



RELIANCE ETPS-L LED Elevated Turning Pad Light

## User Manual

96A0495, Rev. C, 2019/12/18

  
**ADB  
SAFEGATE**



## A.0 Disclaimer / Standard Warranty

### CE certification

The equipment listed as CE certified means that the product complies with the essential requirements concerning safety and hygiene. The directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

### ETL certification

The equipment listed as ETL certified means that the product complies with the essential requirements concerning safety and FAA Airfield regulations. The directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

### LED Product Guarantee

Where applicable, per FAA EB67 (applicable edition), ADB SAFEGATE L858(L) Airfield Guidance Signs are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years. ADB SAFEGATE LED light fixtures (with the exception of obstruction lighting) are warranted against mechanical and physical defects in design or manufacture for a period of 12 months from date of installation; and are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years per FAA EB67 (applicable edition).



#### Note

See your sales order contract for a complete warranty description. In some specific cases, deviations are (to be) accepted in the contract, which will supersede the standard warranty.

### Standard Product Guarantee

Products of ADB SAFEGATE manufacture are guaranteed against mechanical, electrical, and physical defects (excluding lamps) which may occur during proper and normal use for a period of one year from the date of installation or 2 years from date of shipment and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made. ADB SAFEGATE L858 Airfield Guidance Signs are warranted against mechanical and physical defects in design or manufacture for a period of 2 years from date of installation per FAA AC 150/5345-44 (applicable edition).



#### Note

See your sales order contract for a complete warranty description.

### All Products Guarantee

LED Products of ADB SAFEGATE, manufactured and sold by ADB SAFEGATE or its licensed representatives, meets the corresponding requirements of FAA, ICAO and IEC.

ADB SAFEGATE will correct by repair or replacement per the applicable guarantee above, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, and provided further that Buyer gives ADB SAFEGATE written notice of such defects after delivery of the goods to Buyer. Refer to the Safety section for more information on Material Handling Precautions and Storage precautions that must be followed.

ADB SAFEGATE reserves the right to examine goods upon which a claim is made. Said goods must be presented in the same condition as when the defect therein was discovered. ADB SAFEGATE further reserves the right to require the return of such goods to establish any claim.

ADB SAFEGATE's obligation under this guarantee is limited to making repair or replacement within a reasonable time after receipt of such written notice and does not include any other costs such as the cost of removal of defective part, installation of repaired product, labor or consequential damages of any kind, the exclusive remedy being to require such new parts to be furnished.

ADB SAFEGATE's liability under no circumstances will exceed the contract price of goods claimed to be defective. Any returns under this guarantee are to be on a transportation charges prepaid basis. For products not manufactured by, but sold by ADB SAFEGATE, warranty is limited to that extended by the original manufacturer.

This is ADB SAFEGATE's sole guarantee and warranty with respect to the goods; there are no express warranties or warranties of fitness for any particular purpose or any implied warranties of fitness for any particular purpose or any implied warranties other than those made expressly herein. All such warranties being expressly disclaimed.

## Liability

---



### WARNING

Use of the equipment in ways other than described in the catalog leaflet and the manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in the manual.

---

ADB SAFEGATE cannot be held responsible for injuries or damages resulting from non-standard, unintended uses of its equipment. The equipment is designed and intended only for the purpose described in the manual. Uses not described in the manual are considered unintended uses and may result in serious personal injury, death or property damage.

Unintended uses includes the following actions:

- Making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine ADB SAFEGATE replacement parts or accessories.
- Failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards if not in contradiction with the general rules.
- Using materials or auxiliary equipment that are inappropriate or incompatible with your ADB SAFEGATE equipment.
- Allowing unskilled personnel to perform any task on or with the equipment.

## © ADB SAFEGATE BVBA

This manual or parts thereof may not be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, nor otherwise, without ADB SAFEGATE BVBA's prior written consent.

This manual could contain technical inaccuracies or typographical errors. ADB SAFEGATE BVBA reserves the right to revise this manual from time to time in the contents thereof without obligation of ADB SAFEGATE BVBA to notify any person of such revision or change. Details and values given in this manual are average values and have been compiled with care. They are not binding, however, and ADB SAFEGATE BVBA disclaims any liability for damages or detriments suffered as a result of reliance on the information given herein or the use of products, processes or equipment to which this manual refers. No warranty is made that the use of the information or of the products, processes or equipment to which this manual refers will not infringe any third party's patents or rights. The information given does not release the buyer from making their own experiments and tests.

# TABLE OF CONTENTS

<b>1.0 Safety</b> .....	<b>1</b>
1.1 Safety Messages.....	1
1.1.1 Introduction to Safety.....	2
1.1.2 Intended Use.....	2
1.1.3 Material Handling Precautions: Storage.....	3
1.1.4 Arc Flash and Electric Shock Hazard.....	3
<b>2.0 Manual Introduction</b> .....	<b>5</b>
2.1 How to work with the manual.....	5
<b>3.0 RELIANCE ETPS-L Introduction</b> .....	<b>7</b>
3.1 Turnpad.....	7
3.2 ETPS-L Light: Required Equipment.....	8
<b>4.0 RELIANCE ETPS-L Installation</b> .....	<b>9</b>
4.1 Unpacking.....	9
4.2 Placement.....	9
4.2.1 Base Mounting.....	9
4.2.2 Light Base Mounting.....	10
4.3 Light Fixture Leveling.....	11
4.3.1 Align the Equipment.....	12
4.3.2 Final alignment check.....	12
<b>5.0 RELIANCE ETPS-L Maintenance</b> .....	<b>13</b>
5.1 Maintenance Safety.....	13
5.2 Maintenance Schedule.....	13
5.3 EMIL Lens Replacement.....	13
5.4 Troubleshooting.....	16
<b>6.0 RELIANCE ETPS-L Parts</b> .....	<b>19</b>
6.1 Parts Diagram.....	20
6.2 Spare Parts.....	23
<b>A.0 SUPPORT</b> .....	<b>25</b>
A.1 ADB SAFEGATE website.....	25
A.2 Recycling.....	26
A.2.1 Local authority recycling.....	26
A.2.2 ADB SAFEGATE recycling.....	26



# 1.0 Safety

## Introduction to Safety

This section contains general safety instructions for installing and using ADB SAFEGATE equipment. Some safety instructions may not apply to the equipment in this manual. Task- and equipment-specific warnings are included in other sections of this manual where appropriate.

## 1.1 Safety Messages

### HAZARD Icons used in the manual

For all HAZARD symbols in use, see the Safety section. All symbols must comply with ISO and ANSI standards.

Carefully read and observe all safety instructions in this manual, which alert you to safety hazards and conditions that may result in personal injury, death or property and equipment damage and are accompanied by the symbol shown below.



**WARNING**

Failure to observe a warning may result in personal injury, death or equipment damage.



**DANGER - Risk of electrical shock or ARC FLASH**

Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage. ARC Flash may cause blindness, severe burns or death.



**WARNING - Wear personal protective equipment**

Failure to observe may result in serious injury.



**WARNING - Do not touch**

Failure to observe this warning may result in personal injury, death, or equipment damage.



