AXON Runway Inset Lights, 8-inch and 12-inch

Runway Centerline, L-850A(L); Runway Touchdown Zone, L-850B(L); Runway Edge 45 m, L-850C(L); ICAO Runway Edge 60 m; FAA L-850D(L) Threshold and Threshold/End; Runway End, L-850D(L); Runway Takeoff/Hold Light, L-850T(L); ICAO Stopway 45 m; ICAO Stopway 60 m; ICAO Rapid Exit Taxiway Indicator Light; Runway Guard Light, L-852G(L);

User Manual

UM-5055, Rev. 1.2.30, 2025/05/23

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 European 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 C22.2 No.180:13 (R2018) regulations. The CSA directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

All Products Guarantee

ADB SAFEGATE will correct by repair or replacement per the applicable guarantee below, 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 furthers 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.

Standard Products Guarantee

Products manufactured by ADB SAFEGATE are guaranteed against mechanical, electrical, and physical defects (excluding lamps) which may occur during proper and normal use for a period of two years from the date of ex-works delivery, and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made.

Note

See your applicable sales agreement for a complete warranty description.

Replaced or repaired equipment under warranty falls into the warranty of the original delivery. No new warranty period is started for these replaced or repaired products.

FAA Certified products manufactured by ADB SAFEGATE

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).

ADB SAFEGATE LED products (with the exception of obstruction lighting) are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years from date of installation, per FAA EB67 (applicable edition). These FAA certified constant current (series) powered LED products must be installed, interfaced and powered with and through products certified under the FAA Airfield Lighting Equipment Program (ALECP) to be included in this 4 (four) year warranty. This includes, but is not limited to, interface with products such as Base Cans, Isolation Transformers, Connectors, Wiring, and Constant Current Regulators.

Note

See your sales order contract for a complete warranty description.

Replaced or repaired equipment under warranty falls into the warranty of the original delivery. No new warranty period is started for these replaced or repaired products.

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.

Copyright Statement

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 the author's prior written consent.

This manual could contain technical inaccuracies or typographical errors. The author reserves the right to revise this manual from time to time in the contents thereof without obligation of the author 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 the author 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

List of Figures

List of Tables

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.
	ELECTROSTATIC SENSITIVE DEVICES This equipment may contain electrostatic devices.

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.
- CSA – C22.2 No.180:13 (R2018), series isolating transformers for airport lighting.
- 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 Operation Safety

CAUTION

Improper Operation
Do Not Operate this equipment other than as specified by the manufacturer

- Only qualified personnel, physically capable of operating the equipment and with no impairments in their judgment or reaction times, should operate this equipment.
- Read all system component manuals before operating this equipment. A thorough understanding of system components and their operation will help you operate the system safely and efficiently.
- Before starting this equipment, check all safety interlocks, fire-detection systems, and protective devices such as panels and covers. Make sure all devices are fully functional. Do not operate the system if these devices are not working properly. Do not deactivate or bypass automatic safety interlocks or locked-out electrical disconnects or pneumatic valves.
- 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.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Never operate equipment with a known malfunction.
- Do not attempt to operate or service electrical equipment if standing water is present.
- Use this equipment only in the environments for which it is rated. Do not operate this equipment in humid, flammable, or explosive environments unless it has been rated for safe operation in these environments.
- Never touch exposed electrical connections on equipment while the power is ON.

Failure to follow these instructions can result in equipment damage

1.1.5 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

1.1.6 Material Handling Precautions: Fasteners

DANGER

FOREIGN OBJECT DAMAGE - FOD
THIS EQUIPMENT MAY CONTAIN FASTENERS THAT MAY COME LOOSE - TORQUE PROPERLY.

- ONLY USE FASTENERS OF THE SAME TYPE AS THE ONE ORIGINALLY SUPPLIED WITH THE EQUIPMENT.
- USE OF INCORRECT COMBINATION OF GASKETS, BOLTS AND NUTS CAN CREATE SEVERE DAMAGES TO THE PRODUCT INSTALLATION AND CREATE SAFETY RISK .
- YOU NEED TO KNOW WHAT BASE THE LIGHT FIXTURE WILL BE INSTALLED IN, IN ORDER TO CHOSE THE CORRECT GASKET, BOLTS AND NUTS.
- BOLT TYPE, LENGTH, AND TORQUE VALUE ARE DETERMINED BY TYPE OF BASE, HEIGHT OF SPACERS USED, AND CLAMP FORCE REQUIRED IN FAA ENGINEERING BRIEF NO 83 (LATEST REVISION).
- DUE TO THE RISK OF BOLTS VIBRATING LOOSE, DO NOT USE ANY TYPE OF WASHER WITH THE FIXING BOLTS (SUCH AS SPLIT LOCK WASHERS) OTHER THAN AN ANTI-VIBRATION WASHER. ANTI-VIBRATION WASHERS AS DEFINED IN FAA EB 83 (LATEST EDITION) MUST BE USED. FOR INSTALLATIONS OTHER THAN FAA, USE THE BASE CAN MANUFACTURER'S RECOMMENDATIONS.
- ALWAYS TIGHTEN THE FASTENERS TO THE RECOMMENDED TORQUE. USE A CALIBRATED TORQUE WRENCH AND APPLY THE RECOMMENDED ADHESIVE TYPE.
- OBEY THE INSTRUCTIONS OF THE ADHESIVES NECESSARY FOR THE FASTENERS.

FAILURE TO FOLLOW THESE WARNINGS MAY CAUSE THE FASTENERS TO LOOSEN, DAMAGE THE EQUIPMENT, POTENTIALLY TO LOOSEN THE EQUIPMENT. THIS CAN LEAD TO A HIGHLY DANGEROUS SITUATION OF FOD, WITH POTENTIAL LETHAL CONSEQUENCES.

Note

To minimize the risk of errors, the ADB SAFEGATE Sales Representative will have information on which gasket goes with which base. This information is also provided in the product Data sheets, the User Manuals and the Spare Part Lists.

CAUTION

Use of incorrect combination of gaskets, bolts and nuts can create severe damages to the product installation and create multiple safety risks.

To obtain a safe and watertight installation the O - ring and retaining bolt stated in the document must be used.

You need to know what base the light fixture will be installed in, in order to choose the correct gasket, bolts and nuts.

Failure to follow these cautions can result in equipment damage or aircraft FOD.

1.1.7 Material Handling Precautions, ESD

CAUTION

Electrostatic Sensitive Devices
This equipment may contain electrostatic devices

- Protect from electrostatic discharge.
- Electronic modules and components should be touched only when this is unavoidable e.g. soldering, replacement.
- Before touching any component of the cabinet you shall bring your body to the same potential as the cabinet by touching a conductive earthed part of the cabinet.
- Electronic modules or components must not be brought in contact with highly insulating materials such as plastic sheets, synthetic fiber clothing. They must be laid down on conductive surfaces.
- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.

Failure to follow this instruction can result in equipment damage

2.0 About this Manual

This document includes AXON runway inset light fixture information with a focus on safety, installation and maintenance procedures.

For more information, see www.adbsafegate.com.

Note
It is very important to read this document before any work is started.

This manual covers the following 12-inch and 8-inch light fixtures:

- ICAO and FAA L-850A(L) Runway Centerline, 12-inch and 8-inch (RC)
- ICAO and FAA L-850B(L) Runway Touchdown Zone, 12-inch and 8-inch (RZ)
- ICAO and FAA L-850C(L) 45 m Runway Edge, 12-inch (RE)
- ICAO Runway Edge 60 m, 12-inch (R6)
- ICAO and FAA L-852G(L) Runway Guard Light, 12-inch and 8-inch (RG)
- FAA L-850D(L) Runway End, 12-inch (RN)
- FAA L-850D(L) Threshold and Threshold/End, 12-inch (RT)
- ICAO Stopway 45 m, 12-inch (SW)
- ICAO and FAA L-850T(L) Runway Takeoff/Hold (THL) and Runway Intersection (RIL), 12-inch and 8-inch (RS)
- ICAO Rapid Exit Taxiway Indicator Light (RETIL), 12-inch and 8-inch (RY)
- ICAO Stopway 60 m, 12-inch (S6)

2.1 How to work with the Manual

- Familiarize yourself with the structure and content.
- Carry out the actions completely and in the given sequence.

2.2 Abbreviations and Terms

This document may include the abbreviations and terms listed below.

Abbreviation and term	Description
AGL	Airfield Ground Lighting
ANSI	American National Standards Institute
ATM	Air Traffic Movement
CCR	Constant Current Regulator
EASA	European Union Aviation Safety Agency
FAA	Federal Aviation Administration
ICAO	International Civil Aviation Organization
IEC	International Electrotechnical Committee
IEEE	Institute of Electrical and Electronics Engineers
ILCMS	Individual Light Control and Monitoring System
LED	Light Emitting Diode
NATO	North Atlantic Treaty Organization
OFDM	Orthogonal Frequency Division Multiplexing
PWM	Pulse Width Modulation
STAC	Service Technique de l'Aviation Civile (France
STANAG	Standardization Agreement (NATO)

3.0 Introduction

The all-in-one solution

The 8-inch and 12-inch range is a bi- or unidirectional low protrusion light-emitting diode (LED) inset light fixture, available in multiple versions:

Non-MON

Basic operation providing power only

MON (Fail-open)

A LED light fixture with integrated fail open technology with CCR monitoring compatibility

IQ

Integrated intelligence (IQ) with built-in converter for individual monitoring and control, based on RELIANCE Intelligent Light Control and Monitor System (ILCMS)

NOTICE

All Axon light fixtures are equipped with failed LED detection monitoring as required by FAA Engineering Brief 67.

Figure 1: 8-Inch and 12-Inch Fixtures

3.1 Product Information

Compliance and Standards

Compliance	Description	RC-RZ	RE 45 m	R6	RG	RN-RT FAA
Reference DS-XXXX:		**5040**	**5041**	**5042**	**5043**	**5044**
FAA	AC 150/5345-46 and the FAA Engineering Brief No. 67	X	X		X	X
ICAO	Annex 14 Volume 1	X	X	X	X	
EASA	CS-ADR-DSN	X	X	X		
Australia	MOS 139	X	X	X		
Canada	TP 312	X	X	X	X	
IEC	61827	X	X	X	X	X
NATO	STANAG 3316	X	X	X		
STAC	PRO/STAC/SE/VIS	X	X	X		
UK	CAP 168	X	X			
CE		X	X	X	X	X

Compliance	Description	SW 45 m ICAO	RS	RY	S6 60 M ICAO
Reference DS-XXXX:		**5047**	**5070**	**5092**	**5097**
FAA	AC 150/5345-46 and the FAA Engineering Brief No. 67		X		
ICAO	Annex 14 Volume 1	X	X	X	X
EASA	CS-ADR-DSN				
Australia	MOS 139	X			X
Canada	TP 312			X	
IEC	61827	X		X	X
NATO	STANAG 3316			X	
STAC	PRO/STAC/SE/VIS				
UK	CAP 168				
CE		X	X	X	X

Uses RC-RZ

ICAO

- Runway centerline
- Touchdown zone

FAA

- L-850A(L) Runway centerline
- L-850B(L) Touchdown zone

Uses RE 45 m

ICAO

- Runway edge ≤ 45 m width runway

FAA

- L-850C(L) Runway edge
- L-850C(L) Displaced threshold

Uses R6 60 m

ICAO

- Runway edge ≤ 60 m width runway

Uses RN, RT FAA

FAA

- L-850D(L) Runway threshold
- L-850D(L) Runway end
- L-850D(L) Runway threshold/end (bidirectional green and red)

Uses RS TS

FAA Runway Status Light (RWSL) Applications

- REL Runway Entry Light

Uses SW 45 m

ICAO and MOS

- Stopway 45 m Wide Runway

Uses S6 60 m

ICAO

- Stopway 60 m Width Runway

Uses RY

ICAO

- Rapid Exit Taxiway Indicator Light (RETIL)

Uses RG

ICAO

- Runway guard light

FAA

- Runway guard light

Features and Benefits

Efficiency

- EQ has an integrated ILCMS remote for use with the LINC 360 system providing high data capacity and resisting degradation from various types of radio effects to provide a superior communication platform
- Precision aimed optics enhancing photometric performance and complementing extended LED life
- Reduced bottom pan profile allowing for very shallow base can installation
- LED pulse width modulated (PWM) at 400 Hz optimizing LED performance and eliminating perceptible flicker to a moving human observer throughout the range of brightness steps
- Operates at all steps of constant current regulator technologies designed in compliance with IEC or FAA requirements
- Fully dimmable lights, conforming to the dimming curve of traditional halogen lights
- Low protrusion, high-intensity, Style 3 (≤ 6.35 mm) inset light fixtures
- No negative slope in front of the prisms

Sustainability

- Fully encapsulated all-in-one universal power supplies for Runway, Taxiway, Approach and Omni inset families
- Latest generation LEDs providing a long-lasting light source with high efficiency and low power consumption
- Reinforced top cover substantially exceeding standards to improve durability and longevity
- One single family of fixtures covering all runway, taxiway and approach applications
- IP68 rated enclosure designed for harsh environments; all fastenings are stainless steel
- Reinforced prism available as an option
- Compatible with existing infrastructure allowing for direct replacement of existing LED inset fixtures

Safety

- Improved mechanical design to strengthen and consolidate components, improving the customer maintenance experience
- Fail-open option for compatibility with legacy monitoring systems and optimization of advanced control and monitoring systems
- Failed-LED Detection as required by Engineering Brief 67D
- Robust lightning protection complying with ANSI/IEEE C62.41-1991; Location Category C2 as required by FAA Eng. Brief 67 Category C2 is defined as a 1.2/50 µS – 8/20 µS combination wave, with a peak voltage of 10,000 V and a peak current of 5,000 A

Power Supply Options

- Non-Monitored — Power only
- Monitored — Integrated Fail-open technology
- EQ with integrated ILCMS with OFDM technology for use with LINC 360 system

Maintenance and Installation

The light fixture can be installed on an 8-inch or 12-inch base. Gaskets are sold separately. Check what gasket and bolts to order depending on base and installation. Refer to the interoperability section of the user manual for installation on a specific base.

Operating Conditions

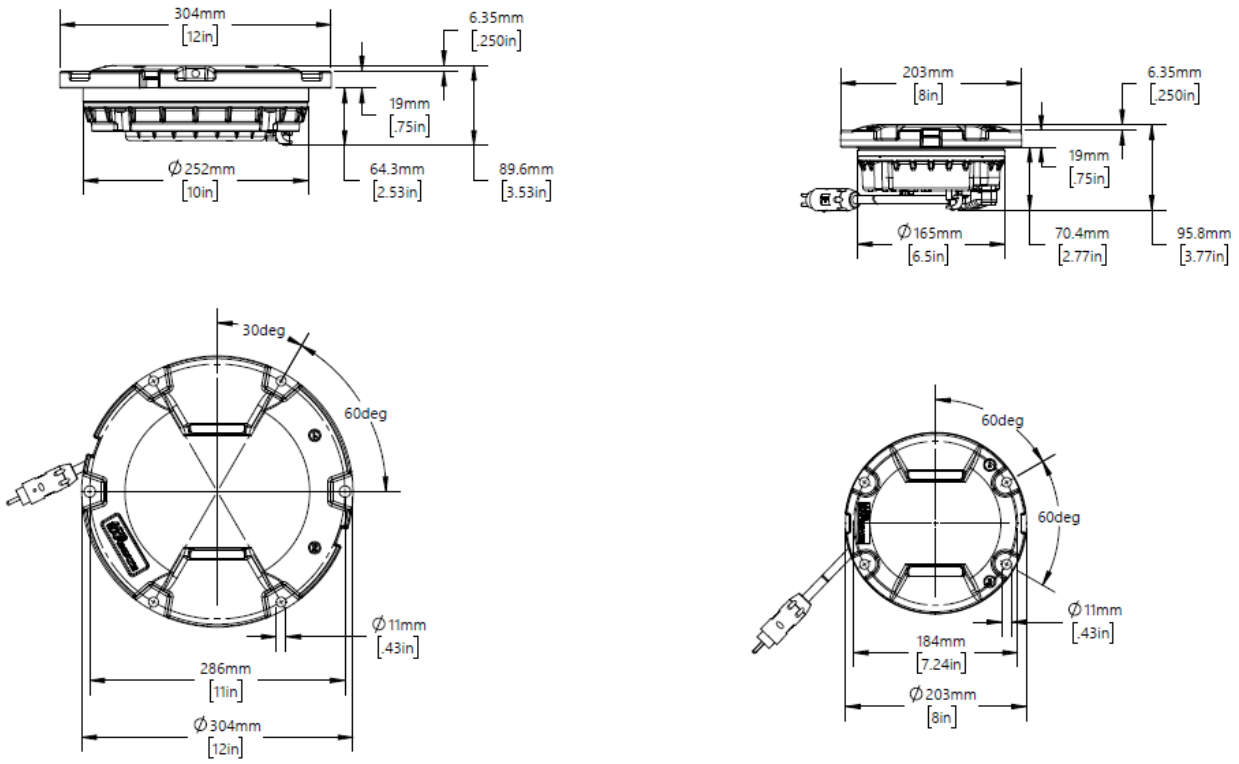
Operating temperature	-60 °C to +55 °C / -76 °F to +131 °F
Storage temperature	-60 °C to +80 °C / -76 °F to +176 °F
Humidity	Up to 100%

3.2 Dimensions and Weight

The weight and measurement [A] depends on version of the light fixture.

Version	Weight	Dimension
ICAO/FAA RC – RZ – RG – RS **ICAO RY**	3 kg / 6.6 lb (8 in)	203 mm / 8 in
ICAO/FAA RC – RZ – RE – RN – RS – RG **ICAO R6 – RY – S6, FAA RT**	6.8 kg / 15 lb (12 in)	304 mm / 12 in

Figure 2: 8-Inch and 12-Inch Fixtures



4.0 Installation

Install the inset light fixture in a base provided by ADB SAFEGATE.

Note

If the inset light fixture is to be installed on another type of base or adapter ring not provided by ADB SAFEGATE, contact ADB SAFEGATE.

CAUTION

Use of incorrect combination of gaskets, bolts and nuts can cause severe damage to the product and create multiple safety risks.

To obtain a safe and watertight installation, the O - ring and retaining bolt stated in this document must be used.

In order to choose the correct gasket, bolts and nuts, you need to know what base the light fixture will be installed on.

4.1 Safety Considerations

Read the installation section of all system component manuals before starting these steps. A thorough understanding of system components and their requirements will promote safe and efficient installation. See FAA AC 150/5340-30, Design and Installation Details for Airport Visual Aids, and site plans and specifications for field installation of runway and taxiway in-pavement lights.

DANGER

FAILURE TO FOLLOW THESE SAFETY PROCEDURES CAN RESULT IN PERSONAL INJURY OR DEATH.

- ALLOW ONLY QUALIFIED PERSONNEL TO INSTALL ADB SAFEGATE AND AUXILIARY EQUIPMENT. USE ONLY APPROVED EQUIPMENT. USING UNAPPROVED EQUIPMENT IN AN APPROVED SYSTEM MAY VOID FAA APPROVALS. OBSERVE AND FOLLOW THE SAFETY INSTRUCTIONS IN THIS DOCUMENT AND ALL OTHER RELATED DOCUMENTATION.
- MAKE SURE ALL EQUIPMENT IS RATED AND APPROVED FOR THE ENVIRONMENT WHERE IT IS BEING USED.
- FOLLOW ALL INSTRUCTIONS FOR INSTALLING COMPONENTS AND ACCESSORIES.
- INSTALL ALL ELECTRICAL CONNECTIONS IN COMPLIANCE WITH LOCAL AND NATIONAL CODES AND REGULATIONS.
- USE ONLY ELECTRICAL WIRE OF SUFFICIENT GAUGE AND INSULATION TO HANDLE THE RATED CURRENT DEMAND. ALL WIRING MUST MEET LOCAL AND NATIONAL CODES.
- ROUTE ELECTRICAL WIRING ALONG A PROTECTED PATH. MAKE SURE IT WILL NOT BE DAMAGED BY MOVING EQUIPMENT.
- PROTECT COMPONENTS FROM DAMAGE, WEAR AND HARSH ENVIRONMENTAL CONDITIONS.
- ALLOW AMPLE CLEARANCE 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, REINSTALL THEM IMMEDIATELY AFTER THE WORK IS COMPLETED AND CHECK THEM FOR PROPER FUNCTIONING.
- THE CORD SET MUST BE PROTECTED PRIOR TO INSTALLATION.

