQ lights can work with transformers up 300W.

Note:

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

Maintenance and Installation

Refer to the user manual for RELIANCE unidirectional and bidirectional elevated lights and to the interoperability info for installation in a specific base.

Dimensions and Weight

Outer diameter and height	166 × 233 mm / Without mounting interface
	6.54 × 9.17-in
Weight without packaging	3.36 kg /
	7.41 lb

Operating Conditions

Operating temperature	-67 to +131 °F / -50 to +55 °C
Storage temperature	-58 to +122°F / -50 to +50 °C
Relative humidity	Up to 100% condensing

Ordering Code

Cover	Cable and Connectors	Color Left Side	Color Right Side	Toe-in ⁵	Overall Fixture Height / Coupling	Power Supply and Monitoring	Standard	Options	Arctic Kit	Enhanced Corrosion Resistance	Version
ERE											

Cover

L = UV-resistant polycarbonate
S = Glass

Cable and Connectors

2 = 1 FAA L823 plug (2-pins)
6 = 1 plug (2-pins) w/Earth ground
8 = 1 external connected plug (2-pins)^{1,2}

Color Left Side

W = White
R = Red
G = Green^{3,4}
Y = Yellow
N = None (Obscured)

Color Right Side

W = White
R = Red
G = Green^{3,4}
Y = Yellow
N = None (Obscured)

Toe-in⁵

0 = No toe-in⁴
1 = Left side with toe-in
2 = Right side with toe-in
3 = Both sides with toe-in

Overall Fixture Height / Coupling

1 = 14 in (35.6 cm) with 1.5" coupling, 12 TPI
2 = 20 in (50.8 cm) with 1.5" coupling, 12 TPI
3 = 24 in (61.0 cm) with 1.5" coupling, 12 TPI
5 = 14 in (35.6 cm) with 2" coupling, 11.5 TPI
6 = 20 in (50.8 cm) with 2" coupling, 11.5 TPI
7 = 24 in (61.0 cm) with 2" coupling, 11.5 TPI
9 = 14 in (35.6 cm) with 2" coupling, 11 TPI¹

Power Supply and Monitoring

S = 6.6A - 50/60 Hz series supply, without monitoring
M = 6.6A - 50/60 Hz series supply, with monitoring
P = IQ0 version⁶
Q = IQ1 version⁶

Standard

0 = ICAO- and FAA-compliant⁷
F = FAA (threshold only)
I = ICAO (threshold/end and threshold only)⁴
K = Australian (color to MOS 139)

Options

0 = No option
1 = With bracket for snow rod

Arctic Kit

0 = Without arctic kit
1 = With arctic kit⁸

Enhanced Corrosion Resistance

1 = Included

Version

2 = Improved mechanics

Ordering Code Notes

¹ Not defined by FAA, hence not ETL Certified.

² Cord set connected external to column.

³ G-green will only be delivered if Standard = K. All other applications will be delivered with F - green (ICAO / FAA).

⁴ ICAO / TP312 unidirectional threshold light is always without toe-in. These light fixtures have to be installed with a Toe-in to be compliant to the standards.

⁵ Refer to Toe-in Coding diagram for more information.

⁶ The IQ functionality allows control and monitoring of the fixture. IQ1 fixtures are preconfigured for the specific position at delivery. This function is disabled in IQ0 fixtures but could be enabled later.

⁷ All lights without green beam are compliant to ICAO and FAA. Use 0 for any application (FAA, ICAO, TP 312) that does not use green.

⁸ Not with IQ fixtures.

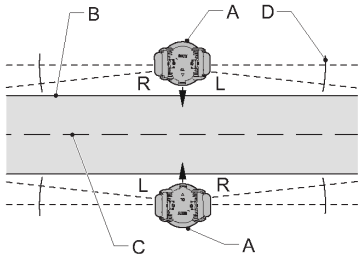
Note: Additionally please consider the following:

- Code for an ICAO unidirectional threshold light is ERE XX GN0 XX I XX12, where X must be selected according to the table
- ICAO Stopway is always unidirectional, red and with toe-in
- White and yellow beams are for runway edge application and are always with toe-in
- Red beam may be with toe-in for runway edge application (e.g. displaced threshold) or without toe-in for runway end application
- Green beam is always with toe-in for FAA applications (See note 6 above for ICAO)

Toe-in Color Coding

For toe-in, the part number scheme assumes the observer is facing both the light and the runway centerline. For example, toe-in option 3 means that both the left and right side are toed in the direction of the centerline. If the equipment (A) has a toe-in (D), the toe-in is in compliance with the relevant ICAO or FAA requirements. The indication left side (L) or right side (R) always refers from the equipment to the centerline (C) of the runway (B).

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ANNEX

Fixture type	Fixture load	Isolation transformer			CCR load
without Arctic Kit:		Rating	Loss	Efficiency	
EREL (unidirectional)	29 VA	45 W	10 VA	0.85	39 VA
EREL (bidirectional)	33 VA	45 W	10 VA	0.85	43 VA
with Arctic Kit:					
ERES (unidirectional)	31 VA	45 W	10 VA	0.85	41 VA
ERES (bidirectional)	38 VA	45 W	10 VA	0.85	48 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 more information about the product, including manuals, certifications and photometric data, please see our Product Center on the ADB SAFEGATE website, www.adbsafegate.com.