**CAUTION**

Failure to observe a caution may result in equipment damage.

### Qualified Personnel



**Important Information**

The term **qualified personnel** is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations and have been trained to safely install, operate, maintain and repair the equipment. It is the responsibility of the company operating this equipment to ensure that its personnel meet these requirements.

Always use required personal protective equipment (PPE) and follow safe electrical work practice.

### 1.1.1 Introduction to Safety



#### CAUTION

##### Unsafe Equipment Use

This equipment may contain electrostatic devices, hazardous voltages and sharp edges on components

- Read installation instructions in their entirety before starting installation.
- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Make this manual available to personnel installing, operating, maintaining or repairing this equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect equipment with safety devices as specified by applicable safety regulations
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

**Failure to follow this instruction can result in serious injury or equipment damage**

### Additional Reference Materials



#### Important Information

- IEC - International Standards and Conformity Assessment for all electrical, electronic and related technologies.
- IEC 60364 - Electrical Installations in Buildings.
- FAA Advisory: AC 150/5340-26 (current edition), Maintenance of Airport Visual Aid Facilities.
- Maintenance personnel must refer to the maintenance procedure described in the ICAO Airport Services Manual, Part 9.
- ANSI/NFPA 79, Electrical Standards for Metalworking Machine Tools.
- National and local electrical codes and standards.

### 1.1.2 Intended Use



#### CAUTION

##### Use this equipment as intended by the manufacturer

This equipment is designed to perform a specific function, do not use this equipment for other purposes

- Using this equipment in ways other than described in this manual may result in personal injury, death or property and equipment damage. Use this equipment only as described in this manual.

**Failure to follow this instruction can result in serious injury or equipment damage**



### 1.1.3 Material Handling Precautions: Storage



#### CAUTION

##### **Improper Storage**

Store this equipment properly

- If equipment is to be stored prior to installation, it must be protected from the weather and kept free of condensation and dust.

**Failure to follow this instruction can result in equipment damage**

### 1.1.4 Arc Flash and Electric Shock Hazard



#### DANGER

##### **Series Circuits have Hazardous Voltages**

This equipment produces high voltages to maintain the specified current - Do NOT Disconnect while energized.

- Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks.
- Only persons who are properly trained and familiar with ADB SAFEGATE equipment are permitted to service this equipment.
- An open airfield current circuit is capable of generating >5000 Vac and may appear OFF to a meter.
- Never unplug a device from a constant current circuit while it is operating; Arc flash may result.
- Disconnect and lock out electrical power.
- Always use safety devices when working on this equipment.
- Follow the recommended maintenance procedures in the product manuals.
- Do not service or adjust any equipment unless another person trained in first aid and CPR is present.
- Connect all disconnected equipment ground cables and wires after servicing equipment. Ground all conductive equipment.
- Use only approved ADB SAFEGATE replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.
- Check the interlock systems periodically to ensure their effectiveness.
- Do not attempt to service electrical equipment if standing water is present. Use caution when servicing electrical equipment in a high-humidity environment.
- Use tools with insulated handles when working with airfield electrical equipment.

**Failure to follow these instructions can result in death or equipment damage**



---

## 2.0 Manual Introduction

This manual shows the information necessary to:

- Install
- Carry Out Maintenance
- Carry Out Troubleshooting on the RELIANCE ETPS-L.

### 2.1 How to work with the manual

1. Familiarize yourself with the structure and content.
2. Carry out the actions completely and in the given sequence.
3. Read and follow all Safety messages.



## 3.0 RELIANCE ETPS-L Introduction

This section describes the RELIANCE ETPS-L light.

The ETPS-L Assemblies connected with standard metric pipe fittings.

### 3.1 Turnpad

#### Compliance with Standards

---

<b>ICAO:</b>	Annex 14, Vol. 1 (Current Edition)
--------------	------------------------------------

---

#### Uses

- ICAO**
- Elevated runway turning pads as defined in ICAO Annex 14, Vol. 1 (Current Edition)
  - Visual runways or non-precision IFR runways
  - Used to delineate the edges of airport turning pads.

#### Features & Benefits

- RELIANCE® omnidirectional elevated turnpad fixture provides constant light output with an input current range of 2.8 A - 6.6 A. Allows turning pad lights to be connected to existing runway edge circuits.
- Average LED life of 100.000 hours under high-intensity conditions and more than 180.000 hours under typical operating conditions, resulting in significant reduction or even elimination of ongoing maintenance costs and periodic re-lamping expenses.
- RELIANCE Turnpad with heater fixture MTBF is 180.000 operating hours minimum.
- Single-latch, stainless steel clamp allows easy removal and replacement of top cover and lens
- A gasket is used between the lens and the top cover and also between the top and bottom fixture head assemblies to form a watertight seal
- RELIANCE Turnpad with arctic option uses a thermostatically controlled heater to prevent ice and snow buildup from obscuring light output. Melts ice similar to traditional incandescent fixtures.
- Three screws allow a 4° leveling adjustment of the fixture after installation.
- Fixture comes standard with a 1.5-inch coupling, but is available with a 2-inch coupling and in alternative thread patterns.
- Sealed entry at cord set to optical assembly interface prevents insect entry.
- For additional features common to all ADB SAFEGATE's elevated LED fixtures .

#### Operating Conditions

Temperature:	-40°F to +131°F / -40°C to +55°C
Wind:	Withstands wind velocities up to 300 mph (480 kph)

## Power Supply

6.6 A through a 10/15 W or 30/45 W L-830 (for 60 Hz) or L-831 (for 50 Hz) isolation transformer. RELIANCE Turnpad lights have been designed to work with any IEC- or FAA-compliant transformer up to 100 W without affecting performance or lifetime of the light or the transformer.

Turning Pad Light	Fixture Load	Isolation Transfmr.	Isol. XF Load	CCR Load
W/out heater	8.1 VA	10/15 W	8 VA	16.1 VA
With heater	28.1 VA	30/45 W	9 VA	37.1 VA

## Packaging

Assembled Fixtures	Dimensions of cartons (H x W x D)		Indiv. Weight lb / kg
	Individual in / cm	15 per box in / cm	
14" OAH	20.5 x 6.5 x 6.5 / 52 x 17 x 17	19.5 x 23.5 x 15.75 / 50 x 60 x 40	5 lb / 2.3 kg
24" OAH	31 x 6.5 x 6.5 / 79 x 17 x 17	29.5 x 23.5 x 15.75 / 75 x 60 x 40	6.25 lb / 2.8 kg
30" OAH	37 x 6.5 x 6.5 / 94 x 17 x 17	36 x 23.5 x 15.7 / 91.5 x 60 x 40	7 lb / 3.2 kg

## Leveling Device Ordering Code

For accurate aiming and leveling, it is recommended to have one leveling device per airfield.



44A7645

For more information about the product, including manuals and certifications, please see our Product Center on the ADB SAFEGATE website, [www.adbsafegate.com](http://www.adbsafegate.com).