4.2 Photobiological safety

CAUTION

Photobiological safety conforming with IEC 62471

RISK GROUP 0 or 1: Optical radiation emitted from LED lights may be harmful to the eyes. Do not stare with at the light source with bare eyes at a fixture operating at high intensity. Use protection goggles or similar protection method.

Goggles with a transmission factor not higher than 5% in the 400-530 nm band have been tested and provide adequate protection.

4.3 Inspect on delivery

1. Inspect all packaging for visible damage.
2. If damage is detected on packaging, open the damaged box and inspect its contents for damage.
3. If containing product is damaged, immediately fill a claim form with the carrier.
4. Store the fixture in its original packing in a protected area.

4.4 Unpack the Unit

CAUTION

Do not unpack the fixture until it is at the installation site to avoid damage due to transportation and handling.

Open the box and verify that the characteristics of the light fixture correspond to the design requirements, such as type, color etc. When installing a light fixture where the control and monitoring function is to be activated at a later stage, make sure to register product information, such as PID/SN and position of the light fixture in, for example, a site documentation table. The information is required for remote activation and administration of control and monitoring functionality from a substation.

4.5 Verify Input Requirements and Equipment Needed

The In-pavement light fixture is designed for connection to a 6.6A or 20A series lighting circuit via an L-830 (60 Hz) or L-831 (50 Hz) isolation transformer.

Make sure you have the necessary tools and materials ready for installation (not supplied). Also consider other tools that might be needed based on site-specific conditions.

4.6 Tools Required

The following tools are recommended for installation:

- Drill / driver with 21 mm (9/16-inch) socket.
- Torque wrench with 21 mm (9/16-inch) socket (Do not use an impact wrench)
- Two large flat head screwdrivers to lift edge of fixture to reposition if necessary.
- Air compressor with high pressure nozzle - Optional to assure mounting surface is free of debris.
- One brush or cloth.

Note

Provided the base has been properly installed, no other tool is required.

4.7 Installation Overview

WARNING

Read the instructions in their entirety before starting installation.

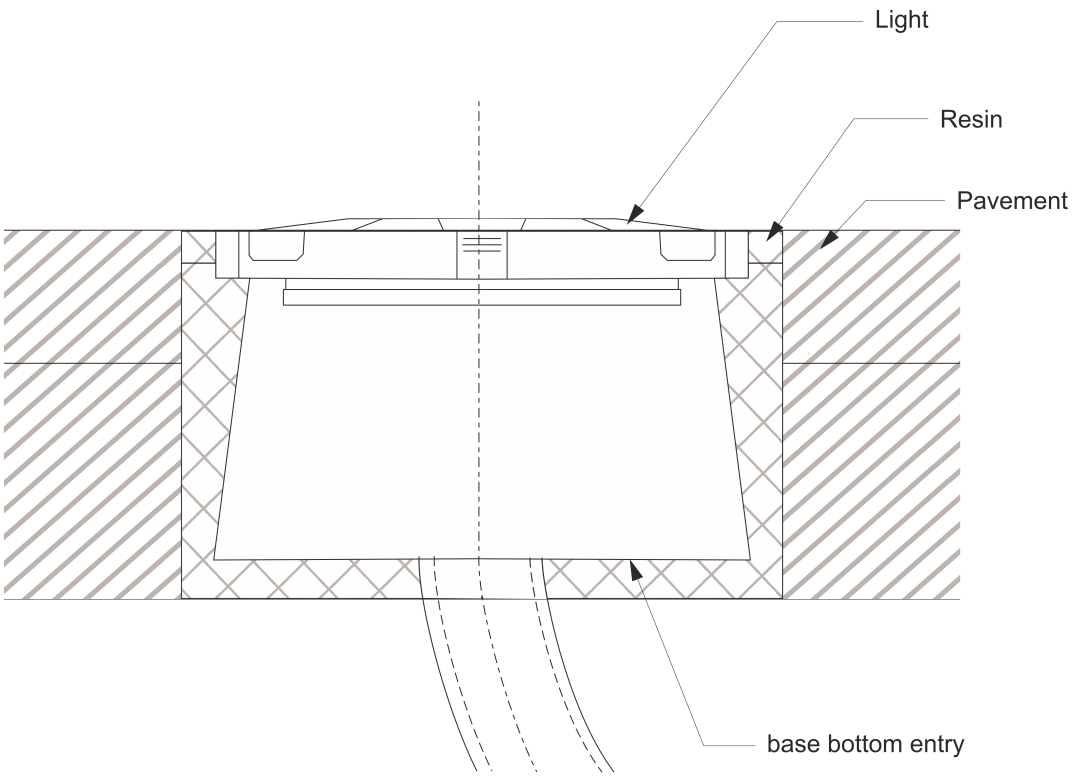
This section provides instructions for installing the in-pavement lights. Refer to airport project plans and specifications for specific installation instructions. The installation must conform to the applicable sections of the National Electric Code and local codes.

4.7.1 Installation

On a shallow base

The 8-inch and 12-inch diameter shallow base is secured in the pavement by means of resin. Correct positioning is obtained with a leveling jig with a sighting telescope. Wires between the light and the series transformer are installed either in saw cuts in the pavement filled with resin or in pipes in the lower concrete layers. Mounting an 8-inch light fixture in a 12-inch diameter base is made possible by means of dedicated adapter rings.

Figure 3: Installation on shallow base



On an FAA L-868B size B steel base

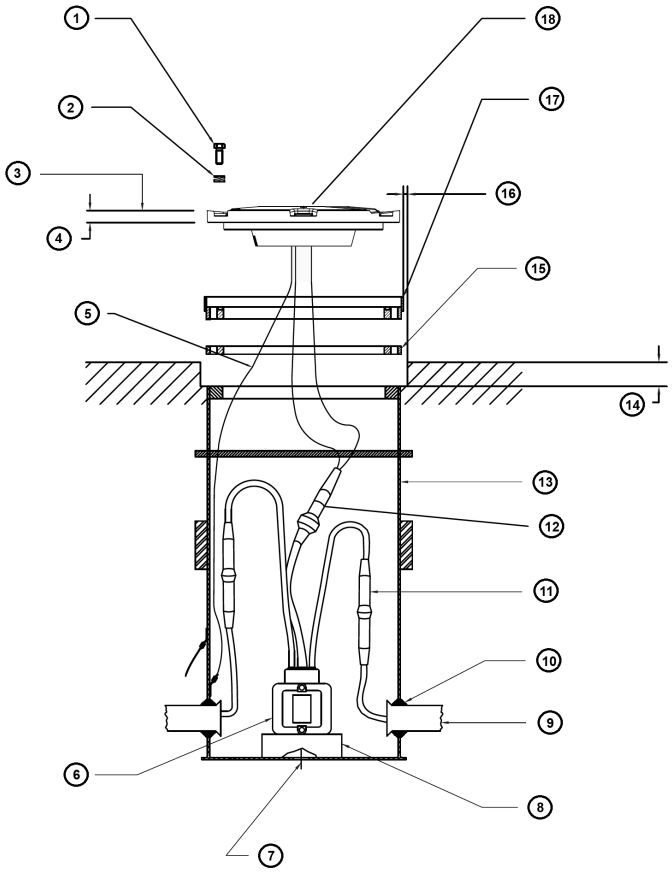
The 12-inch light fixture is installed in a 12-inch base. The 8-inch diameter light can be installed in an 8-inch base or, with the use of a snow ring or an adapter ring, in a 12-inch base. The bases are interconnected by means of conduits protecting the cables. The series transformer is installed under the light or in a separate pit. See data sheet A.05.120 or DS–2012 for more information on base cans.

4.7.2 Configuration

To learn more about updating or configuring our EQ light fixtures equipped with internal ILCMS remote and sensor technology, please refer to our LINC360 manuals. These comprehensive guides cover firmware updates, configuration options and instructions on integrating EQ lights into the ILCMS system.

4.7.3 Typical L-868 Assembly

Figure 4: Fixture Installed in a 1-Piece Base Can

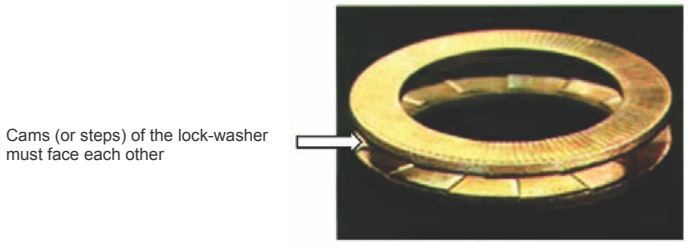


Call-out Numbers) Description
1) 3/8-16 Hex Cap Screw (per FAA EB-83 (latest revision)
2) 3/8" Anti-vibration Washer (per FAA EB-83 (latest revision)
3) Fixture Top Edge to be +0/ $^{-1}$/16" Below Grade
4) 0.75"
5) Ground Wire
6) Isolation Transformer Size as Required
7) 3/4" Drain Hole (Centered)
8) Transformer Support (Typ.)
9) 2" PVC Conduit with Bell End
10) Grommet
11) L-823 Primary Connector (Typ.) (Heatshrink Optional)
12) L-823 Secondary Connector
13) L868B Light Base
14) 1-1/2" (Typ.)
15) L868B Spacer Ring(s) In order to maintain +0/ $^{-1}$/16" below grade, per FAA installation tolerance, a maximum of 3 spacers may be used.
16) 1/4" Wide X 1-1/2" Deep Groove (Typ.)
17) L868B Flange Ring 12.25" O.D. 3/4" Thick, 5402/12Y With O-Ring Gasket (Typ.)
18) Semi-Flush Light Fixture Type L-85X (Typ.)

Note
Torque according to: FAA EB-83 (latest revision).

CAUTION
Per FAA AC 150/5340-30, Chapter 10, and FAA Engineering Brief No 83 (latest revision), it is extremely important that other types of washers, such as split washers, not be used. Failure to use properly installed anti-vibration lock washers will cause mounting bolts to become loose. The cams (or steps) of each half of the lock washer must face each other.

Figure 5: Anti-vibration washer example



4.7.4 Remote RRU401.5 Programming Procedure for RSRG Autonomous Runway Guard Light

IR Remote Configuration procedure if the remote stops working or Anderic RRU401.5 batteries need to be changed.

Figure 6: Remote Configuration

1. Press and hold the "TV" key (top-left) for 3 seconds until it illuminates and remains on. 20 seconds of inactivity will cause the remote to exit programming mode.
2. Use the number keys (0-9) to enter 2001.
    a. If valid - the "Mode" key light will go out directly.
    b. If invalid - the "Mode" key will quickly blink 3 times and then go out. Please return to step 1.
3. Turn on the the AXON RSRG Runway Guard Light you want to change flash program.
4. Check if the keys can control the RSRG light. (Position remote close to light and aim into the side 2 optical sensor window)
    a. Ensure "TV" mode is enabled (press and release "TV" button).
    b. Press and release "0" button (for initial flash "ON").
    c. Press and release "cc" button.
    d. Verify the fixture flashes 4 times. (unit is configured for initial flash "ON".)

> **Note**
> The IR remote is only used in unmonitored applications in which no remote control device is present. Prior to using the IR remote, the fixture must be energized at any brightness step and flashing.

5. Press and release the "TV" key.
6. Point the IR Remote at the L-852G(L) side 2 optical sensor window (prism). The IR Remote should be held approximately 0.5" (13 mm) from the window at an angle of approximately 45° from the pavement surface.

7. Press and release IR remote keys according to the following table.

Setting	First Key	Second Key	Notes
Initial Flash ON	0	"CC"	The RSRG light turns on, then turns off.
Initial Flash OFF	2	"CC"	The RSRG light turns off, then turns on.
ON alternative	1	"CC"	If a CCR only powers a single RGL bar, the L-852G(L) fixtures within the bar shall be configured "ON (RSRG1XXX1NY1SXX1) Initial flash ON) next OFF (RSRG1XXX1NY0SXX1) Initial flash OFF) next ON ((RSRG1XXX1NY1SXX1)Initial flash ON) ... etc." If a CCR powers multiple RGL bars, it is recommended that approximately half of the continuous bars shall be configured "ON next OFF" and the rest use the "alternative ON next alternative OFF" settings. The alternative settings incorporate a small time delay (when compared to the ON or OFF setting). This small time delay on half of the RGL bars evens out the load on a CCR, reducing CCR output current fluctuations.
OFF alternative	3	"CC" (old remote was "OK" button)	

8. The first key is pressed followed by the "CC" key within 2 seconds. The system will respond to an INQUIRY to the programmed setting as follows:
   a. Programmed for ‘0', unit will flash 4 times to confirm setting.
   b. Programmed for ‘2', unit will flash 2 times to confirm setting.
9. The L-852G(L) should start to flash as commanded. The setting is kept in its volatile memory. The programming procedure can be repeated if necessary.

4.7.5 Installation and Removal of the Inset Light Fixture

WARNING

Read the instructions in their entirety before starting installation.

Note

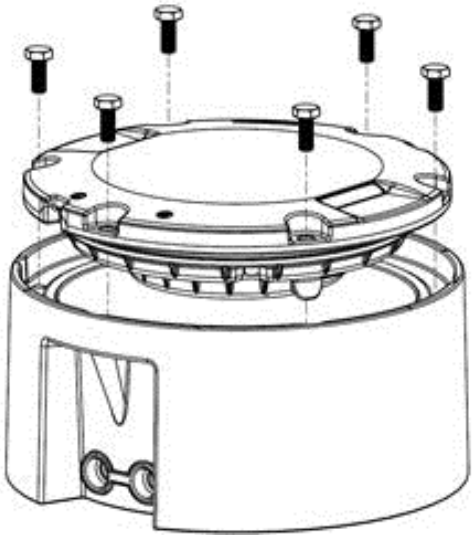
Top cover versions:

please check interoperability matrix for information on compatibility to different bases and torque values.

This section provides instructions for installing the in-pavement lights. Refer to airport project plans and specifications for specific installation instructions. The installation must conform to the applicable sections of the National Electric Code and local codes.

Install the light fixture in a base, class 1, direct-mounted fixture.

Figure 7: 12-inch shallow base, class 1, direct-mounted fixture



1. Carefully clean all contact surfaces of the light fixture and the base.
2. Put the O-ring gasket in the gasket track on the base. (Not for class 2)
3. Mount light fixture to the base.

   Note

   Make sure the secondary cables are inside the base and not pressed between the light and the base.

4. For installation on a base, use a torque limiting box spanner of 16/17 mm to install and tighten the fixing bolts or nuts to a torque value according to specification. Make sure the light fixture functions properly before the next step. See INTEROPERABILITY. For other base manufacturers, refer to their specifications.

   Note

   Do not use high speed for tightening the fixing bolts. The recommended speed is 10 - 40 rpm. Do not used an impact driver/wrench.

5. In order to bond the light fixture to the ground, use a ground lug or grounding screw (torque 2.5 Nm) to attach the braided ground strap or wire to the grounding point on the light fixture. The grounding point is indicated by a grounding symbol that is located on the bottom side.

Remove the fitting from the base

CAUTION

Fall- and trip hazard!

When a light fixture has been removed, the base must be fitted with a cover designed for this purpose or with a spare light fixture.

1. Using two large flat blade screwdrivers carefully remove the light fixture from its base .
2. Disconnect the secondary supply connector.
3. Remove and check the gasket (O-ring or labyrinth).

Note

It is recommended to change the gasket, lock nuts or bolts each time the light fixture is removed or dismounted from the base. For more information, see INTEROPERABILITY chapter of this manual. .

CAUTION

Use of incorrect combination of gaskets, bolts and nuts can cause severe damage to the product installation and create multiple safety risks.

Verify what base the light fixture will be installed in, in order to chose the correct gasket, bolts and nuts.

Failure to follow these cautions can result in equipment damage or aircraft FOD.

4.7.6 Testing the Light Fixture for Leaks (Water-tightness)

Note

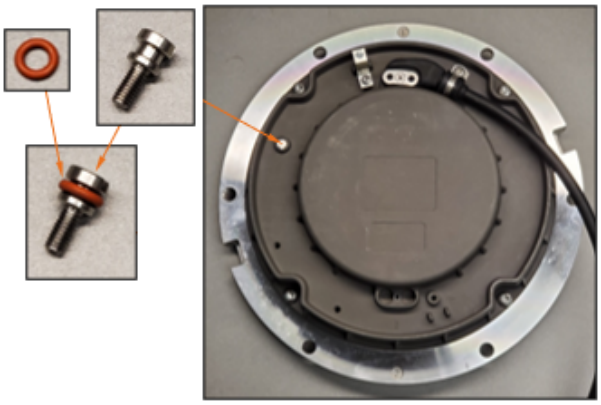
A compressor, or a manual car tire pump, equipped with a manometer is required to check the light fixture for watertightness.

Tools to be used:

- Flat head screwdriver
- Pressure test fitting tool to be used (pt no.44A6104/A) for watertight testing

1. Remove the pressure release screw and discard.

Figure 8: Pressure Release Screw



2. Screw the pressure test fitting tool hand-tight into the pressure-relief port (the opening from where the pressure release screw was removed).

Figure 9: Pressure Test Fitting Tool

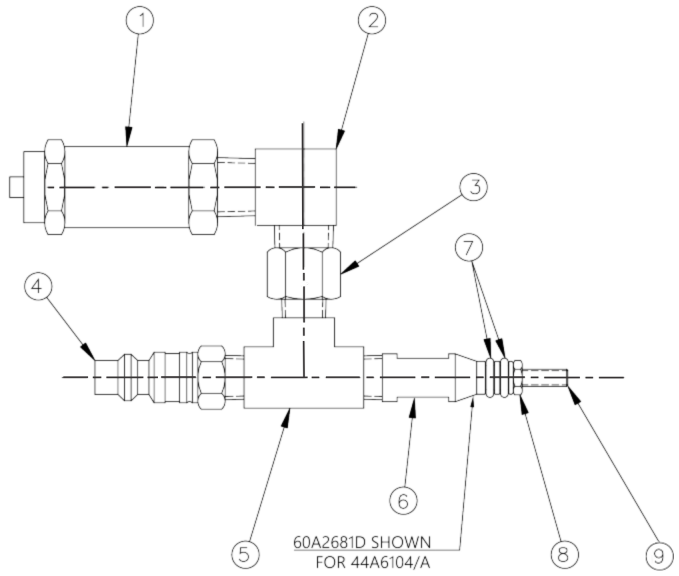


Figure 10: Pressure Test Fitting Tool

Call-out) Description
1) Pop — safety valve
2) 90 deg., elbow, female X male, brass, ¼"
3) Adapter, female — male, ¼ x 1/8, brass
4) Sleeve — lock hose plug, ¼" coupler
5) Tee, brass, 1/8
6) Pressure test fitting, body
7) O-ring, silicone, size 008, 1/16 W X 3/16
8) M4 Hex Jam nut, 18-8 SS
9) Pressure test fitting stud

3. Attach the shop airline (4) to the lock hose plug sleeve.
4. Pressurize to 20 psi (130 kPa).
5. Submerge the pressure test fitting into a water tank.
6. Wait 3 minutes and check if air leaks out between:
   - the bottom pan and the top cover
   - the prism and and the top plate
   - the watertightness valve and top plate

   If air leaks out of the light fixture, it is not watertight and must be repaired:
   - release the air from the light
   - disassemble the light fixture
   - re-check the mating surfaces and gaskets
   - re-assemble the light fixture
   - return to step 1
7. If the fixture is watertight, depressurize and install a new pressure release screw (see Figure 8) at 26 in-lbs (3 Nm).

DANGER

NEVER EXCEED A PRESSURE OF 22 PSI (150 KPA) INSIDE THE LIGHT FIXTURE. A HIGHER PRESSURE MAY CAUSE INJURIES AND DAMAGE THE LIGHT.

4.8 Toe-in

Toe-in of light fixtures can be achieved in two ways:

1. By installing the light fixture in runway/taxiway parallel bases and use light fixtures with built in toe-in.
2. By installing the light fixture in bases installed at an angle relative to the runway/taxiway and use light fixtures with no built in toe-in.

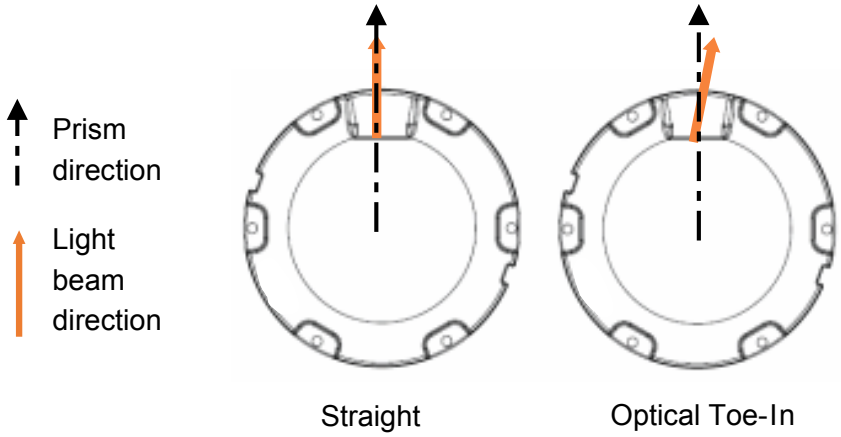
If bases which are installed at an angle are used, straight light fixtures with no toe-in should be used, provided they are used correctly.