## 3.2 ETPS-L Light: Required Equipment

Refer to [Table 1](#) for required equipment that is supplied. Refer to [Table 2](#) for required equipment that is not supplied. Refer to the "RELIANCE ETPS-L Parts" section for part numbers.

**Table 1: Required Equipment Supplied**

Description	Quantity	Note
L-810(L) obstruction light	1	
Instruction manual	1	A

NOTE A - Additional copies of manual are available on the ADB Safegate Web site at [www.adbsafegate.com](http://www.adbsafegate.com).

**Table 2: Required Equipment Not Supplied**

Description	Quantity	Note
Wire, input power – 18AWG	As required	
Wire, Ground – 18AWG	As required	

## 4.0 RELIANCE ETPS-L Installation



### WARNING

Read installation instructions in their entirety before starting installation.

- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Make this manual available to personnel installing, operating, maintaining or repairing this equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

**Failure to follow these warnings may result in serious injury or equipment damage.**

This section provides instructions for installing the LED Turning Pad Light (ETPS-L) fixture. Refer to the airport project plans and specifications for the specific installation instructions.

### 4.1 Unpacking

The equipment is shipped ready for installation. Handle equipment very carefully to prevent component damage. Unpack the carton upon receipt and check the contents and their condition. Note any exterior damage to the carton that might lead to detection of equipment damage.

If you note any damage to any equipment, file a claim with the carrier immediately. The carrier may need to inspect the equipment.

### 4.2 Placement

This subsection describes the placement of the ETPS-L light fixtures.

#### ETPS-L Light Fixture Placement

Follow the guidelines below when placing the Turning Pad Light fixture.

- The ETPS-L light fixture is normally positioned along the airfield turning pad.
- See the site plans for your airport for exact placement and spacing.

#### 4.2.1 Base Mounting

L-861 light fixtures can be mounted on an L-867 base plate with a diameter and bolt-hole corresponding to either a 12-inch (304.8 mm) diameter L-867B base or a 16-inch (406.4 mm) diameter L-867D base plate per FAA AC 150/5345-46. The base plate is designed to receive a frangible coupling using a female thread. The standard coupling thread is 1-1/2 -12 UNF, optional thread is 2-11.5 NPT, and 2-11 TPI (ICAO application). A gasket is supplied with the base plate to form a watertight seal between the base plate and the L-867 light base per FAA AC 150/5345-46.



#### Note

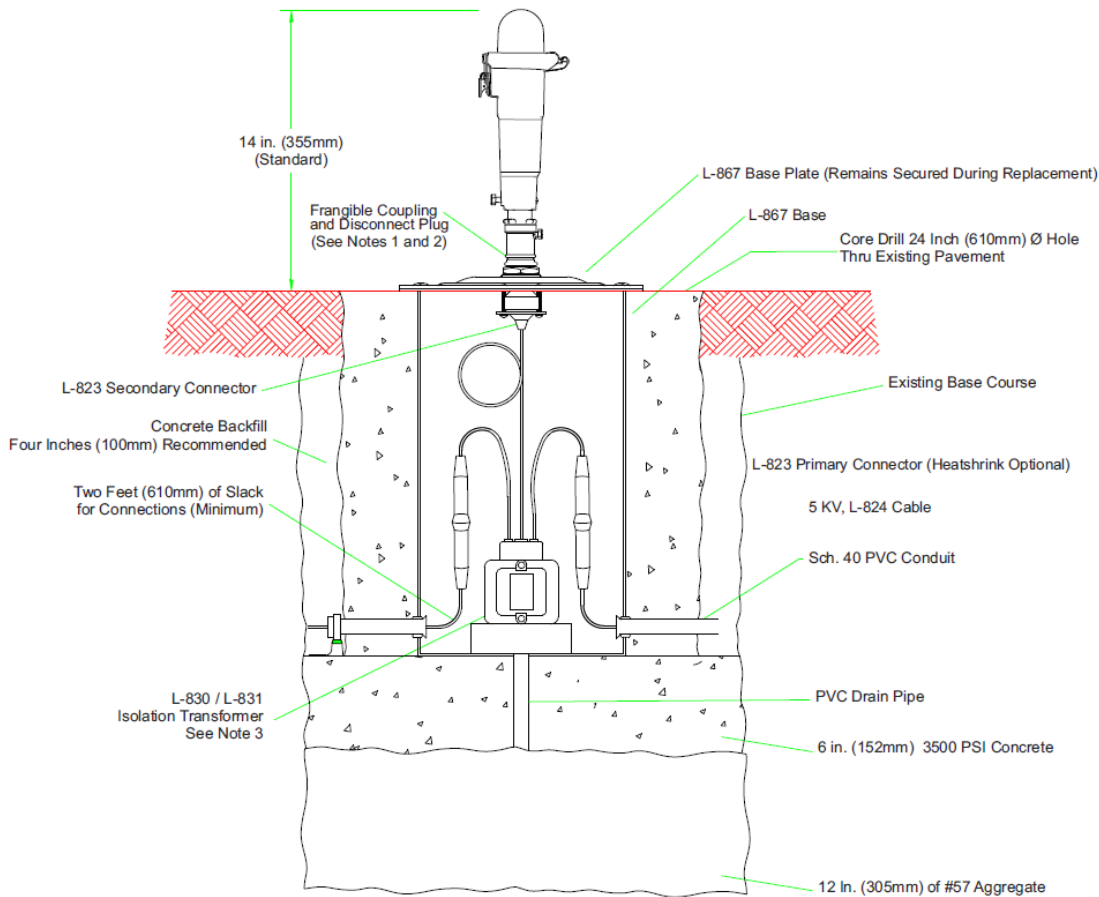
Install the base according to FAA Advisory Circular AC 150/5340-30 and site plans.

See Figure 1. The ETPS-L light fixtures can be mounted on an L-867 base mated with a base plate with a diameter and bolt-hole corresponding to either a 12-inch- or 16-inch- (304.8 or 406.4 mm) diameter L-867 base. The base plate is designed to receive a frangible coupling using a female thread.

**i Note**

1. The ETPS-L is available with couplings to fit new design or existing baseplate with various thread designations: See the ordering EMIL codes or speak to your ADB Safegate representative.
2. Apply anti-seize compound to threads of frangible coupling when installing new or replacing existing ETPS-L.
3. Existing L-830 / L-831 30W/45W transformer can be used or a 100W isolation transformer may be substituted.

**Figure 1: Base Mounting**



**Installation Notes**

1. Loosen set screw located on frangible coupling.
2. Back frangible coupling out of base plate or stake hub.
3. Unplug existing L-861 from L-823 connection.
4. Replace with LED, ETPS-L fixture.

**4.2.2 Light Base Mounting**

To install the base, perform the following procedure:

1. Install the L-867 base on undisturbed soil.  
If the soil is unsuitable, remove soil to an adequate depth and replace with compacted acceptable material.





### Note

In closed duct systems, install in soil conditions with good drainage. Use light bases having a drain hole to prevent water accumulation.

2. Orient the cable entrance hubs of the light base in the proper direction according to site plans.
3. Level the light base so that the mounting flange surface is level in all directions.
4. With the base at the proper orientation and held at proper elevation, place approximately 4 inches (102 mm) of concrete backfill around the outside base.



### Note

If the concrete backfill is omitted, the earth backfill must be compacted to maintain proper elevation and orientation of the base.

5. Slope the top of the concrete away from the flange portion of the base so the sloped outer edges of the concrete are at surface grade.
6. Hand screw the entire fixture onto the base plate.  
Finish tightening the fixture by using a wrench on the flat areas of the frangible coupling.
7. Place the assembled base plate/fixture close to the base can.
8. Connect the fixture leads to the isolation transformer.
9. Bolt the base plate with the base plate gasket to the L-867 base using six 3/8-16 stainless steel bolts.  
Apply a drop of Loctite number 243 to each bolt thread, and use a torque wrench to torque bolts down to 100-110 inch-pounds (11.3 N•m).



### Note

For TP312 Threshold/End light installation, see the airport specific drawings or consult your local airport authority for installation requirements.

## 4.3 Light Fixture Leveling



EMix leveling/aiming device 44A7645

Level the light fixture only after mounting the aiming device on the light base.

Depending on the position of the equipment, the reference mark may be another light in the same row or a stick installed for this purpose.

Usually, for runway edge lights another light of the same row is used. For threshold / runway end lights, a stick can be installed in the prolongation of the line of the threshold / runway end lights.

To level the light fixture, perform the following procedure:

1. place the aiming device over the glassware assembly.
2. Slightly loosen the three hex screws at the bottom of the housing.

Make certain that the alignment tool notch is centered on the ETPS raised alignment mark.



### Note

There are 4 alignment notches so that the tool can be located at any 90 degree increment.

---

3. Tighten the three hex screws finger tight.

Depending on the side and direction one is working, set the azimuth in order to look in the direction of the reference mark.

#### 4.3.1 Align the Equipment

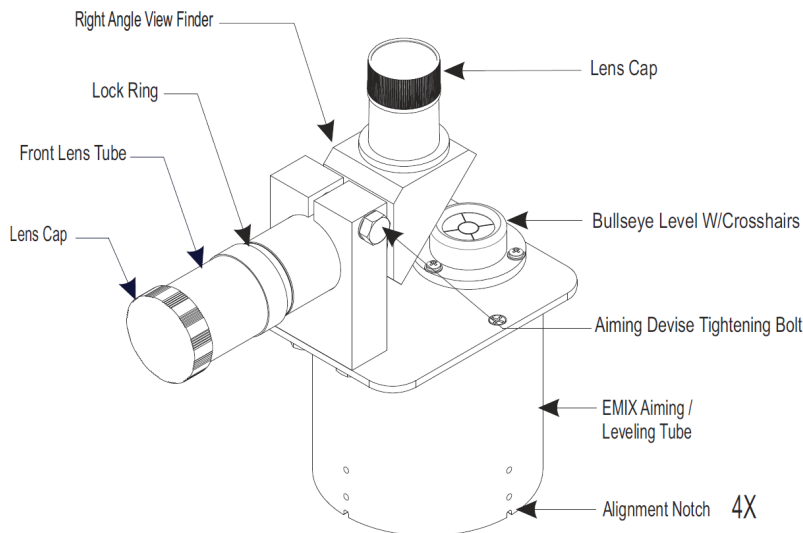
1. Loosen the retaining bolt.
  2. From the top down, look into the Aiming Device Eyepiece and turn the equipment until it aligns with the reference mark.
  3. While maintaining the fixture in this position, tighten.
  4. Check the level again.
  5. Carefully tighten the hex screws of the support (gradually, going round) while keeping the light in the right position. Make sure the light is firmly fixed.
  6. Check the Alignment again.
- 



### Note

In order to avoid repeating a possible mistake, it is advisable that the final check be made by another operator, or in a different order, than the original alignment.

---



#### 4.3.2 Final alignment check

1. From the top down, look into the Aiming Device Eyepiece and check that it aligns with the reference mark. If the alignment is not correct or if the equipment is not level, align or level the equipment.
2. Tighten all screws and nuts holding the light in place with the proper tools.

## 5.0 RELIANCE ETPS-L Maintenance

### 5.1 Maintenance Safety



#### DANGER

##### Electric Shock Hazard

This equipment may contain electrostatic devices

- Do not operate a system that contains malfunctioning components. If a component malfunctions, turn the system OFF immediately.
- Disconnect and lock out electrical power.
- Allow only qualified personnel to make repairs. Repair or replace the malfunctioning component according to instructions provided in its manual.

**Failure to follow these instructions can result in death or equipment damage**

### 5.2 Maintenance Schedule

To keep the ETPS-L light fixtures operating efficiently, follow a preventive maintenance schedule. Refer to [Table 1](#). Refer to FAA AC 150/5340-26 for additional recommendations.

**Table 3: L-861/L-861E Light Fixture Maintenance**

Interval	Maintenance Task	Action
Daily	Inspect for outages Check cleanliness of lenses	Repair as necessary Clean as necessary
Weekly	Check for vegetation.	Remove vegetation. Use weed killer.
Monthly	Check for misaligned fixture.	Straighten, level, and align.
Annually	Check for improper ground elevation. Check for improper light elevation. Check for corrosion present or paint loose or chipped. Check gaskets/seal for leakage	Grade so frangible point is approximately 1 inch (25 mm) above ground elevation. Maintain same elevation for all light fixtures. Scrape and repaint. Touch up paint as necessary. Replace gasket/seal if torn or damaged
Unscheduled	Make prediction of heavy snowfall, if necessary.	Use red flags or sticks to mark the location of fixtures to facilitate snow removal and lessen the chance of damage to fixtures by snow removal equipment.

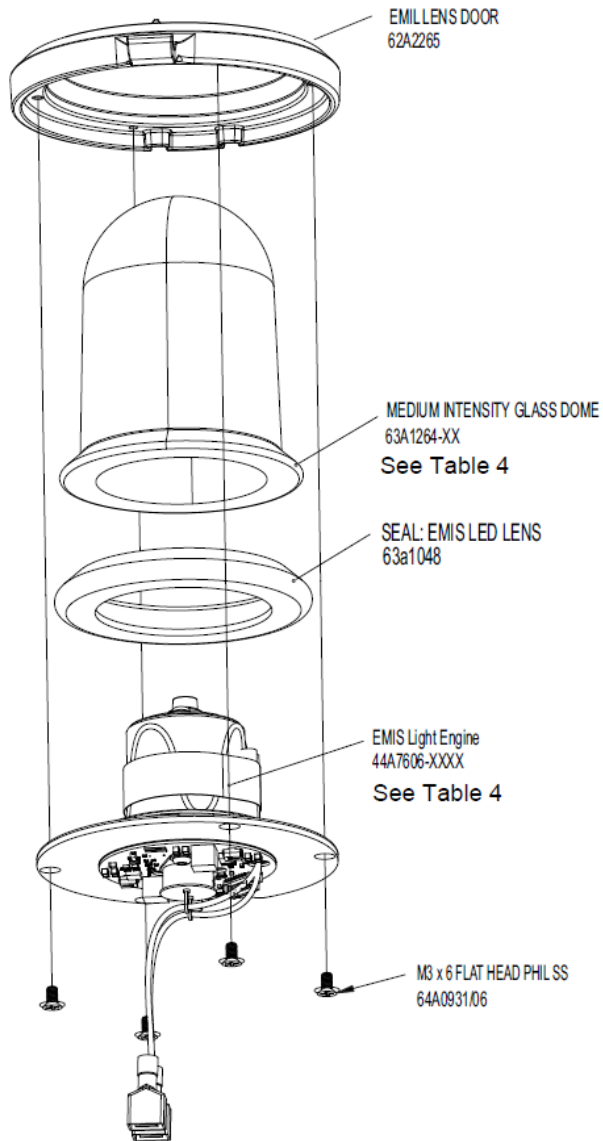
### 5.3 EMIL Lens Replacement

Before starting, read the entire procedure. A # 2 Phillips screw driver and, a Sharpie or equivalent is required.