The following chapter only regards the case where light fixtures are installed in runway/taxiway parallel bases, i.e. where no toe-in is achieved by angled bases.

There are three major categories regarding the toe-in in light fixtures:

Straight light fixtures	These light fixtures have a straight light beam
Light fixtures with optical toe-in	These light fixtures have a reflector that reflects the light beam at an appropriate angle
Light fixtures with mechanical toe-in	These light fixtures are installed at an angle within its base due to the hole pattern for the base screws. This results in an angled light beam relative to the runway/taxiway.

Figure 11: Toe-in



The table below shows a summary of the light fixture types and their toe-in properties.

Light fixture	Toe-in options	Toe-in type
L-850A(L) - Runway Centerline (RC)	Straight	N/A
L-850B(L) - Runway Touchdown Zone (RZ)	Straight or Toe-in ± 4 °	Optical
L-850C(L) - Runway Edge (RE)	Toe-in to centerline	Optical
ICAO Runway Edge 60 m (R6)	Toe-in to centerline	Optical
L-850D(L) - Runway Threshold (RT)	Straight or Toe-in ± 3.5 °	Optical
L-850T(L) - Runway Status, Takeoff, Runway Intersection Light (RS)	Straight	N/A
ICAO Stopway 45 m (SW)	Toe-in to centerline	Optical
ICAO Stopway 60 m (S6)	Toe-in to centerline	Optical
ICAO & FAA L-852G(L) Runway Guard Light (RG)		

4.9 Light Emission Directions

4.9.1 Definition of Light Emission Directions

Light fixtures that have a toe-in are marked with an arrow to ensure a correct installation with regard towards the toe-in. The light fixtures should be installed with the arrow pointing towards the centerline.

The color of the emitted light is indicated with a painted dot on the top cover in front of the prism.

Figure 12: Light Emissions Direction

Color Code	Color	
W	White	
Y	Yellow	
G or F	Green	
R	Red	

5.0 Maintenance

This section describes different steps for the maintenance of the light fixture.

Before you start, make sure you have read and understand the Safety chapter.

Find out the location of the light unit that needs maintenance. If the purpose is to replace an existing light unit with a new one, make sure that corresponding unit is available. Find the type information on the identification tag with details of name.

Spare parts are available, if required. For more information, see www.adbsafegate.com and the Spare Parts List document, or contact ADB SAFEGATE for assistance.

CAUTION

Use of incorrect combination of gaskets, bolts and nuts can cause severe damage to the product installation and create multiple safety risks.

You need to know what base the light fixture will be installed in to choose the correct gasket, bolts and nuts.

Failure to do so can result in equipment damage or aircraft FOD.

CAUTION

When a light fixture has been removed from its base, the base must either be fitted with a cover or a spare light fixture must be put in its place to avoid a trip and/or fall hazard. It is recommended that only authorized personnel disassemble fittings with prior agreement from ADB SAFEGATE.

5.1 Basic Maintenance Program

It is important to understand that even though a LED fixture requires substantially lower maintenance in regard to the replacement of the light bulbs, some parts of the light fixture remain the same and still require the same level of maintenance (prisms, top cover, bolts).

There are recommended maintenance tasks to ensure that the equipment is in correct operating condition.

Table 1: Maintenance tasks

Weekly	▪ Visual inspection of the light fixture. ▪ Removal of dust from external surfaces of the light fixture.
Monthly	▪ Check optical window for cleanliness, mechanical damage or moisture/condensation on the inside of the prism ▪ Check for improper torque on mounting bolts. Re-torque if needed.
Yearly	▪ Detailed inspection of the light fixture ▪ Check of the body resistance, check for mechanical damage (for example cracks around the prism windows). ▪ Clean optical windows
Bi-yearly	▪ Check for presence of water in mounting support by unscrewing and lifting light fixture from base and check for water ingress and corrosion. Replace gasket between light fixture and base.
After snow removal	▪ Check for damaged light fixtures. Any damaged light fixtures should be replaced and brought in and properly investigated and repaired.

A daily function check is referred to in the document:

ICAO, Airport Services Manual Part 9, Airport Maintenance Practice and FAA AC 150/5340-26A, Maintenance of airport visual aids facilities.

Any issues found during maintenance tasks should be corrected accordingly and properly documented.

A proper asset management system such as ADB Safegate's ALIS can help to store/document data and can provide valuable information on local presiding conditions for preventive maintenance planning. This can then be used to minimize the need for reactive maintenance.

ALIS, ADB Safegate's new digital asset tracking, inspection and service solution, helps airports easily register airside assets, electronically schedule and track maintenance, and record maintenance and inspection tasks in compliance with ICAO and FAA standards.

Visit alis.adbsg.com.

5.2 Recommended Maintenance Program for Optimal Service Life

Service life and inspection Intervals

All products have an expected service life. Service life is the lifetime of the product and reaching the end means that it is no longer serviceable and should be replaced.

There are several key external factors that influences the service life of a product.

- Aircraft traffic movements
- Location on the airfield
- Maintenance
- Chemical usage

Air traffic movements (ATM)

The expected lifetime of a light fixture will be highly impacted by the traffic volume and the number of aircraft that are mechanically putting stress on the light fixtures. Airports with a higher traffic volume will have a light fixture with a shorter expected lifetime than an airport with a lower traffic volume.

The ATM can be divided into three categories for the recommendation of inspections as well as for the expected lifetime of a light fixture[1].

- 0-100k movements/year
- 100k-200k movements/year
- >200k movements/year

Location on the airfield

The expected lifetime of a light fixture is highly dependent on the location where it is installed on an airfield. Three different areas have been defined by color categorization that are exposed to a different degree of mechanical impact. These three categories are used as a basis for the recommendation of inspections as well as for the expected lifetime of a light fixture.

- **Red** – Touch Down Area defined as 6m from either side of the runway centerline for a distance starting from 50m before the TDZ markings and extending to 200m beyond the TDZ markings as seen from the landing direction.
- **Red** – Rapid Exit Taxiway centerline lights from the runway centerline to 50m beyond the edge of the runway.
- **Amber** – All runway areas outside the Red areas.
- **Amber** – All taxiway areas outside the Red areas, including taxiway intersections for which more than 50% of the aircraft traffic turn more than 45 degrees.
- **Green** – Areas outside Red and Amber areas

NOTICE

A reliable means of recording the location history of fittings (i.e. ADB Safegate ALIS) is recommended to ensure that the maximum duration in critical red areas of the runway is not exceeded.

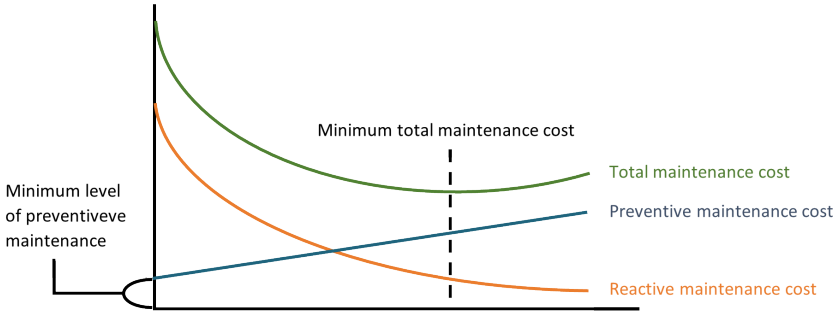
[1] Based on ADB SAFEGATE's field experience and investigation made together with an independent consultant and airport.

Preventive maintenance

Preventive maintenance and inspections will help to prolong the service life of a light fixture. By finding issues (e. g., bad gaskets or broken prisms) at an early stage you can mitigate and fix issue before they cause more damage and reduce the cost of the repair. You can also increase the service life of a light fixture by rotating the installation location of light fixtures in critical areas.

Regular inspections and well-defined preventive maintenance planning will help to reduce the overall maintenance cost and reduce downtime from reactive maintenance tasks.

Figure 13: Preventive Maintenance

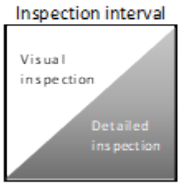


5.2.1 Recommendation

Based on the air traffic volume and location on the airfield, a matrix was created for recommended inspection intervals presented in Figure 14.

Figure 14: Visual Inspection Interval

Location / ATM	RED	Amber	Green
0-100k movements	2 Months / 1 Year	6 Months / 3 Years	1 Year / 3 Years
100k-200k movements	2 Months / 1 Year	4 Months / 2 Years	1 Year / 3 Years
Above 200k movements	1 Months / 6 Months	2 Months / 1 Year	1 Year / 3 Years



Visual inspection

Visually inspect the light fixture and make sure that:

- Prism is clean and no cracks are visible
- Gaskets are ok and are not deteriorating
- No moisture or condensation can be seen on the inside of the prism
- Corrosion on top cover, around the prism and bolts.
- Torquing of nuts/bolts are according to specification

Detailed Inspection

Includes visual inspection tasks and additionally the following tasks:

- Unbolt the light fixture and lift it from the base for the detailed inspection
- Check for water ingress (watertight installation) and corrosion on light fixture and base (especially around the mating surfaces)
- For deep base installation (L-868) check for water ingress, if more than 6 inches please have it removed.
- Inspect light and base for damage

- Replace gasket between light fixture and base

NOTICE
We recommend any maintenance work that requires the light fixture to be opened to be done back in the dedicated maintenance area.

- We recommend that inspection intervals are halved for aging units that have reached more than 75 % of their expected lifetime.
- We recommend that AGL in critical areas are rotated.
- To achieve a proper location rotation and individual asset, data needs to be recorded.
- To relax the recommended frequencies of some maintenance tasks i.e. torque management, data is needed for justification.
- Policies have a direct link with the age of the AGL and should also be tracked and recorded.

The recommended service life is presented in Table 2. With a proper asset management (ALIS or similar) and data capturing strategy, the guidelines presented could be extended or shortened as deemed necessary via presiding local conditions.

Table 2: Expected service life (only critical areas defined)

RED Zone -, ATM < 100k	15 years
RED Zone -, ATM > 100k < 200K	10 years
RED Zone -, ATM > 200k	7 years

Note
Contact your local sales representative if you have any questions or would require some assistance to go through local conditions and see how we can help establish a well-defined maintenance planning to optimize the expected service life of your investment.

5.3 Cleaning Procedure for the Prisms of an Inset Light Fixture

Safety Precautions

1. Ensure Power is Off: Confirm that the light fixture is turned off at the main power source to eliminate electrical hazards.
2. Wear Protective Gear: Use safety gloves to protect your hands and safety glasses to shield your eyes from dust and debris.

Cleaning Process

Start by gently dusting the prisms with a soft, dry cloth to get rid of any loose dirt or dust.

Cleaning

- To clean the prism and remove any rubber build-up, start with a plastic scraper. For a deeper clean, lukewarm water mixed with a pH-neutral soap can be applied.
- In cases where simple cleaning isn't adequate, you may consider using chemicals to tackle rubber build-up or compacted snow. However, be cautious with the use of chemicals as extensive application may damage the light fixtures and underground electrical components, leading to increased maintenance requirements and costs.
- Use de-icing liquids and cleaning chemicals in moderation to prevent environmental impact and contamination of the light outlet.

Approved Chemicals for Cleaning

The following chemicals are tested for compatibility with ADB Safegate light fixtures:

- Potassium Acetate
- Potassium Formate
- Sodium Acetate
- Sodium Formate

NOTICE

Ensure the pH of chemical solutions does not exceed pH11 to avoid corrosion or other damage to the light fixtures.

Protocol for Introducing New Chemical Solutions

- Verify the chemical's intended use on similar materials and products, adhering to ADB Safegate's recommendations.
- Conduct initial tests on a few units to ensure there is no damage to the light fixture or gaskets before applying the chemical to a larger installation.

NOTICE

Special Consideration for Sapphire Prisms: Sapphire prisms, made by bonding a thin sapphire slab to a glass prism, can be sensitive to certain chemicals. Always test cleaning chemicals for compatibility with sapphire prisms to avoid weakening the adhesive bond.

NOTICE

High-pressure water jets may be employed for cleaning, ensuring the minimum distance of 165 mm (6.5 inches) is maintained and the water pressure does not exceed 80 bar (1300 psi) to prevent damage to the gaskets.

Tips for Optimal Maintenance

- Regular cleaning of the prisms is crucial for maintaining light quality and fixture efficiency.
- No use of abrasive cleaners or pads that can scratch the prism surfaces.
- Handle the prisms with care to avoid creating chips or cracks.
- After cleaning, thoroughly dry each prism with a soft, lint-free cloth to prevent water spots and ensure clear illumination.

By following these detailed instructions, you can maintain the integrity and performance of the inset light fixtures at the airfield, ensuring safety and visibility are upheld.

5.4 Workshop Maintenance

CAUTION
Before you start, make sure you have read and understand Safety instructions.

The workshop maintenance refers to following:

1. Open a light fixture
2. Close a light fixture
3. Replace the power wire harness
4. Replace the light engine assembly
5. Replace the prism
6. Reset the top cover assembly
7. Replace the bottom pan assembly
8. Replace the secondary cable
9. Reset the fail-open converter

Note
A compressor, or a manual car tire pump, equipped with a manometer is required to check the light fixture for water-tightness.

Design may differ from picture depending on application. Please follow described work flow and torque level specified as they are generic.

5.4.1 Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover

Tools to be used:

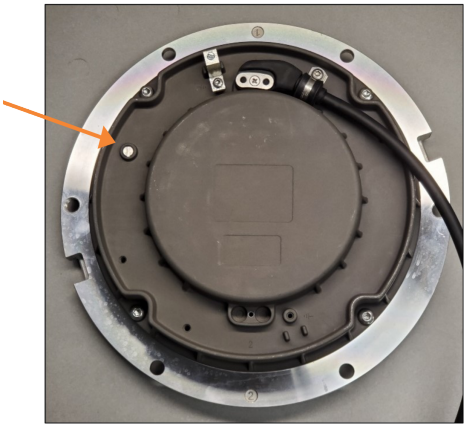
- Screwdriver or variable-speed torque drill driver with T25 Torx bit for 8-inch and T30 Torx bit for 12-inch.

NOTICE
Do not use an Impact driver.

- Flat-head screwdriver

1. Place the light fixture upside down.
2. Loosen the Pressure Release Screw.

Figure 15: Loosening Pressure Release Screw



3. Unscrew the fixation screws (4 pcs, keeping the bottom cover attached to top cover).
   Make sure to **dispose of the old screws** and use new screws.
4. Lift the Bottom Pan without damaging the connecting wires.

> **CAUTION**
> Make sure you do not damage the cables when opening the light fixture.

5. Disconnect the wires:
   a. Pull carefully to disconnect the wires between the converter and the light engine.
   b. Pull carefully to disconnect the wires between the converter and the heater kit(s), if the heater kit is in place.
6. Remove the gasket between the Top Cover Assembly and the Inner Pan Assembly.
   Make sure to **dispose of the old gasket** and use a new gasket.

5.4.2 Close a Light Fixture – Connect the Bottom Pan to the Top Cover

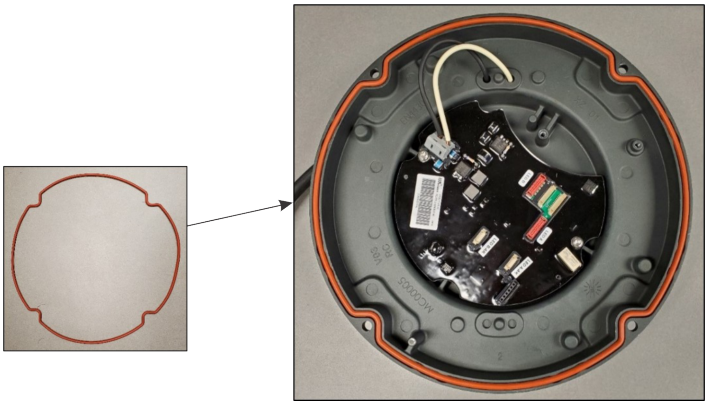
Tools to be used:

- Screwdriver or variable-speed torque drill driver with T25 Torx bit for 8-inch and T30 Torx bit for 12-inch.
- Flat-head screwdriver.

1. Clean all the contact surfaces of the light fixture and of the housing carefully.
2. Press the gasket (located between top cover and inner pan) into the O-ring Groove.
   Make sure the gasket placed correctly.

> **IMPORTANT**
> The O-ring Gasket must always be changed when the fixture is being disassembled.

Figure 16: Gasket Placement

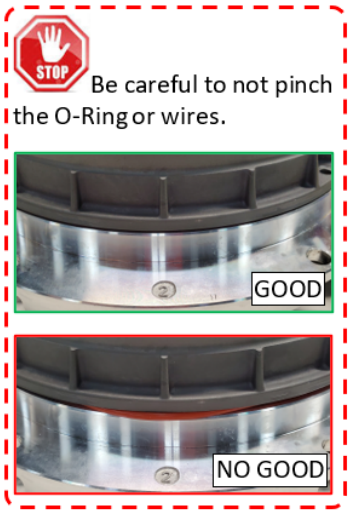


3. Connect the wires:
   a. Press carefully to connect the wires lead in from the light engine on the converter.
   b. Press carefully to connect the wires lead in from the light engine on the converter, if the heater kit is in place.

4. Put the Top Cover onto the Bottom Pan.
   Make sure the poka-yoke (alignment pin) is placed correctly.

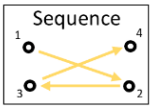
IMPORTANT
Do not pinch the wires or the gasket

Figure 17: Top Cover Placement



5. Put the light fixture on a surface with the top cover facing down.
6. Torque:
   a. Use new fixation screws to torque in star pattern at 53 in-lbs (6 Nm) for 12-inch light or 31 in-lbs (3.5 Nm) for 8-inch lights.
   b. Re-torque the screws in star pattern at 53 in-lbs (6 Nm) for 12-inch light or 31 in-lbs (3.5 Nm) for 8-inch lights.

Figure 18: Star Pattern



7. Follow the water-tightness test procedure.

Note
Refer to the Check the Light Fixture for Water-tightness section.

5.4.3 Replace the Wire Harnesses

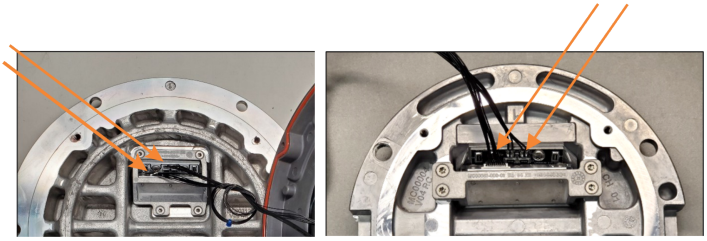
Tools to be used:

- Screwdriver or variable-speed torque drill driver with T20 Torx bit.

1. Open the light.
   Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

2. Disconnect the old wire harnesses.
   Make sure to **dispose of the old wire harnesses** and use new wire harnesses.

   Figure 19: Dispose Old Wire Harnesses



3. Connect the new wire harnesses.
   Make sure the direction of the connector is correct to avoid damaged pins.
4. Close the light.
   Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.4 Replace the Light Engine Assembly

Tools to be used:

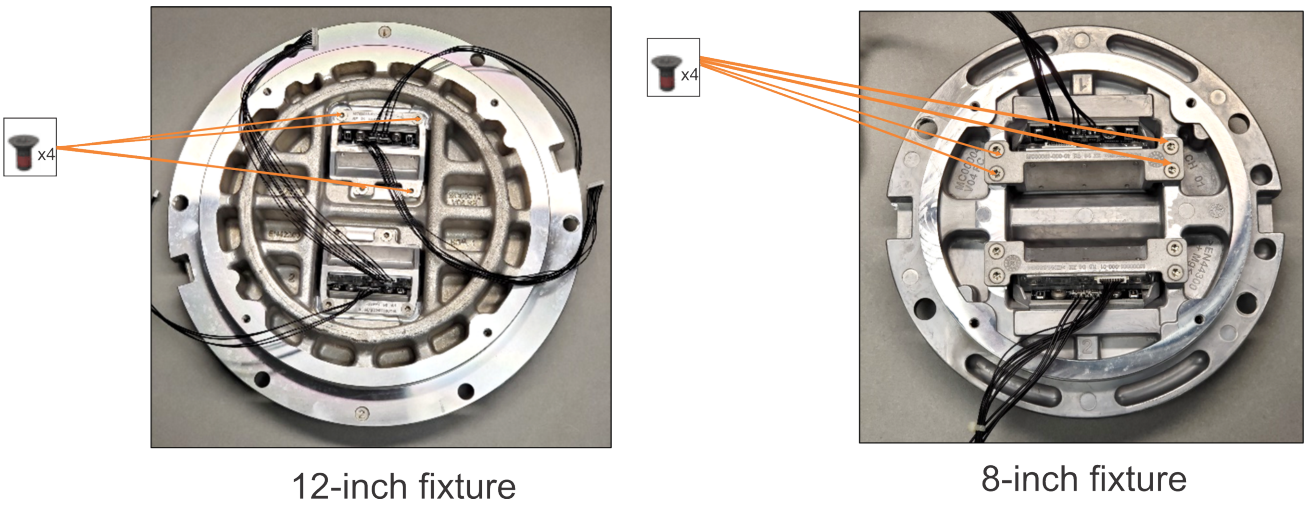
- Screwdriver or variable-speed torque drill driver with T20 Torx bit.