1. Follow your airport's established lockout-tagout procedures to turn off the circuit of the fixture to be repaired.
2. Open the EMIL fixture by pulling the latch open.

Lift the top open from the latch.

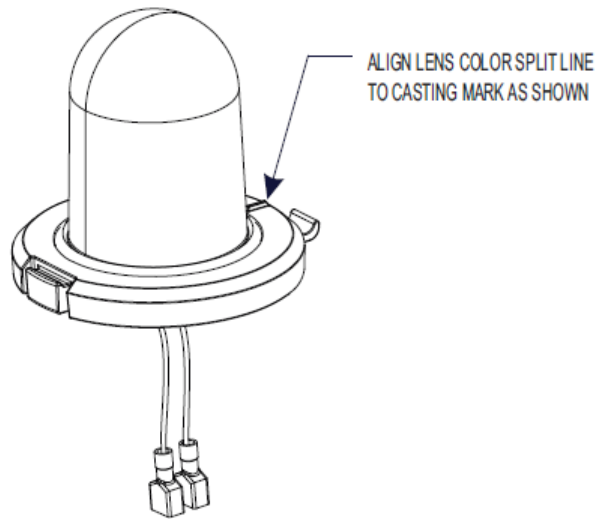
**Figure 2: The ETPS-L Optic Assembly**



3. Disconnect the heaters from the PCB if used.
4. Unhinge the top assembly and place on a non-abrasive surface.
5. Remove the 2 screws retaining the LED assembly.  
See [Figure 1](#).
6. Remove the gasket protecting the lens base.  
Replace the gasket if damaged.
7. Press firmly on the lens top to dislodge the lens and the lens seal gasket.
8. Remove the lens from the lens seal gasket.

Replace the gasket if damaged.

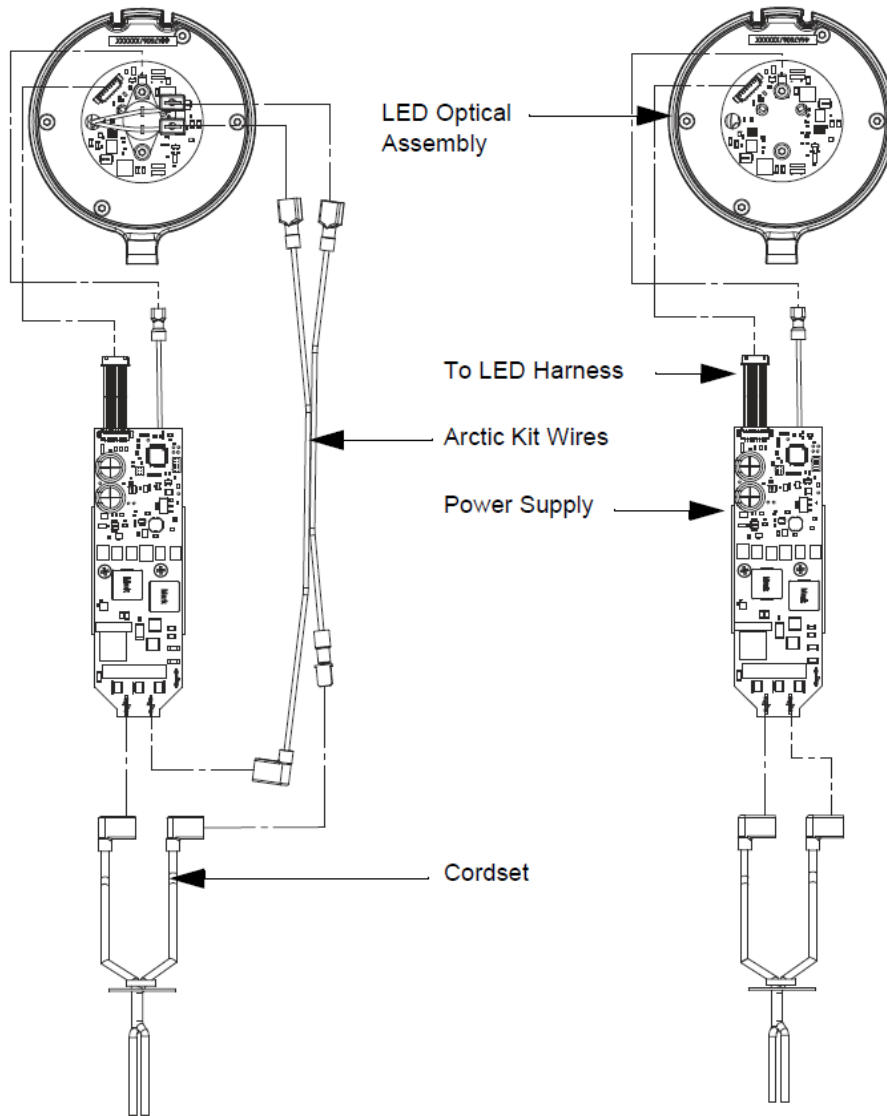
**Figure 3: Split Lens Alignment**



9. Place the new lens into the lens seal gasket.
10. Align the colors per the Aiming Profile as shown in [Figure 2](#).
11. Press this assembly into the top cover until it is seated correctly.  
See [Figure 2](#).
12. Install the gasket protecting the lens base.
13. Install the 2 screws retaining the PCB/top cover assembly.  
See [Figure 1](#).
14. Connect the heaters to the LED PCB if used.
15. Close the unit.
16. Connect the hinge of the top assembly.
17. Close the latch firmly.

Turn on the circuit of the fixture that was repaired after all other work is complete.

**Figure 4: Power Supply Connection**



## 5.4 Troubleshooting

This section contains troubleshooting information for the ETPS-L light fixtures. This information covers only the most common problems that you may encounter. If you cannot solve the problem with the information given here, contact your local ADB Safegate representative for help.

Refer below for troubleshooting procedures for the L-861, L-861E, L861SE LED Elevated Runway Edge Light (ETPS-L).

**Table 4: Troubleshooting Process**

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
1. LED will not turn on.	Defective LED	Replace LED Assembly.
	Loose connection(s)	Tighten wires.
	Transformer on series circuit bad	Replace the transformer.
2. Moisture present in fixture.	Broken lens or faulty gasket.	Open up and dry light fixture. Inspect lens for cracks. Replace gasket. Replace the LED assembly and any damaged parts.
3. Ice forming on lens.	Defective or missing arctic kit	Remove the glassware assembly and check to see if heating element is installed. If missing or defective install new arctic kit. See Spare Parts List in the catalog sheet.





## 6.0 RELIANCE ETPS-L Parts

To order parts, call ADB Safegate Customer Service Center or your local representative. Use the accompanying illustrations, part number callouts and descriptions to identify and order parts correctly.

### Ordering Code

E T P S 2 B B 0 X S I O X 0 0

#### Application

TP = Turning Pad Light

#### Lens Type

S = Glass

#### Cable and Connector

2 = 1 plug (2-pin)

#### Color - Left Side

B = Blue

#### Color - Right Side

B = Blue

0

#### 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
- 4 = 30 in (76.2 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
- 8 = 30 in (76.2 cm) with 2" coupling, 11.5 TPI
- 9 = 14 in (35.6 cm) with 2" coupling, 11 TPI<sup>1</sup>
- A = 20 in (50.8 cm) with 2" coupling, 11 TPI<sup>1</sup>
- B = 24 in (61.0 cm) with 2" coupling, 11 TPI<sup>1</sup>
- C = 30 in (76.2 cm) with 2" coupling, 11 TPI<sup>1</sup>

#### Power Supply

S = Current Driven, 50/60 Hz

#### Photometrics

I = ICAO only

0

#### Arctic Option

- 0 = Without arctic option
- 1 = With arctic option

0

#### Version

0 = Original version

#### Notes

<sup>1</sup> Normally used in metric applications

## 6.1 Parts Diagram

Figure 5: EMIS-L Assembly

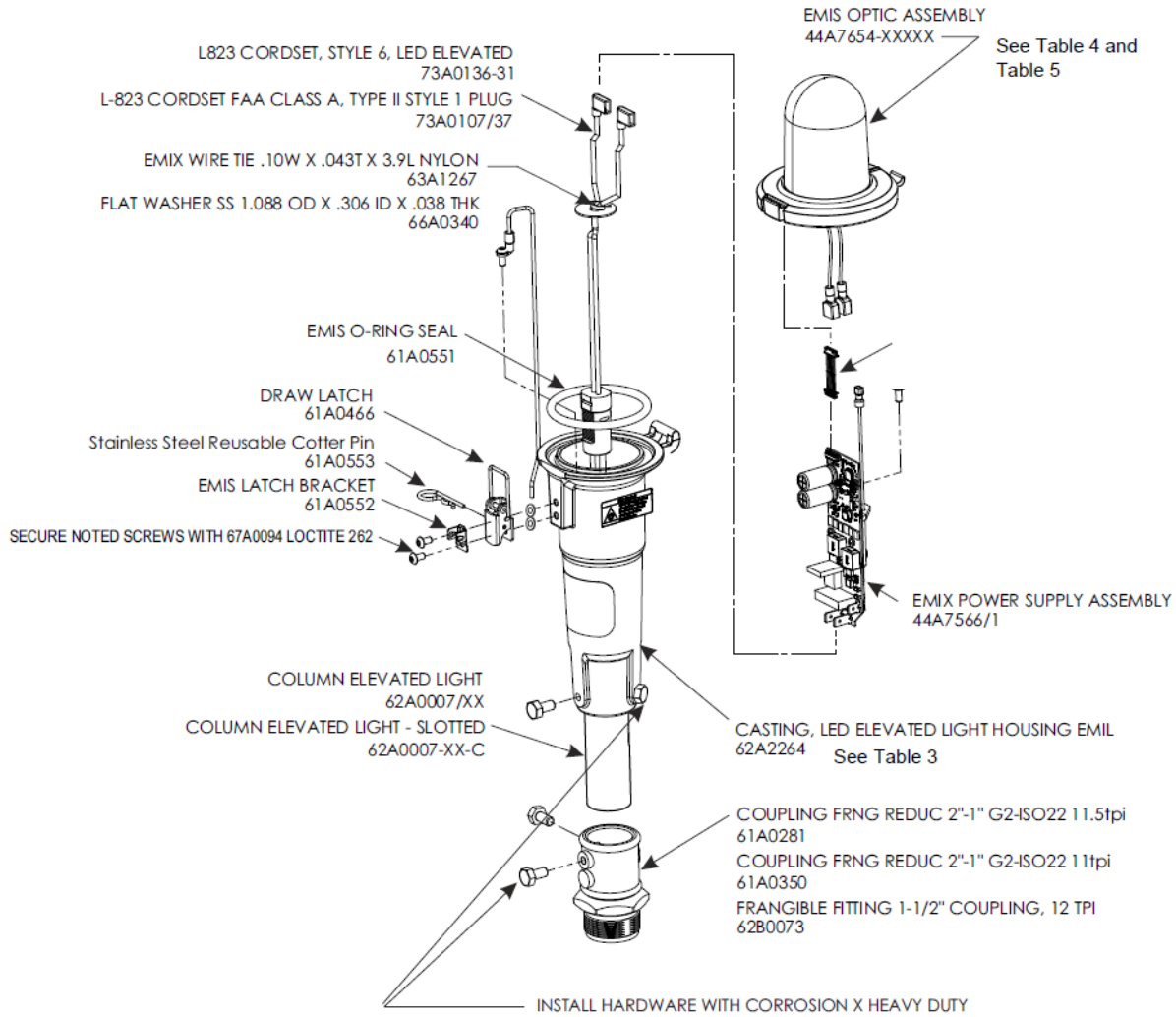
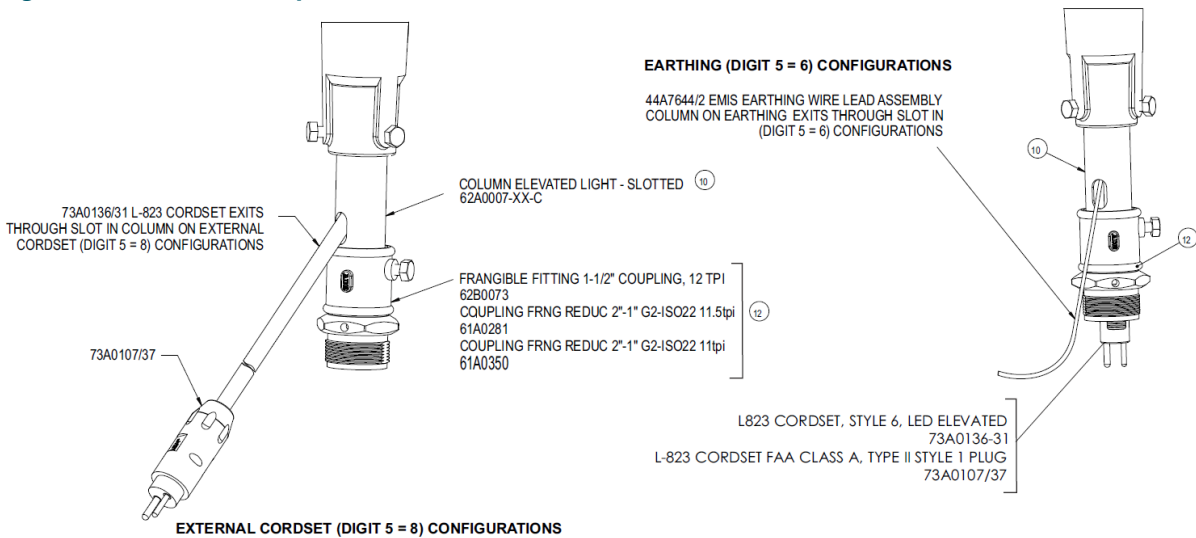