1. Open the light.

> **Note**
> Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

2. Remove the Light engine(s) (4 pieces M4 screws per light engine assembly).
   Make sure to **dispose of the old screws, light engine(s), and wire harness(es),** and use new material.

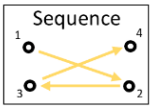
   Figure 20: Removal of Light Engine(s) Assembly



3. Mount the new light engine(s) with the wire harnesses attached.

4. Use new screws to attach the light engine in star pattern at 26 inch-pound (3.0 Nm).

Figure 21: Star Pattern



5. Close the light.

> **Note**
> Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.5 Replace the Prism and its Gasket

Tools to be used:

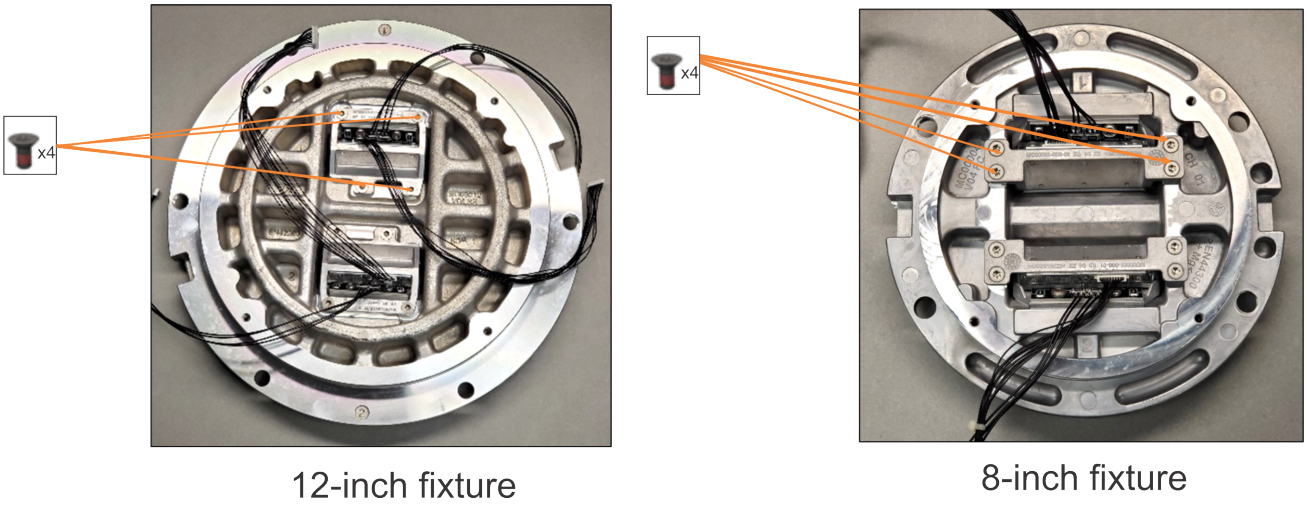
- Screwdriver or variable-speed torque drill driver with T20 Torx bit.

1. Open the light.

> **Note**
> Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

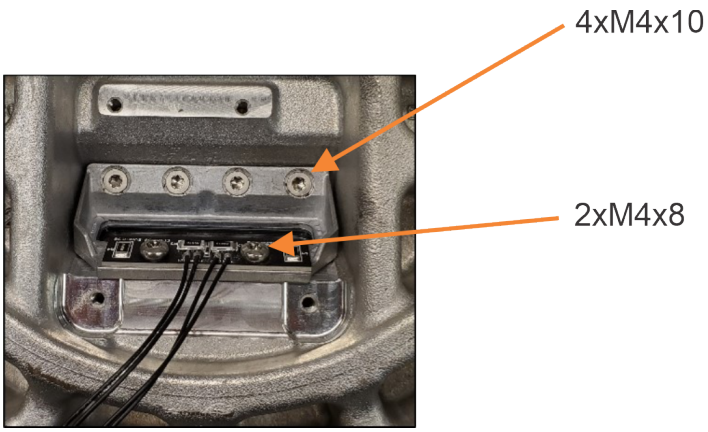
2. Remove the Light engine assembly (4 M4 screws per light engine assembly).
Make sure to **dispose of the old screws** and use new screws.

Figure 22: Removal of Light Engine(s) Assembly



3. Remove the Prism-keeper Plate and Prism-protection Gap Pad (4xM4x10 and 2xM4x8).

Figure 23: Removal of the Prism-Keeper Plate and Prism-Protection Gap Pad

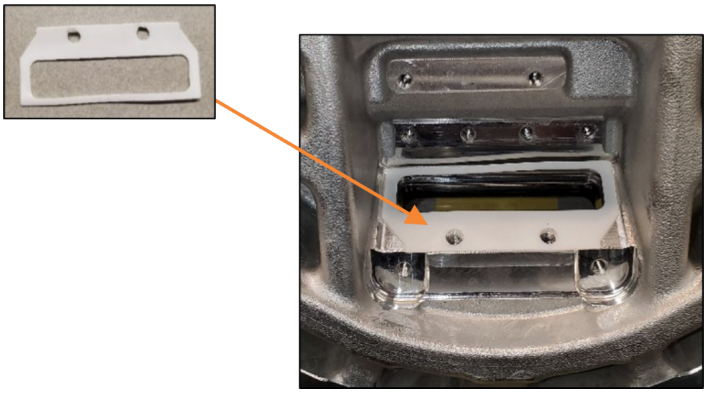


4. Remove the prism the prism gasket by pushing from outside.
   Make sure to **dispose of the old prisms and gaskets** and use new material.
5. Install the new sock seal and mount the new prism gasket into the top cover.

> **IMPORTANT**
> Make sure the wider slant is oriented towards the center of the fixture.

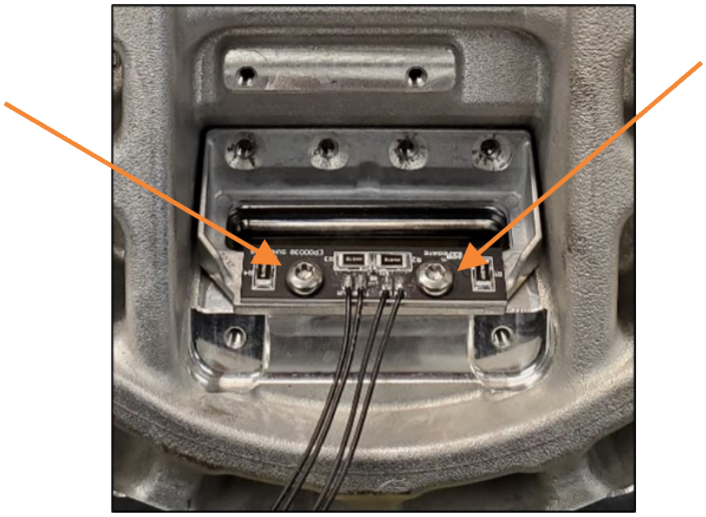
6. Apply some glass cleaner on the outside of sock seal.
7. Press the prism assembly into the window of the top cover with a rocking motion.
8. Use pressure to set the prism into the top cover.
9. Clean the prism with a clean rag or a wipe.
10. Place the Prism Protection Gap Pad on top of the prism.

Figure 24: Prism Protection Gap Pad Placement



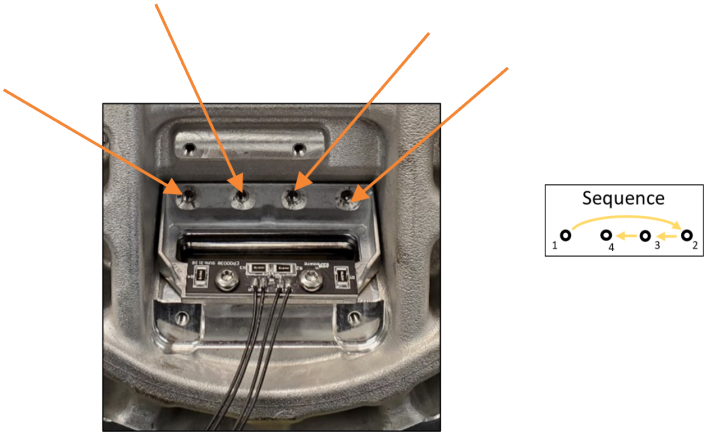
11. Install the Prism-keeper Plate into the top cover with 2 M4x10 screws (26 in-lbs/3 Nm) to the “top” of the Prism-keeper Plate.
    The heater must be installed under the screws, if the heater is included.

Figure 25: Prism-Keeper Plate Installation into the Top Cover



12. Finish the mounting procedure for the Prism-keeper Plate with 4 M4x8 screws at 26 in-lbs (3 Nm) to the “bottom” of the prism keeper plate.
    Make sure you tighten the screws in the correct order (refer to the image below).

Figure 26: Mounting Procedure

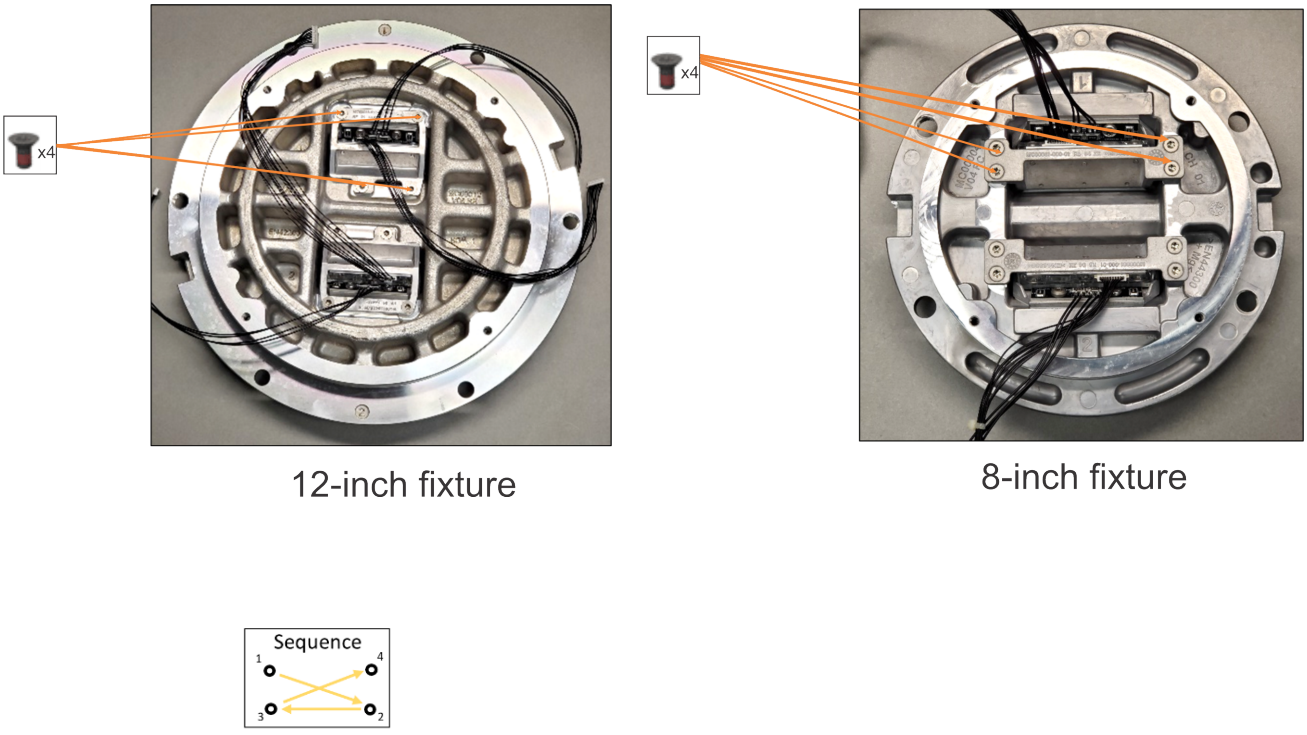


13. Mount the Light Engine Assembly onto the top cover with 4 new M4x10 screws at 26 in-lbs (3 Nm).

IMPORTANT

Make sure you mount the Light Engine Assembly on the correct side of the top cover, with the correct color and toe-in (refer to the image below).

Figure 27: Light Engine Assembly Mounting Procedure



14. Close the light.

Note

Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.6 Replace the Top Cover Assembly

Tools to be used:

- Screwdriver or variable-speed torque drill driver with T25 Torx bit for 8-inch and T30 Torx bit for 12-inch.
- Flat-head screwdriver

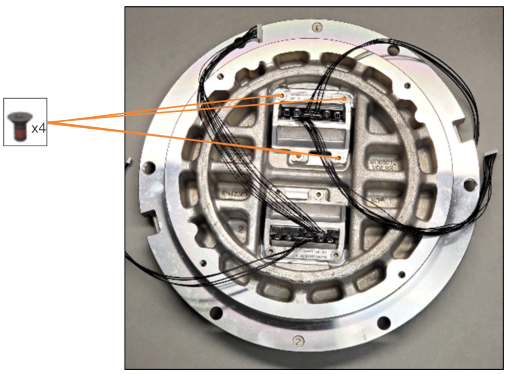
1. Open the light.

Note

Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

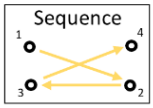
2. Remove the Light Engine(s) (4 M4 screws per light engine assembly.)
   Make sure to **dispose of the old screws and the old top cover** and use new material.

   Figure 28: Disposal of Old Screws and Old Top Cover



3. Replace the old top cover with new top cover assembly.
4. Mount the light engine(s) into the new top cover assembly.
5. Use 4 new M4x10 screws to attach the light engine in star pattern at 26 in-lbs (3 Nm).

   Figure 29: Star Pattern



6. Close the light.

> **Note**
> Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.7 Replace the Bottom Pan Assembly

Tools to be used:

- Screwdriver or variable-speed torque drill driver with T25 Torx bit for 8-inch and T30 Torx bit for 12-inch.
- Flat-head screwdriver

1. Open the light.

> **Note**
> Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

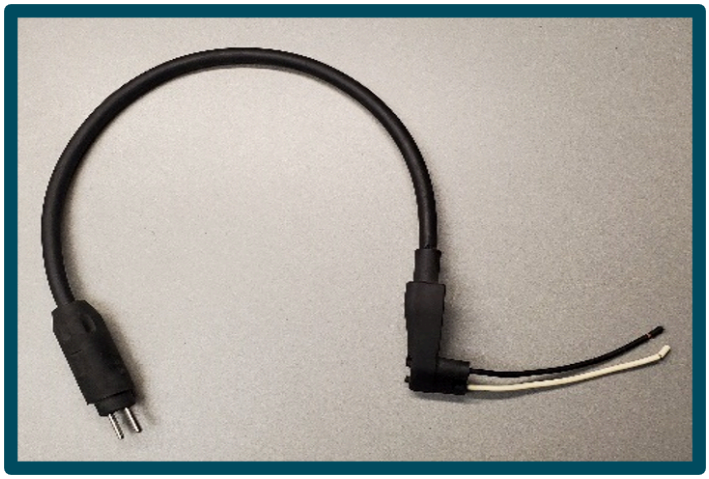
   Make sure to **dispose of the old bottom cover assembly** and use the new assembly.

2. Close the light.

> **Note**
> Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.8 Replace the Secondary Cable – SJO Cord Set

Figure 30: Secondary Cable Replacement

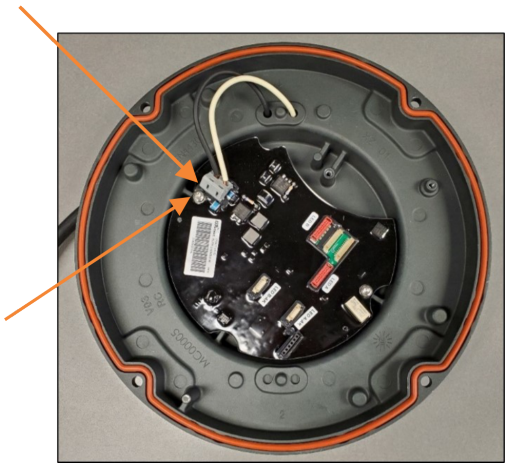


Tools to be used:

- Screwdriver or variable-speed torque drill driver with T20 Torx bit
- Flat-head screwdriver
- Small flat head screwdriver or Insert Tool, Part No : 236-332

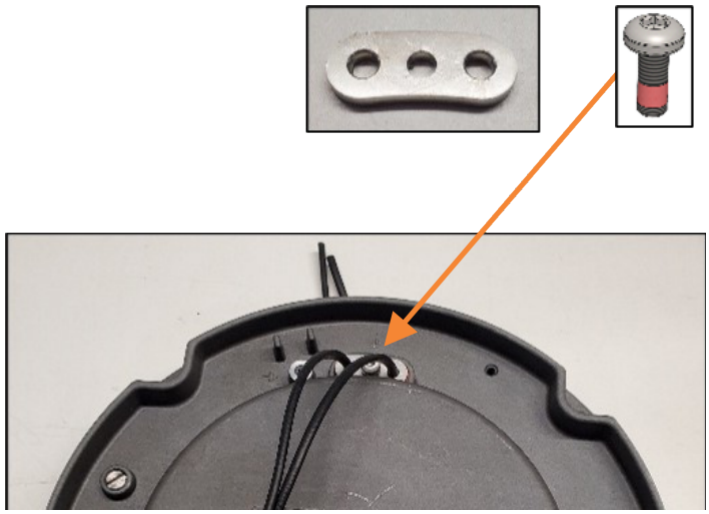
1. Open the light. Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.
2. Disconnect the cable:
   a. Disconnect the secondary cable from the converter by placing a small flat-head screwdriver or insert tool into the opening located at the other side of the secondary wire, and
   b. Release the cable by prying the screwdriver or Insert Tool on the cable release opening.

   Figure 31: Disconnecting Secondary Cable



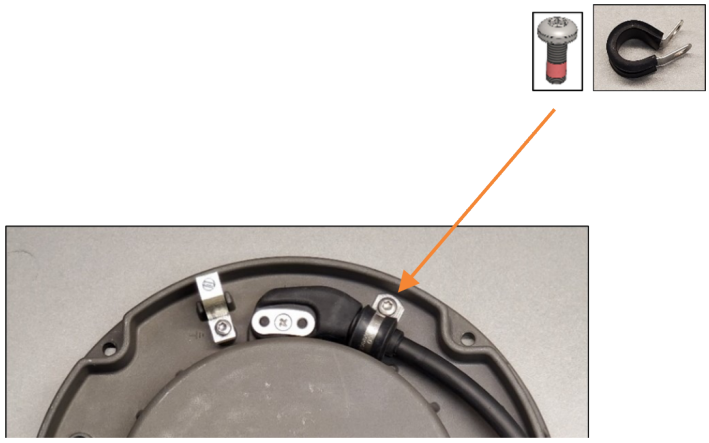
3. 4. Unscrew the Cord-set-retainer Disc Bolt.
   Make sure to **dispose of the old bolt and cord-set retainer disc** and use the new material.

   Figure 32: Disposal of Old Bolt and Cord-Set Retainer Disc



4. Unscrew the cable clamp.
   Make sure to **dispose of the old bolt, washer and lock washer** and use the new material.

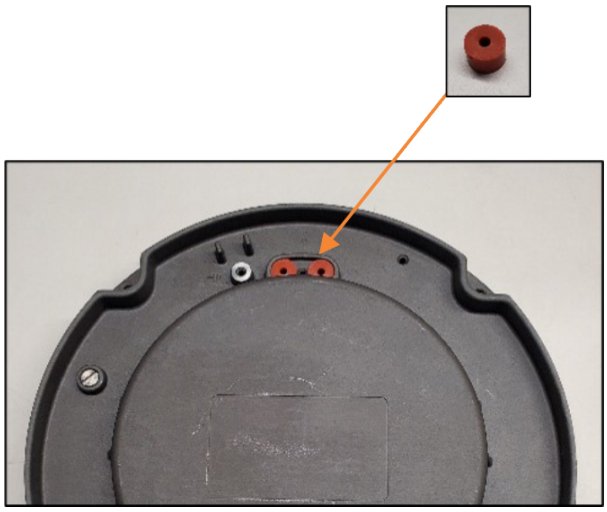
   Figure 33: Disposal of Old Bolt, Washer and Lock Washer



5. Remove the secondary cable
   Make sure to **dispose of the old secondary cable** and use the new secondary cable.
6. Remove the old cable gland gaskets.

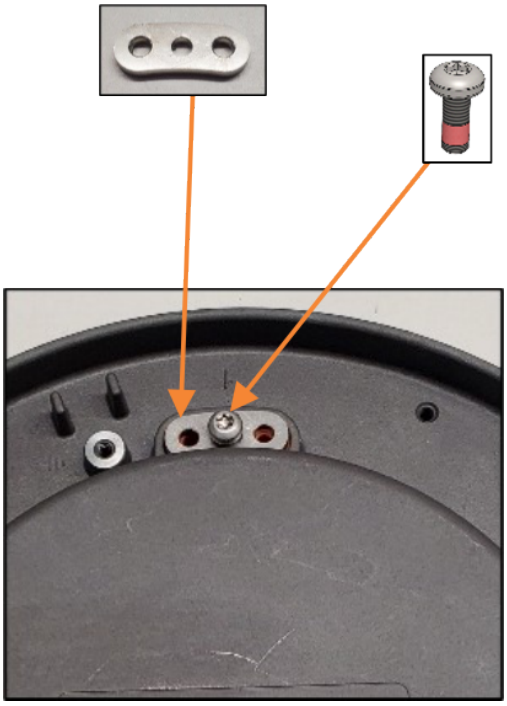
7. Install the new cable gland gaskets.

Figure 34: New Cable Gland Gasket Installation



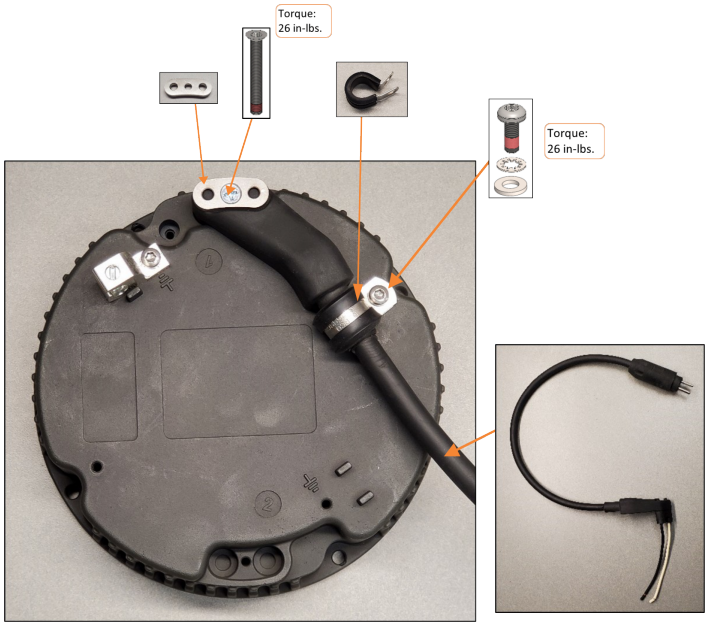
8. Install the new Cord-set-retainer Disc (M4x10) into the Bottom Cover.
   Make sure the **Cord-set-retainer Disc** sits loosely in the Bottom Cover.

Figure 35: Loosen the Cord-Set-Retainer Disc in the Bottom Cover



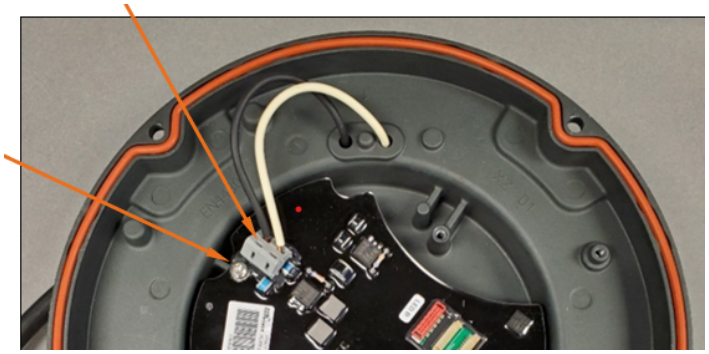
9. Installation:
    a. Install cord set into the Bottom Over using the cord set.
    b. Pull the cable through into the inside of the Bottom Cover.
    Make sure the cable is on the inside of the Bottom Cover.
    c. Mount the Retainer Disc onto the cable.
    d. Tighten the screw at 26 in-lbs (3 Nm).
    e. Loop the clamp using a new screw, lockwasher and flatwasher.
    f. Tighten the new screw, lockwasher and flatwasher at 26 in-lbs (3 Nm).

Figure 36: Installation Steps Overview



10. Locking:
    a. Lock the secondary cables leading to the converter by opening the cable holes prying a thin screwdriver or insert tool on the cable release opening and mounting the wires in place and
    b. Lock the cables by releasing screwdriver from the opening.

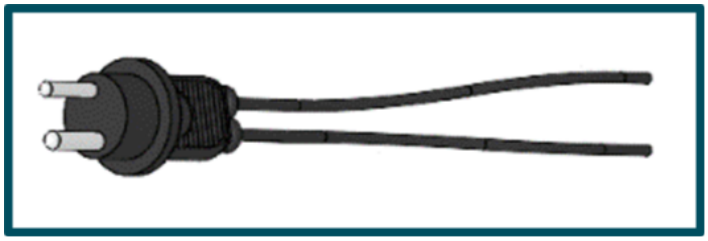
Figure 37: Locking Secondary Cables



11. Close the light. Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.9 Replace the Secondary Cable – Style-6 Cord Set

Figure 38: Secondary Cable Replacement



Tools to be used:

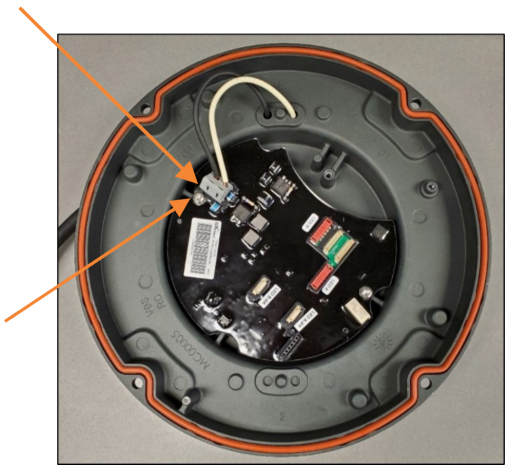
- Screwdriver or variable-speed torque drill driver with T20 Torx bit
- Flat-head screwdriver
- Small flat head screwdriver or insert tool, part no : 236-332

1. Open the light.

> **Note**
> Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

2. Disconnect the cable:
   a. Disconnect the secondary cable from the converter by placing a small flat-head screwdriver or insert tool into the opening located at the other side of the secondary wire, and
   b. Release the cable by prying the screwdriver on the cable release opening.

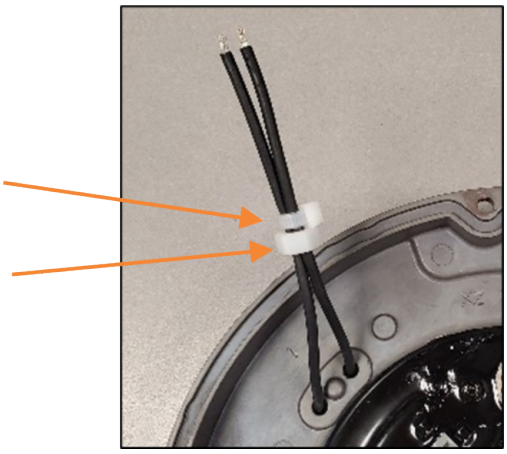
   Figure 39: Disconnecting secondary cable



3. Cut the Wire Tie.

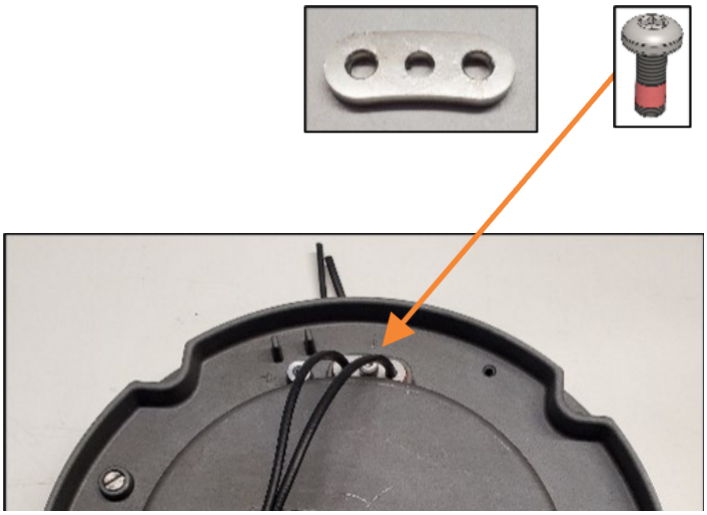
4. Remove the nylon hex nut.

Figure 40: Removal of nylon hex nut



5. Unscrew the Cord-set-retainer Disc Bolt.
   Make sure to **dispose of the old bolt and cord-set-retainer disc** and use the new material.

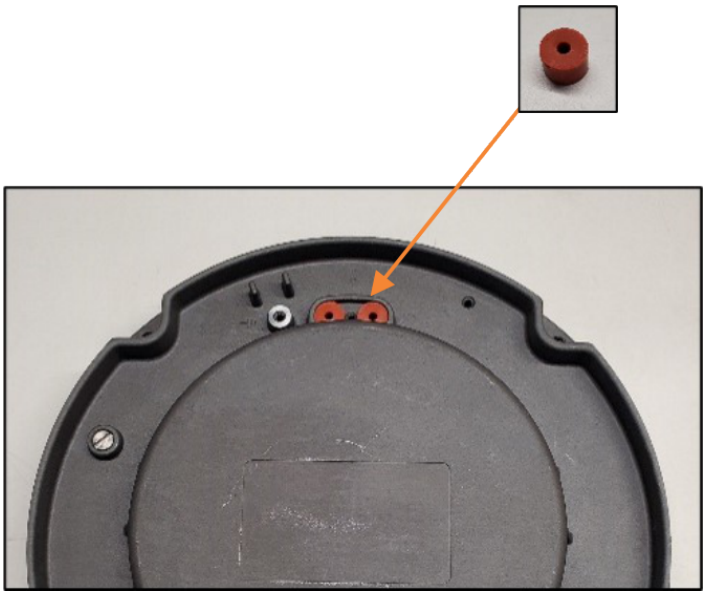
Figure 41: Dispose old bolt and cord-set-retainer disc



6. Remove the secondary cable.
   Make sure to **dispose of the old secondary cable** and use the new secondary cable.
7. Remove the old cable gland gaskets.

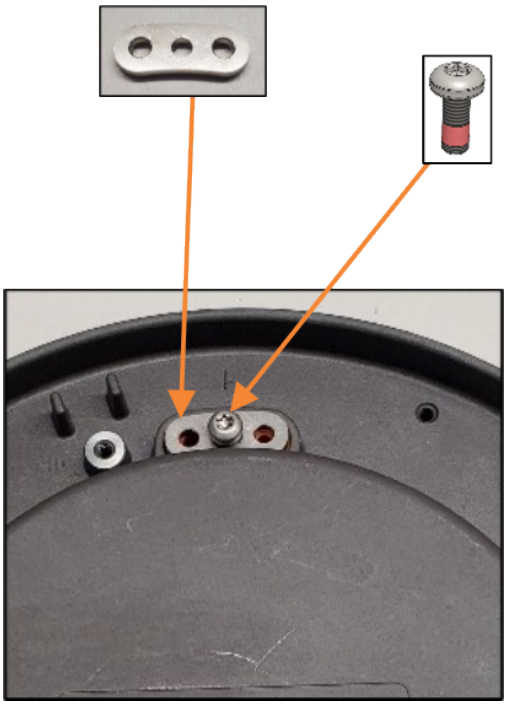
8. Install the new cable gland gaskets.

Figure 42: New cable gland gasket installation



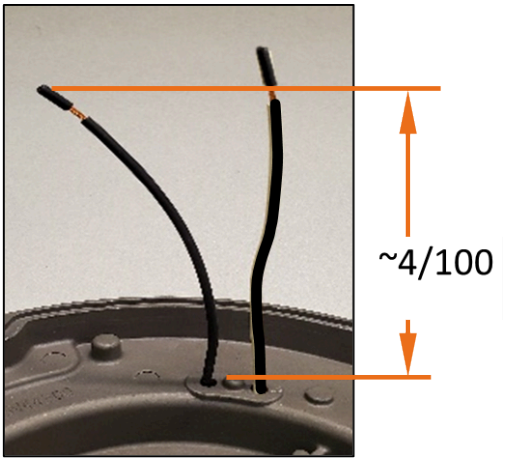
9. Install the new Cord-set-retainer Disc (M4x10) into the Bottom Cover.
   Make sure the **Cord-set-retainer Disc** sits loosely in the Bottom Cover.

Figure 43: Loosen cord-set-retainer disc in the bottom cover



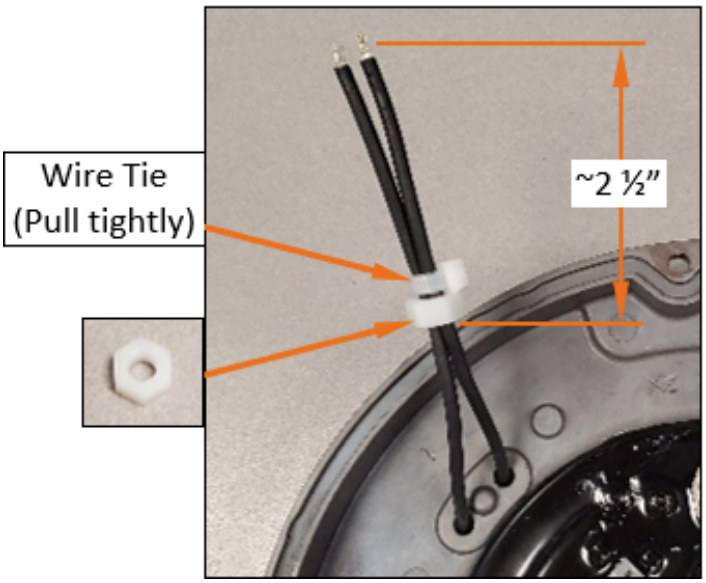
10. Installation:
    a. Pull the new secondary wires through the new Cord-set-retainer Disc Plate.
    b. Pull approximately 4 inches (100 mm) of the secondary cable through the Cord-set-retainer Disc Plate. Make sure the 4-inches of the cable are on the inside of the Bottom Cover.

Figure 44: Installation of secondary cable



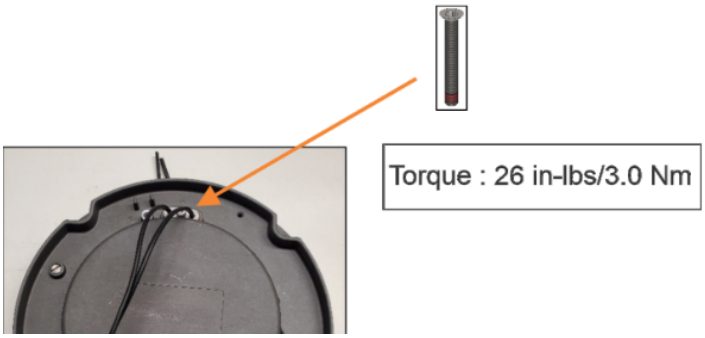
11. Place the new nylon hex nut into cord set.
12. Secure it tightly with a Wire Tie at a position of 2½ inches (64 mm) from the end of the cord set.

Figure 45: Secure nylon hex nut tightly with a wire tie



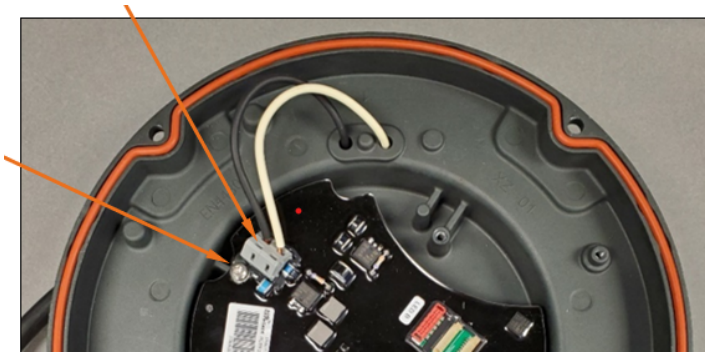
13. Tighten the new Cord-set-retainer Bolt at 26 in-lbs (3 Nm).

Figure 46: Tighten new cold-set-retainer bolt



14. Locking:
    a. Lock the secondary cables leading to the converter by opening the cable holes prying a thin screwdriver or insert tool on the cable release opening and mounting the wires in place and
    b. Lock the cables by removing screwdriver or insert tool from the opening.

Figure 47: Locking secondary cables



15. Close the light.

> **Note**
> Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.10 Replace the Secondary Cable – French 3-Pin Cord Set

Tools to be used:

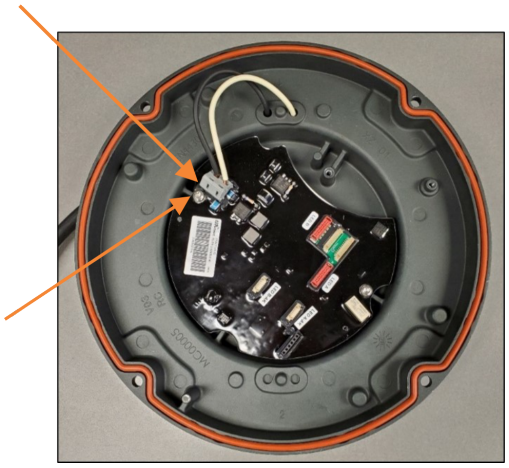
- Screwdriver or variable-speed torque drill driver with T20 Torx bit.
- Flat-head screwdriver
- Small flat head screwdriver or insert tool, part no: 236-332

1. Open the light.

> **Note**
> Refer to the Open a Light Fixture – Disconnect the Bottom Pan from the Top Cover section.

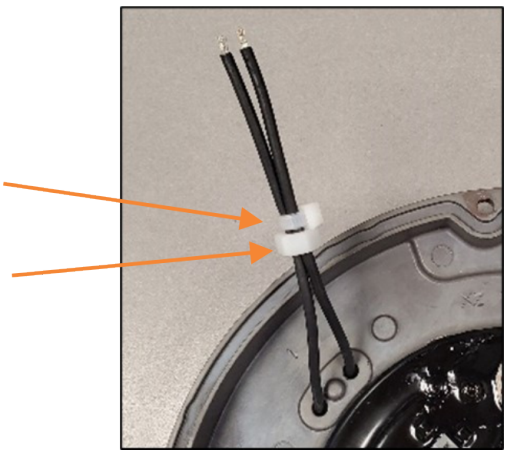
2. Disconnect the cable:
   a. Disconnect the secondary cable from the converter by placing a small flat-head screwdriver or insert tool into the opening located at the other side of the secondary wire, and
   b. Release the cable by prying the screwdriver or insert tool on the cable release opening.