Figure 6: TP312 Column Options



**Table 5: Columns and Couplings**

TABLE B (DIGIT 9 & DIGIT 5)								
DIGIT 9 OAH/CPLG	DIGIT 5 = 2 OR 6				DIGIT 5 = 8		FRANGIBLE COUPLING	
	DIGIT 5 = 2 62A0007/XX COLUMN	DIGIT 5 = 6 62A0007/XX /C COLUMN	73A0136/31 CUT LENGTH "DIM X" .25 IN [6.4 mm]		COLUMN 62A0007/XX /X	73A0107/37 CUT LENGTH "DIM X" .25 IN [6.4 mm]		
1	/3	/3/C	9.25 IN	235 mm		17.88 IN	454.2 mm	62B0073
2	/27	/27/C	15.25 IN	387.4 mm		23.88 IN	606.6 mm	
3	/13	/13/C	19.38 IN	492.3 mm		28.00 IN	711.2 mm	
4	/19	/9/C	25.38 IN	644.7 mm		33.12 IN	841.3 mm	
5	/3	/3/C	9.25 IN	235 mm	/3/C	17.88 IN	454.2 mm	61A0281
6	/27	/27/C	15.25 IN	387.4 mm		23.88 IN	606.6 mm	
7	/13	/13/C	19.38 IN	492.3 mm	/13/C	28.00 IN	711.2 mm	
8	/19	/19/C	25.38 IN	644.7 mm	/19/C	33.12 IN	841.3 mm	
9	/3	/3/C	9.25 IN	235 mm		17.88 IN	454.2 mm	61A0350
A	/27	/27/C	15.25 IN	387.4 mm		23.88 IN	606.6 mm	
B	/13	/13/C	19.38 IN	492.3 mm		28.00 IN	711.2 mm	
C	/19	/19/C	25.38 IN	644.7 mm		33.12 IN	841.3 mm	
D	/7.9	/7.9/C	14.00 IN	355.6 mm		22.38 IN	568.5 mm	62B0073
E	/7.9	/7.9/C	14.00 IN	355.6 mm		22.38 IN	568.5 mm	61A0281
F	/7.9	/7.9/C	14.00 IN	355.6 mm		22.38 IN	568.5 mm	61A0350
G	/3	/3/C	9.25 IN	235 mm	/3/C	17.88 IN	454.2 mm	-

**Table 6: Optic Assembly Combinations / Codes**

EMIX Digit 11	Right	Left	Opt Assem 44A7654/XXXXX	Dome 63A1264/XX	Light Engine 44A7606/XXXX	Type		
0	W	W	1WWX0	CC	11X0	L-861		
	W	Y	1WYX0	CY				
	W	R	1WRX0	CD				
	Y	O	1YOX0	YO				
	W	O	1WOX0	CO				
	Y	Y	1YYX0	YY				
	Y	R	1YRX0	YD	12X0	L-861E		
	Y	G	1YGX0	YG				
	W	G	1WGX0	CG				
	I	R	R	ERRX0	RR		E2X0	ICAO TPL
		R	G	ERGX0	RG		E1X0	
		R	O	EROX0	RO		E4X0	
G		O	EGOX0	GO	E3X0			
B		B	TBBX0	BB	T1X0			

**Table 6: Optic Assembly Combinations / Codes (continued)**

EMIX Digit 11	Right	Left	Opt Assem 44A7654/XXXXX	Dome 63A1264/XX	Light Engine 44A7606/XXXX	Type
C	R	R	CRRX0	RR	C1X0	TP312
	R	G	CRGX0	RG	C2X0	
	R	O	CROX0	RO	C3X0	
	G	O	CGOX0	GO	C4X0	

**Table 7: Possible Color Combinations**

TABLE A (DIGITS 6, 7 & 11)					
DIGIT 6	DIGIT 7	DIGIT 11	44A7654/XXXXX OPTIC ASSEMBLY	REFERENCE INFO	TYPE
W	W	0	1WWX0	L-861	
W	Y	0	1WYX0		
W	R	0	1WRX0		
W	G	0	1WGX0		
W	N(O)	0	1WOX0		
Y	Y	0	1YYX0		
Y	R	0	1YRX0		
Y	G	0	1YGX0		
Y	N(O)	0	1YOX0		
R	R	0	ERRX0	L-861E	
R	G	0	ERGX0		
N(O)	R	0	EORX0		
N(O)	G	0	EOGX0		
R	G	F	SRGX0	L-861SE	
N(O)	G	F	SOGX0		
R	R	C	CRRx0	TP312 Threshold/End	
R	G	C	CRGX0		
R	N(O)	C	CROX0		
G	N(O)	C	CGOX0		

**Note**

1. Digit 6 & 7 color combinations shown are the only combinations possible. ex: green/red is not possible since red/green is shown.

## 6.2 Spare Parts

**Table 8: ETPS-L Spare Parts**

Description	Part No.	Notes
Column for 14" OAH	62A0007-3	
Column for 18" OAH	62A0007-7.9	
Column for 20" OAH	62A0007-27	See <a href="#">Figure 4</a> and <a href="#">Figure 6</a>
Column for 24" OAH	62A0007-13	
Column for 30" OAH	62A0007-19	
Spare EMIS Cordset Assembly 14"	44A7663-14	
Spare EMIS Cordset Assembly 18"	44A7663-18	
Spare EMIS Cordset Assembly 20"	44A7663-20	See <a href="#">Figure 6</a> and <a href="#">Figure 7</a>
Spare EMIS Cordset Assembly 24"	44A7663-24	
Spare EMIS Cordset Assembly 30"	44A7663-30	
Spare ICAO TP312 internal Cordset plus External Earthing Wire	44A7663/XX/G	See <a href="#">Figure 6</a> and <a href="#">Figure 7</a>
Spare ICAO TP312 External Cordset	44A7663/XX/E	See <a href="#">Figure 6</a> and <a href="#">Figure 7</a>
Frangible coupling, 1.5 inch, 12 TPI	62B0073	
Frangible coupling, 2 inch, 11.5 TPI	61A0281	See <a href="#">Figure 6</a>
Frangible coupling, 2 inch, 11 TPI	61A0350	
EMIS Optical Assembly	44A7654-xxxxx	See <a href="#">Table 5</a>
Medium Intensity Glass Lens	63A1264-xx	See <a href="#">Table 5</a>
Seal, lens	63A1048	See <a href="#">Figure 1</a>
Lens Door	62A2265	See <a href="#">Figure 1</a>
Seal, top to bottom cover	61A0551	See <a href="#">Figure 4</a>
Power supply with bracket	44A7566-1	See <a href="#">Figure 4</a>
LED assembly	44A7606-xxxx	See <a href="#">Table 5</a>
Arctic Wire Lead Assembly	44A7644-3	
Stainless Steel Cotter Pin	61A0553	See <a href="#">Figure 4</a>