Figure 48: Disconnecting Secondary Cable



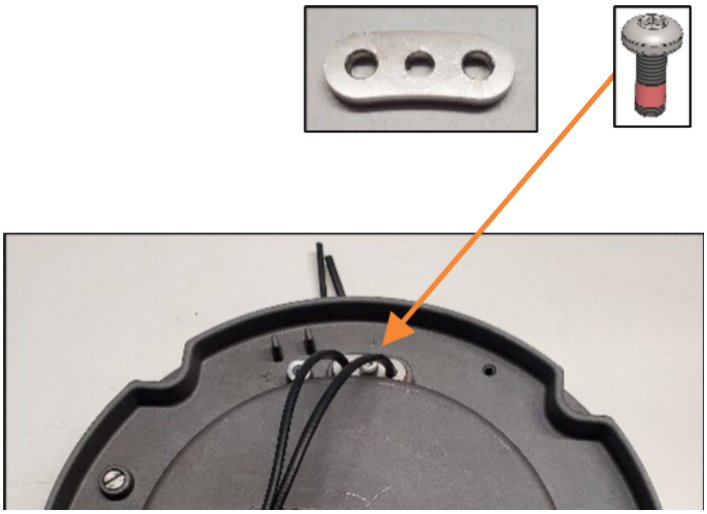
3. Cut the Wire Tie.
4. Remove the nylon hex nut.

Figure 49: Removal of Nylon Hex Nut



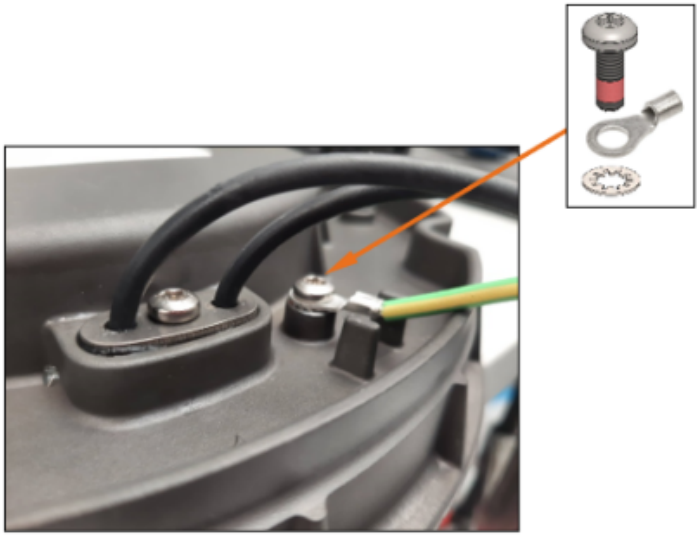
5. Unscrew the Cord-set-retainer Disc Bolt.
   Make sure to **dispose of the old bolt and cord-set-retainer disc** and use the new material.

Figure 50: Dispose of Old Bolt and Cord-Set-Retainer-Disc



6. Disconnect the ground wire of the cord set from the Bottom Cover.
   Make sure to **dispose of the old bolt and washer** and use the new material.

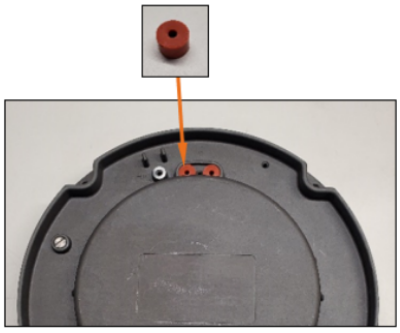
Figure 51: Disposal of Old Bolt and Washer



7. Remove the secondary cable.
   Make sure to **dispose of the old secondary cable** and use the new secondary cable.
8. Remove the old cable gland gaskets.

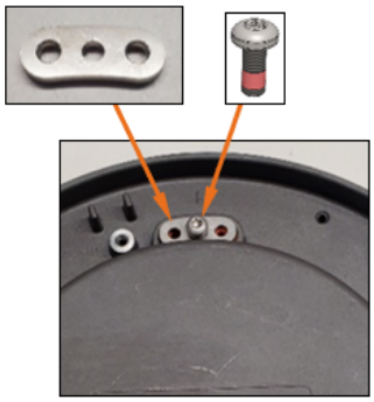
9. Install the new cable gland gaskets.

Figure 52: Installation of New Cable Gland Gasket



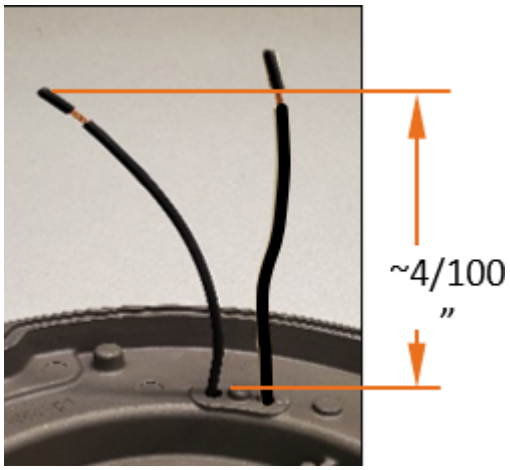
10. Install the new Cord-set-retainer Disc (M4x10) into the Bottom Cover.
Make sure the **Cord-set-retainer Disc** sits loosely in the Bottom Cover.

Figure 53: Loosen Cord-Set-Retainer-Disc in the Bottom Cover



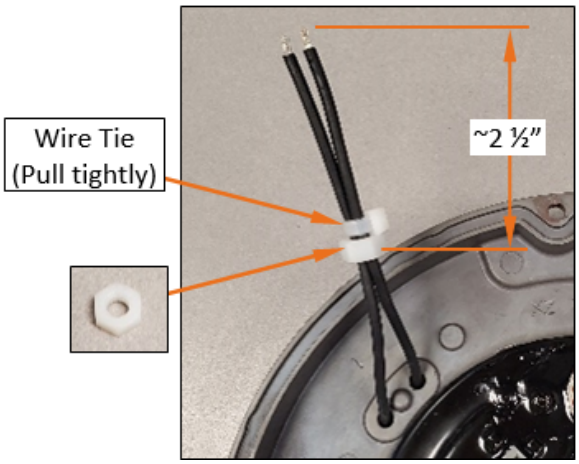
11. Installation:
    a. Pull the new secondary wires through the new cord-set-retainer-disc plate.
    b. Pull approximately 4 inches (100 mm) of the secondary cable through the cord-set-retainer-disc plate. Make sure the 4-inches of the cable are on the inside of the bottom cover.

Figure 54: Installation of New Secondary Wires



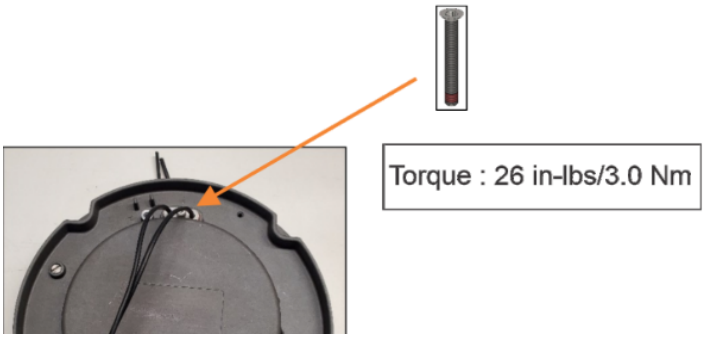
12. Place the new nylon hex nut into cord set.
13. Secure it tightly with a Wire Tie at a position of 2½ inches (64 mm) from the end of the cord set.

Figure 55: Securing Nylon Hex Nut Tightly with a Wire Tie



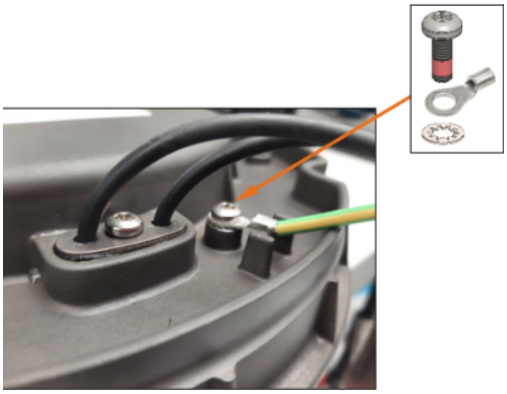
14. Tighten the new Cord-set-retainer Bolt at 26 in-lbs (3 Nm).

Figure 56: Tighten New Cord-Set-Retainer Bolt



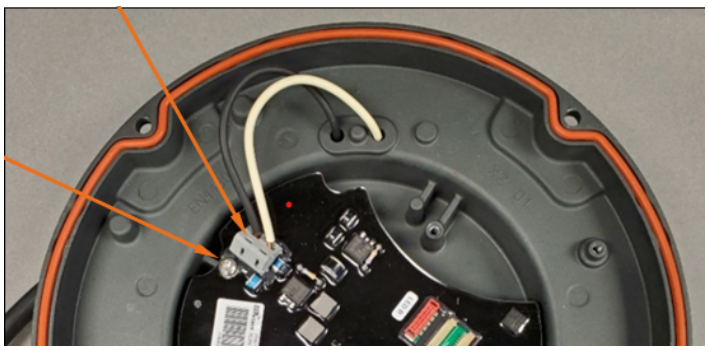
15. Connect the ground wire of the cord set to the Bottom Cover using the bolt and the washer.
16. Tighten the bolt at 26 in-lbs (3.0 Nm).

Figure 57: Tighten Bolt



17. Locking:
    a. Lock the secondary cables leading to the converter by opening the cable holes prying a thin screwdriver or insert tool on the cable release opening and mounting the wires in place and
    b. Lock the cables by removing screwdriver or insert tool from the opening.

Figure 58: Locking Secondary Cables



18. Close the light.

> **Note**
> Refer to the Close a Light Fixture – Connect the Bottom Pan to the Top Cover section.

5.4.11 Reset the Fail-Open Converter

Parts

- Fuse resistor spare part kit: 6132.00.250 (20 pcs)

1. Reset / replace the fuse resistors
   a. Disconnect and disassemble the light fixture.
   b. Locate the fuse resistors.

Figure 59: Converters with 1 connector (2 fuse resistors)

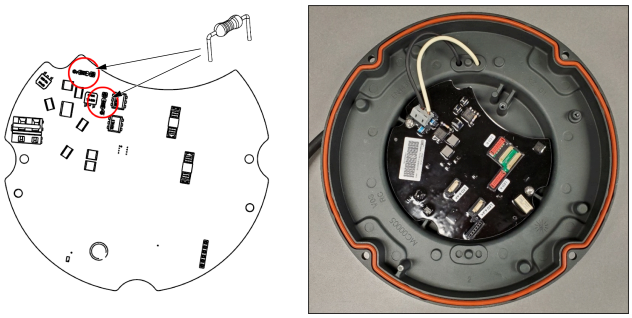
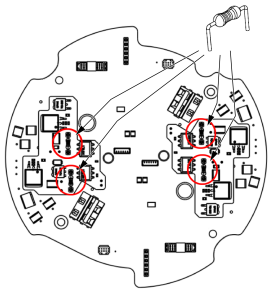


Figure 60: Converters with 2 connectors (4 fuse resistors)



2. Remove the fuse resistors by pulling away from the converter and place the new fuse resistors in the sockets. Make sure to **dispose of the old fuse resistor**.

> **Note**
> a. For fail-open with 1 connector, always replace both fuse resistors at the same time.
> b. For fail-open with 2 connectors, always replace both fuse resistors related to the channel that needs to be reset. (Make sure you replace all 4 fuse resistors, if both channels needs a reset.)

3. Assemble the light fixture and perform a functional test.

6.0 Ordering Codes

6.1 LED L-850A(L) Runway Centerline, L-850B(L) Touchdown Zone (ICAO & FAA)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable6	Options	Version
RS	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
RC = Runway Centerline, L-850A(L)
RZ = Touchdown Zone, L-850B(L)

Standards
1 = FAA / ICAO[1]

Market Specific
0 = None
1 = Buy American Preference (BAP)[23]
4 = German MIL 7-step FO[10]

Dimensions
1 = 8 inch (203 mm) diameter, 2 bolt
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)
3 = 8 inch (203 mm) diameter, 4 bolt

Prism
S = Standard prism
R = Reinforced prism[10]

Beam Orientation
1 = Unidirectional
2 = Bidirectional

Toe-in
L = Left Side Toe-in (unidirectional) (only for RZ)[4]
R = Right Side Toe-in (unidirectional) (only for RZ)[4]
N = None[4]

Color - Side 1 (Left)
W = White
R = Red

Color - Side 2 (Right)
W = White
R = Red
N = None (Unidirectional app only)

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — power only
M = 2.8 - 6.6 A, Fail-open monitoring[10]
R = 2.8 - 6.6 A, EQ integrated LINC 360[5]

Connector and Cable[6]
1 = 1 x Style 6 2-pole plug, 2 individual wires[10]
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable[9]
3 = 2 x Style 6 2-pole plug, 2 individual wires[710]
4 = 2 x Style 1 2-pole plug, jacketed SO 2 core cable[79]
5 = 1 x Flat 3-pole plug, 3 individual wires[10]
6 = 2 x Flat 3-pole plug, 3 individual wires[10]

Options
0 = None[8]
1 = Arctic Kit[8]

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.
2. Required for FAA when funded by AIP.
3. If a 2-cord set fixture is required meeting BAP, Digit 13, "Power and Monitoring", must be M.
4. L and R designations are always in relationship to Side 1 only.
5. EQ light fixtures are only available as a one connector option.
6. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
7. Only available in Digit 13 options S and M and bi-directional configuration.
8. RC white/white application meets the heat rise requirements in Engineering Brief 67D, section 2.13.1, "Arctic Kit Testing Requirements" WITHOUT an arctic kit. We do not offer an arctic kit with this configuration as the additional heat would be detrimental to the life of the LEDs.
9. SO cord set option is not compatible with shallow bases. If required please contact ADB Safegate.
10. Not ETL submitted or not applicable to FAA market.

6.2 LED L- 850C(L) Runway Edge 45 m (ICAO & FAA)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable5	Options	Version
RS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
RE = L-850C(L) Runway Edge ≤ 45 m width runway

Standards
1 = FAA / ICAO[1]

Market Specific
0 = None
1 = Buy American Preference (BAP)[12]
4 = German MIL 7-step FO[9]

Dimensions
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism[9]

Beam Orientation
1 = Unidirectional
2 = Bidirectional

Toe-in
L = Left Side Toe-in (unidirectional)
R = Right Side Toe-in (unidirectional)
C = Both Sides Toe-in (bidirectional)

Color - Side 1 (Left)
W = White
Y = Yellow
R = Red
F = Green

Color - Side 2 (Right)
W = White
Y = Yellow
R = Red
F = Green

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — power only
M = 2.8 - 6.6 A, Fail-open monitoring[9]
R = 2.8 - 6.6 A, EQ integrated LINC 360[4]

Connector and Cable[5]
1 = 1 x Style 6 2-pole plug, 2 individual wires[9]
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable[8]
3 = 2 x Style 6 2-pole plug, 2 individual wires[69]
4 = 2 x Style 1 2-pole plug, jacketed SO 2 core cable[689]
5 = 1 x Flat 3-pole plug, 3 individual wires[9]
6 = 2 x Flat 3-pole plug, 3 individual wires[9]

Options
0 = None[7]

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.
2. Required for FAA when funded by AIP.
3. If a 2-cord set fixture is required meeting BAP, digit 13, "Power and Monitoring", must be M.
4. EQ light fixtures are only available as a one connector option.
5. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
6. Only available in Power and Monitoring options S and M.
7. RE white/white and white/yellow applications meet the heat rise requirements in Engineering Brief 67D, section 2.13.1, "Arctic Kit Testing Requirements" WITHOUT an arctic kit. We do not offer an Arctic Kit with this configuration as the additional heat would be detrimental to the life of the LEDs.
8. SO cord set option is not compatible with shallow bases. If required please contact ADB Safegate.
9. Not ETL submitted or not applicable to FAA market.

6.3 LED Runway Edge, 60 m Width (R6 60 m) (ICAO)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable	Options	Version
RS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
R6 = Runway Edge 60m

Standards
3 = ICAO[1]

Market Specific
0 = None
4 = German MIL 7-step FO

Dimensions
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional
2 = Bidirectional

Toe-in
L = Left Side Toe-in (unidirectional)[2]
R = Right Side Toe-in (unidirectional)[2]
C = Both Sides Toe-in (bidirectional)

Color - Side 1 (Left)
W = White[3]
Y = Yellow[3]
R = Red

Color - Side 2 (Right)
W = White[3]
Y = Yellow[3]
R = Red
N = None

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — power only
M = 2.8 - 6.6 A, Fail-open monitoring
R = 2.8 - 6.6 A, EQ integrated LINC 360

Connector and Cable
1 = 1 x Style 6 2-pole plug, 2 individual wires[2]
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable[2]
3 = 2 x Style 6 2-pole plug, 2 individual wires[2]
4 = 2 x Style 1 2-pole plug, jacketed SO 2 core cable[2]
5 = 1 x Flat 3-pole plug, 3 individual wires[2]
6 = 2 x Flat 3-pole plug, 3 individual wires[2]

Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.
2. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
3. RE white/white and white/yellow applications meet the heat rise requirements in Engineering Brief 67D, section 2.13.1, "Arctic Kit Testing Requirements" WITHOUT an arctic kit. We do not offer an Arctic Kit with this configuration as the additional heat would be detrimental to the life of the LEDs.

6.4 LED L-850D(L) - FAA Threshold, End and FAA Threshold/End

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable	Options	Version
RS	□□	□	□	□	□	□	□	□	□	□	□	□	□

Application
RN = L-850D(L) Runway End
RT = L-850D(L) Runway Threshold,Threshold End

Standards
2 = FAA

Market Specific
0 = None
1 = Buy American Preference (BAP)[12]

Dimensions
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional
2 = Bidirectional

Toe-in
L =
Left Side Toe-in (unidirectional) (RT Green only, always toed)[3]
R =
Right Side Toe-in (unidirectional) (RT Green only, always toed)[3]
N = None (RN must be N)[3]

Color - Side 1 (Left)
F = Green (Arctic kit required)
R = Red (Arctic kit not required)

Color - Side 2 (Right)
R = Red (Arctic kit not required)
N = None

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — power only[4]
M = 2.8 - 6.6 A, Fail-open monitoring[4]
R = 2.8 - 6.6 A, EQ integrated LINC 360

Connector and Cable
1 = 1 x Style 6 2-pole plug, 2 individual wires[458]
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable[45]
3 = 2 x Style 6 2-pole plug, 2 individual wires[4568]
4 = 2 x Style 1 2-pole plug, jacketed SO 2 core cable[4567]

Options
0 = None[7]
1 = Arctic Kit[7]

Version
1 = Version 1

Ordering Code Notes

1. Required for FAA when funded by AIP.
2. If a 2-cord set fixture is required meeting BAP, Digit 13, "Power and Monitoring", must be M.
3. L and R designations are always in relationship to Side 1 only.
4. EQ light fixtures are only available as a one connector option.
5. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
6. Only available in Digit 13 options S and M and bi-directional configuration.
7. RN red application meets the heat rise requirements in Engineering Brief 67D, section 2.13.1, "Arctic Kit Testing Requirements" WITHOUT an arctic kit. We do not offer an arctic kit with this configuration as the additional heat would be detrimental to the life of the LEDs.
8. Not ETL submitted or not applicable to FAA market.

6.5 LED Runway Status L-850T(L), Takeoff/Hold, Runway Intersection (THL/RIL) and Runway Entry Light (REL)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Cable and connector1	Options	Version
RS	□□	□	□	□	□	□	□	□	□	□	□	□	□

Application

RS =
Runway Status; Takeoff/ Hold (THL); L-850T(L) (RIL); Runway Intersection

TS = Runway Status; Runway Entry (REL)[1]

Standards

2 = FAA

Market Specific

0 = None

1 = Buy American Preference (BAP)

Dimensions

1 = 8 inch (203 mm) diameter[3]

2 = 12 inch (305 mm) diameter 11.25 inch BC (285 mm)

3 = 8 inch (203 mm) diameter 4-bolt[3]

Prism

S = Standard prism

R = Reinforced prism[3]

Beam Orientation

1 = Unidirectional

Toe-in

N = None

Color - Side 1 (Left)

R = Red

Color - Side 2 (Right)

N = Not applicable

Power and Monitoring

R = 2.8 A - 6.6 A, EQ integrated LINC 360

Cable and connector[1]

1 = 1 x Style 6 2-pole plug, 2 individual Wires

2 = 1 x Style 1 2-pole plug, jacketed SO 2-core cable[2]

Options

0 = None

1 = Arctic Kit

Version

1 = Version 1

Ordering Code Notes

1. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
2. SO cord set option is not compatible with shallow bases. If required please contact ADB Safegate.
3. Not ETL submitted or not applicable to FAA market.