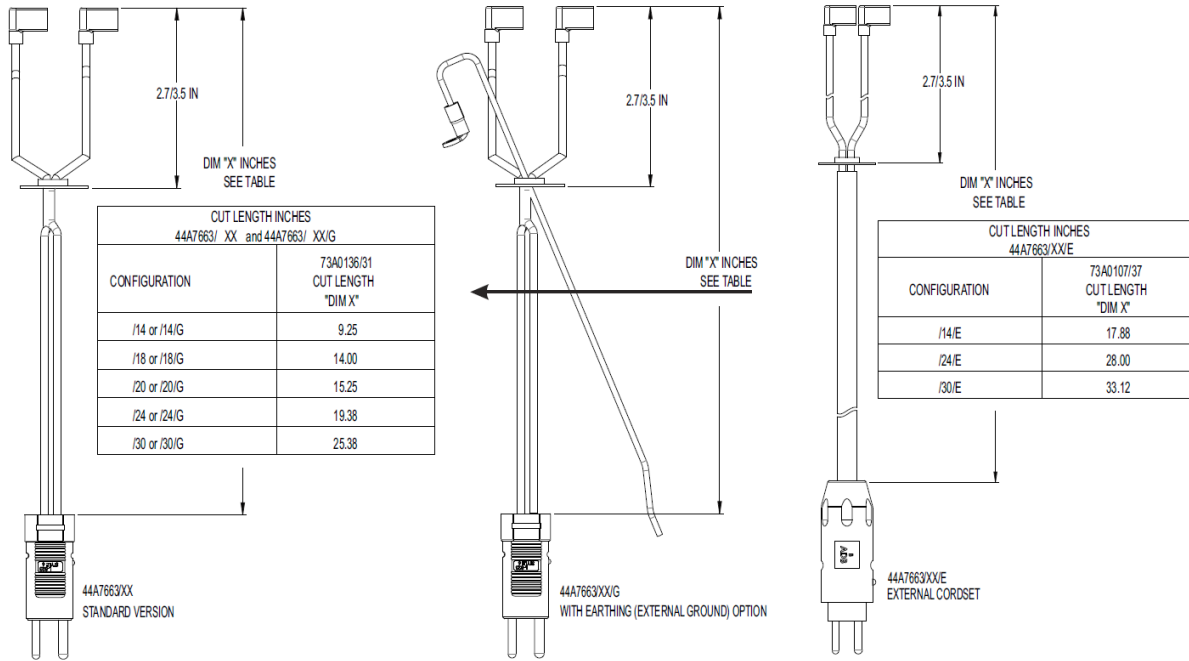
**ETPS-L Leveling Device**  
**Ordering Code**

For accurate aiming and leveling, it is recommended to have one leveling device per airfield.



**44A7645**

**Figure 7: Cordsets**



## Appendix A: SUPPORT

Our experienced engineers are available for support and service at all times, 24 hour/7 days a week. They are part of a dynamic organization making sure the entire ADB SAFEGATE is committed to minimal disturbance for airport operations.

**Table 9: ADB SAFEGATE Support**

### Live Technical Support - Americas

If at any time you have a question or concern about your product, just contact ADB SAFEGATE's technical service department. Trained in all areas of system issues, troubleshooting, quality control and technical assistance, our highly experienced Technical support specialists are available 24 hours a day, seven days a week to provide assistance over the phone.

**ADB SAFEGATE Americas Technical Service & Support (US & Canada): +1-800-545-4157**

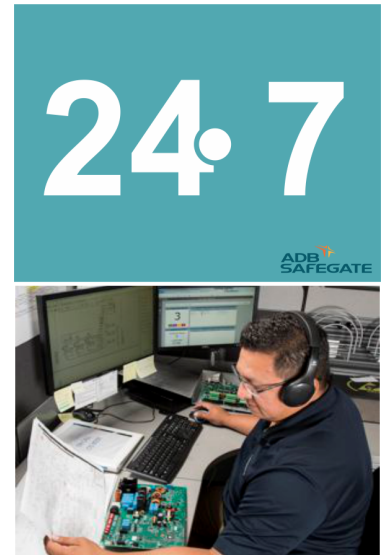
**ADB SAFEGATE Americas Technical Service & Support (International): +1-614-861-1304**

During regular business hours, you can also Chat with a Service Technician. We look forward to working with you!

### Before You Call

When you have an airfield lighting or system control system problem it is our goal to support airfield maintenance staff as quickly as possible. To support this effort we ask that you have the following information ready before calling.

- The airport code
- If not with an airport, then company name (prefer customer id number)
- Contact phone number and email address
- Product with part number preferable or product number
- Have you reviewed the product's manual and troubleshooting guide
- Do you have a True RMS meter available (and any other necessary tools)
- Be located with the product ready to troubleshoot



### Note

For more information, see [www.adbsafegate.com](http://www.adbsafegate.com), or contact ADB SAFEGATE Support via email at [support@adbsafegate.com](mailto:support@adbsafegate.com) or

Brussels: +32 2 722 17 11

Rest of Europe: +46 (0) 40 699 17 40

Americas: +1 614 861 1304. Press 3 for technical service or press 4 for sales support.

China: +86 (10) 8476 0106

### A.1 ADB SAFEGATE website

The ADB SAFEGATE website, [www.adbsafegate.com](http://www.adbsafegate.com), offers information regarding our airport solutions, products, company, news, links, downloads, references, contacts and more.

## A.2 Recycling

### A.2.1 Local authority recycling

The disposal of ADB SAFEGATE products is to be made at an applicable collection point for the recycling of electrical and electronic equipment. The correct disposal of equipment prevents any potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling. The recycling of materials helps to conserve natural resources. For more detailed information about recycling of products, contact your local authority city office.

### A.2.2 ADB SAFEGATE recycling

ADB SAFEGATE is fully committed to environmentally-conscious manufacturing with strict monitoring of our own processes as well as supplier components and sub-contractor operations. ADB SAFEGATE offers a recycling program for our products to all customers worldwide, whether or not the products were sold within the EU.

ADB SAFEGATE products and/or specific electrical and electronic component parts which are fully removed/separated from any customer equipment and returned will be accepted for our recycling program.

All items returned must be clearly labelled as follows:

- For ROHS/WEEE Recycling
- Sender contact information (Name, Business Address, Phone number).
- Main Unit Serial Number.

ADB SAFEGATE will continue to monitor and update according for any future requirements for EU directives as and when EU member states implement new regulations and or amendments. It is our aim to maintain our compliance plan and assist our customers.







## Powering Your Airport Performance from Approach to Departure

[adbsafegate.com](https://adbsafegate.com)

Copyright © ADB SAFEGATE, all rights reserved