6.6 LED Stopway 45 m (ICAO)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable2	Options	Version
RS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
SW = Stopway 45 m

Standards
3 = ICAO[1]

Market Specific
0 = None

Dimensions
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional

Toe-in
L = Left Side Toe-in (unidirectional)
R = Right Side Toe-in (unidirectional)

Color - Side 1 (Left)
R = Red

Color - Side 2 (Right)
N = None

Color - Side 2 (Right)
W = White
Y = Yellow
R = Red
F = Green

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — power only
M = 2.8 - 6.6 A, Fail-open monitoring
R = 2.8 - 6.6 A, EQ integrated LINC 360

Connector and Cable[2]
1 = 1 x Style 6 2-pole plug, 2 individual wires
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable
5 = 1 x Flat 3-pole plug, 3 individual wires

Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, TP 312 and MOS 139.
2. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).

6.7 LED Stopway 60 m (ICAO)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Cable and Connector	Options	Version
RS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
S6 = Stopway 60 m Runway

Standards
3 = ICAO

Market Specific
0 = None

Dimensions
2 = 12 inch (304 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional

Toe-in
L = Left
R = Right

Color - Side 1 (Left)
R = Red

Color - Side 2 (Right)
N = None

Power and Monitoring
S = 2.8 A - 6.6 A non-monitored - power only
M = 2.8 A - 6.6 A Fail-Open monitoring
R = 2.8 A - 6.6 A EQ integrated LINC 360

Cable and Connector
1 = 1 x Style 6 2-pole plug, 2 individual wires[1]
2 = 1 x Style 1 2-pole plug, jacketed SO 2-core cable[1]
5 = 1 x flat 3-pole plug, 3 individual wires[1]

Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).

6.8 LED RETIL (ICAO)

Ordering Code

	Application	Standards	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Cable and connector2	Options	Version
RS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Application
RY = Rapid Exit Taxiway Indicator Light (RETIL)

Standards
3 = ICAO[1]

Market Specific
0 = None
4 = German Military 7-step FO

Dimensions
1 = 8 inch (203 mm) diameter
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional

Toe-in
N = None

Color - Side 1 (Left)
Y = Yellow

Color - Side 2 (Right)
N = Not applicable

Power and Monitoring
M = 2.8 A - 6.6 A Fail-Open monitoring[2]
R = 2.8 A - 6.6 A, EQ Integrated LINC 360

Cable and connector[2]
1 = 1 x Style 6 2-pole plug, 2 individual wires[3]
2 = 1 x Style 1 2-pole plug, jacketed SO 2-core cable[3]
5 = 1 x Flat 3-pole plug, 3 individual wires

Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, TP 312 and MOS 139.
2. EQ light fixtures are only available as a one connector option.
3. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).

6.9 LED L- 852(L) Runway Guard Light (ICAO & FAA)

Ordering Code

RS □□□□□□□□□□□□□□

Application
RG = L-852(L) Runway Guard Light

Standards
2 = FAA
3 = ICAO[6]

Market Specific
0 = None
1 = Buy American Preference (BAP)[1]

Dimensions
1 = 8 inch (203 mm) diameter, 2 bolt
2 = 12 inch (305 mm) diameter, 11.25 inch BC (285 mm)
3 = 8 inch (203 mm) diameter, 4 bolt

Prism
S = Standard prism
R = Reinforced prism

Beam Orientation
1 = Unidirectional

Toe-in
N = None

Color - Side 1 (Left)
Y = Yellow

Programming – Side 2 (Right)[3]
0 = Flash-off
1 = Flash-on

Power and Monitoring
S = 2.8 - 6.6 A, non-monitored — autonomous
R = 2.8 - 6.6 A, EQ integrated LINC 360[4]

Connector and Cable
1 = 1 x Style 6 2-pole plug, 2 individual wires[4]
2 = 1 x Style 1 2-pole plug, jacketed SO 2 core cable[45]
5 = 1 x Flat 3-pole plug, 3 individual wires[4]

Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. Required for USA FAA Market.
2. 8"- 4 bolt top cover fixtures are not compatible with 8" shallow bases.
3. Side 2 will include a non-light producing window on the autonomous version which provides access to the internal optical sensor, allowing the Local Programming Device to change flash programming. All fixtures must be ordered as either flash-off or flash-on. Typically, it is a 50/50 split between the two options.
4. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
5. Style 1 SO cord-set not compatible with 8" shallow bases using side entry.
6. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.

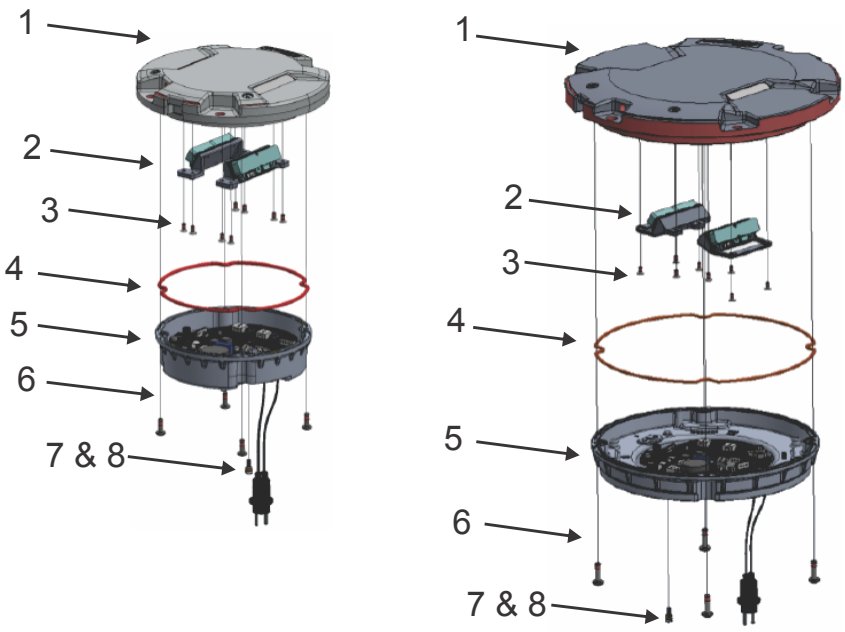
7.0 Spare Parts

Spare parts are available for inset light fixtures with and without the control and monitoring functionality. For more information, see www.adbsafegate.com and the spare part lists, or contact ADB SAFEGATE for assistance.

7.1 Versions and Exploded View

Partial Exploded View — Spare part Assemblies

Figure 61: 8-Inch Fixtures (Left) & 12-Inch Fixtures (Right)



Call-out	Description	Assembly number prefix
1	Top Cover Assembly, 8-inch	SP.AS00019-XXX
1	Top Cover Assembly, 12-inch	SP.AS00018-XXX
2	Light Engine Assembly, 8-inch	SP.AS00020-XXX
2	Light Engine Assembly, 12-inch	SP.AS00023-XXX
3	Mounting Screws, Light Engine	SP.MFPM4PT-708-01
4	Gasket, 8" Bottom Pan	SP.MS00005-000-01
4	Gasket, 12" Bottom Pan	SP.MS00006-000-01
5	Bottom Pan Assembly, 8-inch	SP.AS00021-XXX
5	Bottom Pan Assembly, 12-inch	SP.AS00024-XXX
6	Mounting Screws, 8" Bottom Pan	SP.MFPM5PT-714-01
6	Mounting Screws, 12" Bottom Pan	SP.MFPM6PT-720-01
7 & 8	Pressure Relief Screw with O-ring	SP.MF00090-000-01

7.2 Illustration

Figure 62: Top Cover Assembly

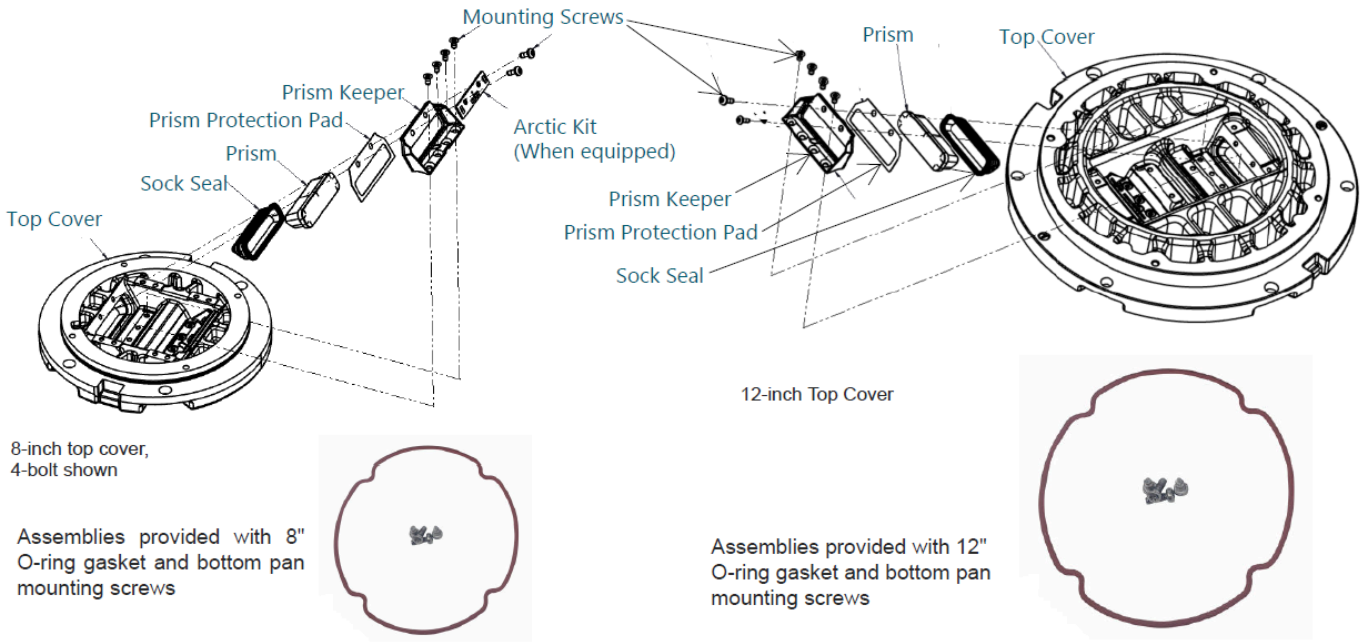


Figure 63: Bottom Pan Assembly, 8-inch

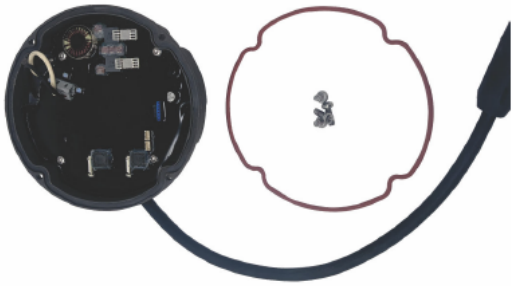


Figure 64: Bottom Pan Assembly, 12-inch

Shown with Gasket Installed

All Bottom Pan assemblies are fully populated (power supply, cord set, ground lug or ground screw) and provided with the O-ring gasket and (4) bottom pan mounting screws.

Figure 65: Bottom Pan Gasket, 8-inch, Package of 10

Figure 66: Bottom Pan Gasket, 12-inch Package of 10

Figure 67: LED Light Engines Wire Harness, Package of 10

Sized for 8" and 12" Fixtures

Figure 68: Light Engine Assembly, Package of 2

8" Fixture Light Engines

12" Fixture Light Engines

Figure 69: Prism Kit, Package of 2

- Available in standard or protected (sapphire) prism.
- Kit includes the Prism, Sock Seal (both shown), Prism Protection Pad, Prism Keeper and all mounting screws.

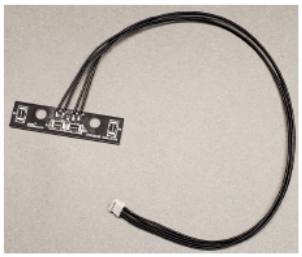
Figure 70: Ground Lugs, Package of 5

Figure 71: Style-1 Cord Set Cable Clamp, Package of 5

Figure 72: Mounting Screws, Package of 100

Figure 73: Pressure Release Screws, Package of 5

Figure 74: Arctic Kit, Package of 2



Note

Pressure release screw O-ring is to be replaced with new O-ring prior to re-installation of the pressure release screw.

7.3 Runway Centerline, L-850A(L) (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS
bidirectional, standard prism	1	1	SP.AS00018-BNG
bidirectional, reinforced prism	1	1	SP.AS00018-BNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBS

A2 - Top Cover assemblies, 8-inch (2-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-3NG
unidirectional, reinforced prism	1	1	SP.AS00019-3NS
bidirectional, standard prism	1	1	SP.AS00019-4NG
bidirectional, reinforced prism	1	1	SP.AS00019-4NS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-4AG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-4AS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-4BG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-4BS

A3 - Top cover assemblies, 8-inch (4-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-5NG
unidirectional, reinforced prism	1	1	SP.AS00019-5NS
bidirectional, standard prism	1	1	SP.AS00019-6NG
bidirectional, reinforced prism	1	1	SP.AS00019-6NS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BS
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-6AG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-6AS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-6BG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-6BS

B1 - RC Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-850A(L), red, straight	1 or 2	1	SP.AS00023-SR1
ICAO and FAA L-850A(L), white, straight	1 or 2	1	SP.AS00023-SW2

B2/3 - RC Light engine assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-850A(L), red, straight	1 or 2	1	SP.AS00020-SR1
ICAO and FAA L-850A(L)/L-850B(L), white, straight	1 or 2	1	SP.AS00020-SW2

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, 2-con style 6 cord set	1	1	SP.AS00024-L23
non-monitored converter, 2-con 3-pole cord set	1	1	SP.AS00024-L2F
non-monitored converter, 2-con style 1 SJO jacketed cord set	1	1	SP.AS00024-L2J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
monitored converter, 2-con style 6 cord sets	1	1	SP.AS00024-M23
monitored converter, 2-con 3-pole cord sets	1	1	SP.AS00024-M2F
monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00024-M2J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J
BAP, non-monitored converter, style 6 cord set	1	1	SP.AS00024-S13
BAP, non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-S1J

C2/3 - Bottom pan assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00021-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00021-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-L1J
non-monitored converter, 2-con style 6 cord sets	1	1	SP.AS00021-L23
non-monitored converter, 2-con 3-pole cord sets	1	1	SP.AS00021-L2F
non-monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00021-L2J
monitored converter, style 6 cord set	1	1	SP.AS00021-M13
monitored converter, 3-pole cord set	1	1	SP.AS00021-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-M1J
monitored converter, 2-con style 6 cord sets	1	1	SP.AS00021-M23
monitored converter, 2-con 3-pole cord sets	1	1	SP.AS00021-M2F
monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00021-M2J
EQ converter, style 6 cord set	1	1	SP.AS00021-R13
EQ converter, 3-pole cord set	1	1	SP.AS00021-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-R1J
Buy American Preference non-monitored converter, style 6 cord set	1	1	SP.AS00021-S13
Buy American Preference non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-S1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 8-inch bottom pan	1 or 2	5	SP.73A0193/1
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160

Cord sets	Quantity per		Spare part code
	fitting	spare part	
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 8-inch bottom pan, package of 10	1	10	SP.MS00005-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, 8-inch bottom pan, package of 100	-	100	SP.MFPM5PT-714-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 8-inch light engine, package of 10	1 or 2	10	SP.EW00079-150-01
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.4 Touchdown Zone, L-850B(L) (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

A2 - Top Cover assemblies, 8-inch (2-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-3NG
unidirectional, reinforced prism	1	1	SP.AS00019-3NS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BS

A3 - Top cover assemblies, 8-inch (4-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-5NG
unidirectional, reinforced prism	1	1	SP.AS00019-5NS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BS

B1 - RZ Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-850B(L), white, left toe	1	1	SP.AS00023-LW2
ICAO and FAA L-850B(L), white, straight	1	1	SP.AS00023-SW2
ICAO and FAA L-850B(L), white, right toe	1	1	SP.AS00023-RW2

B2/3 - RZ Light engine assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-850B(L), white, left toe	1	1	SP.AS00020-LW2
ICAO and FAA L-850B(L), white, straight	1	1	SP.AS00020-SW2
ICAO and FAA L-850B(L), white, right toe	1	1	SP.AS00020-RW2

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J
BAP, non-monitored converter, style 6 cord set	1	1	SP.AS00024-S13
BAP, non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-S1J

C2/3 - Bottom pan assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00021-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00021-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-L1J
monitored converter, style 6 cord set	1	1	SP.AS00021-M13
monitored converter, 3-pole cord set	1	1	SP.AS00021-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-M1J
EQ converter, style 6 cord set	1	1	SP.AS00021-R13
EQ converter, 3-pole cord set	1	1	SP.AS00021-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-R1J
Buy American Preference non-monitored converter, style 6 cord set	1	1	SP.AS00021-S13
Buy American Preference non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-S1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 8-inch bottom pan	1 or 2	5	SP.73A0193/1
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 8-inch bottom pan, package of 10	1	10	SP.MS00005-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, 8-inch bottom pan, package of 100	-	100	SP.MFPM5PT-714-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 8-inch light engine, package of 10	1 or 2	10	SP.EW00079-150-01
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.5 Runway Edge 45 m, L-850C(L) (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS
bidirectional, standard prism	1	1	SP.AS00018-BNG
bidirectional, reinforced prism	1	1	SP.AS00018-BNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBS

B1 - RE Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
FAA L-850C(L), F-green, left toe	1	1	SP.AS00023-LF2-RE
FAA L-850C(L), F-green, right toe	1	1	SP.AS00023-RF2-RE
ICAO and FAA L-850C(L), white, left toe	1	1	SP.AS00023-LW3
ICAO and FAA L-850C(L), white, right toe	1	1	SP.AS00023-RW3
ICAO and FAA L-850C(L), yellow, left toe	1	1	SP.AS00023-LY3
ICAO and FAA L-850C(L), yellow, right toe	1	1	SP.AS00023-RY3

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
non-monitored converter, 2-con style 6 cord set	1	1	SP.AS00024-L23
non-monitored converter, 2-con 3-pole cord set	1	1	SP.AS00024-L2F

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, 2-con style 1 SJO jacketed cord set	1	1	SP.AS00024-L2J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
monitored converter, 2-con style 6 cord sets	1	1	SP.AS00024-M23
monitored converter, 2-con 3-pole cord sets	1	1	SP.AS00024-M2F
monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00024-M2J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J
BAP, non-monitored converter, style 6 cord set	1	1	SP.AS00024-S13
BAP, non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-S1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.6 L-850D(L) Threshold, Threshold/End FAA, Runway End (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS
bidirectional, standard prism	1	1	SP.AS00018-BNG
bidirectional, reinforced prism	1	1	SP.AS00018-BNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBS

B1 - RN and RT FAA Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
threshold, FAA L-850D(L), F-green, left toe	1	1	SP.AS00023-LF2-RT
threshold, FAA L-850D(L), F-green, straight	1	1	SP.AS00023-SF2
threshold, FAA L-850D(L), F-green, right toe	1	1	SP.AS00023-RF2-RT
runway end, ICAO and FAA L-850D(L), red, straight	1 or 2	1	SP.AS00023-SR3

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
non-monitored converter, 2-con style 6 cord set	1	1	SP.AS00024-L23
non-monitored converter, 2-con style 1 SJO jacketed cord set	1	1	SP.AS00024-L2J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, 2-con style 6 cord sets	1	1	SP.AS00024-M23
monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00024-M2J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J
BAP, non-monitored converter, style 6 cord set	1	1	SP.AS00024-S13
BAP, non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-S1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.7 Takeoff/Hold & Runway Intersection, L-850T(L) (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

A2 - Top Cover assemblies, 8-inch (2-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-3NG
unidirectional, reinforced prism	1	1	SP.AS00019-3NS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BS

A3 - Top cover assemblies, 8-inch (4-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-5NG
unidirectional, reinforced prism	1	1	SP.AS00019-5NS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BS

B1 - RS Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
runway status take-off / hold, red	1	1	SP.AS00023-SR2

B2/3 - RS Light engine assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
runway status take-off / hold, red	1	1	SP.AS00020-SR2

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J

C2/3 - Bottom pan assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, style 6 cord set	1	1	SP.AS00021-M13
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-M1J
EQ converter, style 6 cord set	1	1	SP.AS00021-R13
RWSL EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-R1R

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 8-inch bottom pan	1 or 2	5	SP.73A0193/1
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 8-inch bottom pan, package of 10	1	10	SP.MS00005-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, 8-inch bottom pan, package of 100	-	100	SP.MFPM5PT-714-01

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 8-inch light engine, package of 10	1 or 2	10	SP.EW00079-150-01
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.8 Runway Guard Light, L - 852G(L) (ICAO & FAA)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

A2 - Top Cover assemblies, 8-inch (2-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-3NG
unidirectional, reinforced prism	1	1	SP.AS00019-3NS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BS

A3 - Top cover assemblies, 8-inch (4-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-5NG
unidirectional, reinforced prism	1	1	SP.AS00019-5NS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-5AS

A3 - Top cover assemblies, 8-inch (4-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-5BS

B1 - RG Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-852G(L), yellow	1	1	SP.AS00023-GY2
IR sensor optic, autonomous RGL	1	1	SP.AS00277-012

B2/3 - RG Light engine assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO and FAA L-852G(L), yellow	1	1	SP.AS00020-GY2
IR sensor optic, autonomous RGL	1	1	SP.AS00277-008

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J
BAP, non-monitored converter, style 6 cord set	1	1	SP.AS00024-S13
BAP, non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-S1J

C2/3 - Bottom pan assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00021-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00021-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-L1J
monitored converter, style 6 cord set	1	1	SP.AS00021-M13
monitored converter, 3-pole cord set	1	1	SP.AS00021-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-M1J
EQ converter, style 6 cord set	1	1	SP.AS00021-R13
EQ converter, 3-pole cord set	1	1	SP.AS00021-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-R1J
Buy American Preference non-monitored converter, style 6 cord set	1	1	SP.AS00021-S13
Buy American Preference non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-S1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 8-inch bottom pan	1 or 2	5	SP.73A0193/1
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 8-inch bottom pan, package of 10	1	10	SP.MS00005-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, 8-inch bottom pan, package of 100	-	100	SP.MFPM5PT-714-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 8-inch light engine, package of 10	1 or 2	10	SP.EW00079-150-01
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.9 Runway Edge 60 m (ICAO)

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS
bidirectional, standard prism	1	1	SP.AS00018-BNG
bidirectional, reinforced prism	1	1	SP.AS00018-BNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS
bidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAG
bidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-BAS
bidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBG
bidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-BBS

B1 - R6 Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
runway / stopway edge 60m, red, left toe	1	1	SP.AS00023-6R4
runway edge 60m, white, left toe	1	1	SP.AS00023-6W4
runway edge 60m, yellow, left toe	1	1	SP.AS00023-6Y4
runway / stopway edge 60m, red, right toe	1	1	SP.AS00023-7R4
runway edge 60m, white, right toe	1	1	SP.AS00023-7W4
runway edge 60m, yellow, right toe	1	1	SP.AS00023-7Y4

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
non-monitored converter, 2-con style 6 cord set	1	1	SP.AS00024-L23
non-monitored converter, 2-con 3-pole cord set	1	1	SP.AS00024-L2F

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, 2-con style 1 SJO jacketed cord set	1	1	SP.AS00024-L2J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
monitored converter, 2-con style 6 cord sets	1	1	SP.AS00024-M23
monitored converter, 2-con 3-pole cord sets	1	1	SP.AS00024-M2F
monitored converter, 2-con style 1 SJO jacketed cord sets	1	1	SP.AS00024-M2J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.10 Stopway 60m, Inset 12-inch, ICAO

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

B1 - S6 Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
runway / stopway edge 60m, red, left toe	1	1	SP.AS00023-6R4
runway / stopway edge 60m, red, right toe	1	1	SP.AS00023-7R4

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.11 Rapid Exit Taxiway Indicator Light (RETIL), ICAO

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

A2 - Top Cover assemblies, 8-inch (2-bolt), without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00019-3NG
unidirectional, reinforced prism	1	1	SP.AS00019-3NS

A2 - Top Cover assemblies, 8-inch (2-bolt), with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00019-3AS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00019-3BS

B1 - RY Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO RETIL, yellow	1	1	SP.AS00023-SY1

B2/3 - RY Light engine assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
ICAO RETIL, yellow	1	1	SP.AS00020-SY1

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J

C2/3 - Bottom pan assemblies, 8-inch	Quantity per		Spare part code
	fitting	spare part	
monitored converter, style 6 cord set	1	1	SP.AS00021-M13
monitored converter, 3-pole cord set	1	1	SP.AS00021-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-M1J
EQ converter, style 6 cord set	1	1	SP.AS00021-R13
EQ converter, 3-pole cord set	1	1	SP.AS00021-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00021-R1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 8-inch bottom pan	1 or 2	5	SP.73A0193/1
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 8-inch bottom pan, package of 10	1	10	SP.MS00005-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, 8-inch bottom pan, package of 100	-	100	SP.MFPM5PT-714-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 8-inch light engine, package of 10	1 or 2	10	SP.EW00079-150-01
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

7.12 Stopway 45m, ICAO

Note

- Each top cover assemblies includes a bottom pan gasket and screws for bottom pan.
- BAP stands for "Buy American Preference".

A1 - Top Cover assemblies, 12-inch, without heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism	1	1	SP.AS00018-UNG
unidirectional, reinforced prism	1	1	SP.AS00018-UNS

A1 - Top Cover assemblies, 12-inch, with heater	Quantity per		Spare part code
	fitting	spare part	
unidirectional, standard prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAG
unidirectional, reinforced prism, non-monitored (S-BAP) and EQ (R)	1	1	SP.AS00018-UAS
unidirectional, standard prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBG
unidirectional, reinforced prism, non-monitored (S-non-BAP) and monitored (M)	1	1	SP.AS00018-UBS

B1 - RE and SW Light engine assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
runway edge / stopway 45m, red, left toe	1	1	SP.AS00023-LR2
runway edge / stopway 45m, red, right toe	1	1	SP.AS00023-RR2

C1 - Bottom pan assemblies, 12-inch	Quantity per		Spare part code
	fitting	spare part	
non-monitored converter, style 6 cord set	1	1	SP.AS00024-L13
non-monitored converter, 3-pole cord set	1	1	SP.AS00024-L1F
non-monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-L1J
monitored converter, style 6 cord set	1	1	SP.AS00024-M13
monitored converter, 3-pole cord set	1	1	SP.AS00024-M1F
monitored converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-M1J
EQ converter, style 6 cord set	1	1	SP.AS00024-R13
EQ converter, 3-pole cord set	1	1	SP.AS00024-R1F
EQ converter, style 1 SJO jacketed cord set	1	1	SP.AS00024-R1J

Cord sets	Quantity per		Spare part code
	fitting	spare part	
L-823 style 1, 12-inch bottom pan	1 or 2	5	SP.73A0194/1
L-823 style 6, 8-inch and 12-inch bottom pan	1 or 2	5	SP.73A0136/18
3-pole, 8-inch and 12-inch bottom pan	1 or 2	5	SP.SGEFR500160
Cable retaining clamp, for style 1 cord set, package	1 or 2	5	SP.MB00003-013-01
Ground lug kit	1	5	SP.72A0401

Prism Kits	Quantity per		Spare part code
	fitting	spare part	
prism kits, runway standard, package of 2	1 or 2	2	SP.MG00001-G00-03
prism kits, runway reinforced, package of 2	1 or 2	2	SP.MG00001-S00-03
prism gaskets, runway, package of 10	1 or 2	10	SP.MS00004-000-02

Screws and gaskets	Quantity per		Spare part code
	fitting	spare part	
screws, pressure release with o-ring, package of 5	1	5	SP.MF00090-000-01
gaskets, 12-inch bottom pan, package of 10	1	10	SP.MS00006-000-01
screws, mounting light engine assemblies, package of 100	-	100	SP.MFPM4PT-710-01
screws, 12-inch bottom pan, package of 100	-	100	SP.MFPM6PT-720-01

Heater kits	Quantity per		Spare part code
	fitting	spare part	
with harness - non-monitored (S-BAP) and EQ	1 or 2	2	SP.EP00038-R00-01
with harness - non-monitored (S-non-BAP) and monitored	1 or 2	2	SP.EP00038-R01-01

Wire harnesses	Quantity per		Spare part code
	fitting	spare part	
power supply to 12-inch light engine, package of 10	1 or 2	10	SP.EW00079-300-01

Fuses	Quantity per		Spare part code
	fitting	spare part	
Fuse Resistors (for monitoring (M) fixtures only), package of 20	1 or 2	20	SP.6132.00.250

Note

All screws for fastening are included.

Component availability or design may be subject to change due to unforeseen circumstances. This document is subject to change or new information from ADB SAFEGATE, as and when available or if required, with reservation for error or price changes.

For more information or assistance with ordering spare parts, contact ADB SAFEGATE, see www.adbsafegate.com.

8.0 Power Tables

LED L-850A(L), L-850B(L) Runway Centerline and Touchdown Zone

8-inch and 12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Centerline, L-850A(L), bidirectional	34.9 VA	45 W	14.2 VA	49.1 VA
Touchdown Zone, L-850B(L), unidirectional	25.5 VA	25 W	7.2 VA	32.7 VA

8-inch and 12-inch light fixtures with Arctic Kit (heater)

Fixture Types – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Centerline, L-850A(L), bidirectional	62.6 VA	65 W	16.6 VA	79.2 VA
Touchdown Zone, L-850B(L), unidirectional	48.8 VA	45 W	9.7 VA	58.5 VA

[1]Values provided are for the "S" option non-monitored power only.

LED L-850C(L) Runway Edge

12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Edge, L-850C(L), bidirectional	60.7 VA	65 W	17.4 VA	78.1 VA

12-inch light fixtures with Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Edge, L-850C(L), bidirectional	71.6 VA	65 W	15.7 VA	87.3 VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

LED Runway Edge, 60 m Width

12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Edge, bidirectional, White/White	61 VA	65 W	13 VA	74 VA
Runway Edge, unidirectional, White	30 VA	45 W	10 VA	40 VA

12-inch light fixtures with Arctic Kit (heater)

Fixture Types – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Edge, bidirectional, White/Red	72 VA	65 W	15 VA	87 VA
Runway Edge, unidirectional, Red	40 VA	45 W	10 VA	50 VA

[1]Values provided are for the "S" option non-monitored power only.

L-852G(L) LED Runway Guard Light

8-inch and 12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Guard Light, L-852(L), Autonomous	26 VA	25 W	8 VA	34 VA
Runway Guard Light, L-852(L), EQ / LINC 360	28 VA	45 W	10 VA	38 VA

8 and 12-inch light fixtures with Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Guard Light, L-852(L), Autonomous	43 VA	45 W	9 VA	52 VA
Runway Guard Light, L-852(L), EQ / LINC 360	45 VA	45 W	9 VA	54 VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

LED L-850D(L) Runway Threshold, End, Threshold/End

12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Threshold, L-850D(L), bidirectional, F-Green/red	36.6 VA	45 W	14.2 VA	50.8 VA
Runway Threshold, L-850D(L), bidirectional, red/red	46.6 VA	45 W	13 VA	59.6 VA
Runway Threshold, L-850D(L), unidirectional, F-Green	21.2 VA	25 W	6.8 VA	28 VA
Runway Threshold End, L-850D(L), unidirectional, red	31.6 VA	25 W	9.5 VA	41.1 VA

12-inch light fixtures with Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Runway Threshold, L-850D(L), bidirectional, F-Green/red	65.3 VA	65 W	16.2 VA	81.5 VA
Runway Threshold, L-850D(L), bidirectional, red/red46.6 VA	49.4 VA	45 W	10 VA	59.4 VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

LED ICAO Runway Threshold, Threshold/End

12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Threshold/End	43 VA	45 W	12 VA	55 VA
End/End	32 VA	45 W	9 VA	41 VA
Threshold	32VA	45 W	9 VA	41 VA
End	19 VA	25 W	6 VA	25 VA

[1]Values provided are for the "S" option non-monitored power only.

LED Stopway, ≤ 45 m Width

12-inch light fixtures without Arctic Kit (without heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Stopway Unidirectional	34.9VA	45W	14.2VA	49.1VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

LED Runway Status L-850T(L), Takeoff/Hold, Runway Intersection (THL/RIL) and Runway Entry Light (REL)

8-inch and 12-inch light fixtures without Arctic Kit

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
L-850T(L) THL/RIL Takeoff Hold Light	16.5 VA	25 W	10 VA	26.5 VA
REL Runway Entry Light	17.5 VA	25 W	9.8 VA	27.3 VA

8-inch and 12-inch light fixtures with Arctic Kit

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
L-850T(L) THL/RIL Takeoff Hold Light	48.5 VA	65 W	14 VA	62.5 VA
REL Runway Entry Light	49.5 VA	65 W	14 VA	63.5 VA

[1]Values provided are for the "S" option non-monitored power only.

LED Stopway, ≤ 60 m Width Runway

12-inch light fixtures without Arctic Kit (heater)

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Stopway Unidirectional	35 VA	45 W	14.2 VA	49.2 VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

LED RETIL

8-inch and 12-inch light fixtures without Arctic Kit

Fixture type – 1 cord set[1]	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Rapid Exit Taxiway Indicator Light	25.5 VA	45 W	7.2 VA	32.7 VA

[1]Values provided are for the "S" option non-monitored power only.

Note

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer

Appendix A: Cable Loss

The cable resistance R (ohms) for 1 conductor is calculated with following formula:

- R (ohms) = resistivity of material (ohm m) × length (m)/cross sectional area (m^2)
- For copper conductors the resistivity is 1.72 10-8 (m^2)

Example; for 1 km 2.5 mm^2 copper conductor, the resistance R is calculated as follows:

1.72 10-8 × 1000 / 2.5 10-6 m^2= 6.88 ohms

The loss (Watt) is then R × I^2 or 6.88 ohms × 6.6^2 A^2= 299.69 W/km or 0.299 W/m.

The loss (Watt) for a secondary cable with 2 conductors is thus 2 × 0.299 = 0.599 or 0.6 W/m.

As such we can calculate:

- Secondary cable for a 2.5 mm^2 Cu-wire (2 conductors): 0.6 W/m
- Secondary cable for a 4 mm^2 Cu-wire (2 conductors): 0.4 W/m
- Primary cable for a 6 mm^2 Cu-wire (1 conductor): 0.12 W/m

The cable between the isolation transformer and the lamp adds losses that cannot be ignored when dimensioning the circuits and selecting rating for secondary transformers and regulators.

WARNING
Cable lengths should not exceed 100 meters.

For a secondary cable of e.g., 20 m of 2.5 mm^2 CU-wire, 20 m × 0.6 W/m = 12 W equals the additional loss to be taken into account.

For a primary cable of e.g., 100 m of 6 mm^2 CU-wire, 100 m × 0.12 W/m = 12 W equals the additional loss to be taken into account.

Appendix B: Interoperability

Base installation – O-ring selection and retaining bolts 12-inch

The O-ring is required for 12-inch light fixtures. For corresponding 12-inch base, refer to the ordering code of the data sheet.

CAUTION

Use of incorrect combination of gaskets, bolts and nuts can cause multiple safety risks and severe damage to product.
To obtain a safe and watertight installation, the O-ring and retaining bolt stated in the document must be used.
In order to choose the correct gasket, bolts and nuts. you need to know what base the light fixture will be installed in.
Failure to follow these precautions can result in equipment damage and/or aircraft FOD.

Table 3: Interoperability matrix – 12-inch

Base type	Required O-ring	Bolt installation		Stud installation	
		Required dimension	Recommended torque[1]	Required nut	Recommended torque[1]
RELIANCE 12" 150 mm Safegate 12" 150 mm ERNI 12" ED12-190	O-ring D259, 3×5, 7 SP.013114/10pc SP.013115/100pc	1411.20.482 Metric screw kit 12" M10×25 mm	40 Nm+locking washer[2]	1411.20.500 Self-locking nut kit 12" M10xH=100	35 Nm
Thorn 12" 150 mm Thorn 12" 100mm			40 Nm+locking washer[2 4]		35 Nm[4]
ADB 12" Eurobase			21 Nm + Loctite 2701 or 638		21 Nm[3]
L-868 deep can with flange		1411.20.452 UNC screw kit	reference EB83	NA	NA

1. Do not use SO jacketed cord style 1
2. Max height 2 mm
3. Do not use Loctite or washer with self-locking nut
4. Only with non-roll over lights

Base installation – O-ring selection and retaining bolts 8-inch

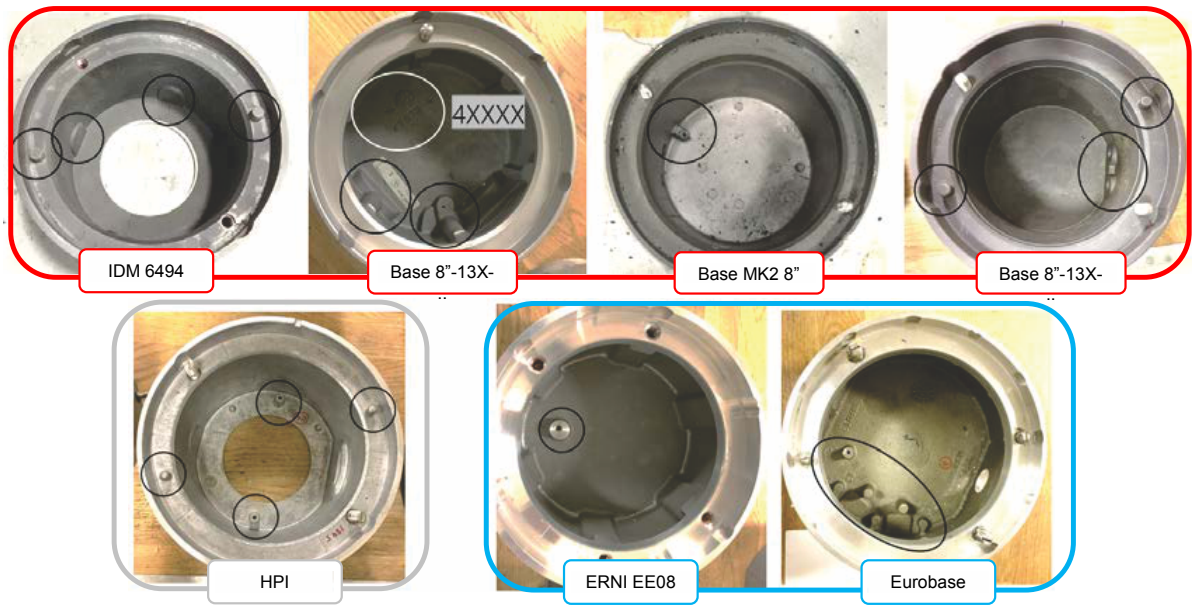
CAUTION

Use of incorrect combination of gaskets, bolts and nuts can cause multiple safety risks and severe damage to product.
To obtain a safe and watertight installation, the O-ring and retaining bolt stated in the document must be used.
In order to choose the correct gasket, bolts and nuts. you need to know what base the light fixture will be installed in.
Failure to follow these precautions can result in equipment damage and/or aircraft FOD.

Table 4: Interoperability matrix – 8-inch

Base type	Required O-ring	Bolt installation		Stud installation	
		Required dimension	Recommended torque[1]	Required nut	Recommended torque[1]
RELIANCE 8" 135 mm Thorn 8" 100 mm Thorn 8" 133 mm IDM 6494 120 mm Adapter ring SG/Thorn/ID 8"–12"	Red O-Ring SGE.SP24523/10 pc SGE.SP24526/100 pc	1411.20.522 Metric screw kit 8" M10x25mm	40 Nm+locking washer[2]	1411.20.430 Self-locking nut kit 8" M10xH100	35 Nm
ERNI 8" EE08 150 mm ERNI 8" ED08 133 mm	Blue O-Ring SGE.SP24521/10 pc SGE.SP24524/100 pc				
ADB 8" Eurobase Adapter ring ADB 8"–12"			21 Nm + Loctite 2701 or 638		21 Nm[3]
ADB 8" HPI	Grey O-Ring SGE.SP24522/10 pc SGE.SP24525/100 pc				

1. Do not use SO jacketed cord style 1
2. Max height 2 mm
3. Do not use Loctite or washer with self-locking nut



Appendix C: Winter Operations: Snow Plowing Guidelines for inset Lights

Introduction

Most ADB Safegate light fixtures are low protrusion height and the risk to damage the light is less than with fixtures that protrude higher above ground. Reinforced prisms are optional available for certain fixtures, further increasing the scratch resistance for enhanced lifetime. Nevertheless, airport winter operations play a crucial role in protecting in-pavement airfield ground lights from damage by snowplows.

Airport operators should follow the specifications:

- FAA AC 150/5200-30D - Airport Winter Safety and Operations
- FAA AC 150/5220-20A - Airport Snow and Ice Control Equipment
- FAA AC 150/5340-26C - Maintenance of Airport Visual Aid Facilities
- FAA EB85 - Ductile Snowplow Protection Ring And Installation Procedures
- ACRP Report 123 - A Guidebook for Airport Winter Operations

The following instructions provide a summary of these specifications and give additional guidelines, next to the airport specific and general rules, on damage prevention of airfield inset lights during winter operations.

Anti- and De-icing Chemicals

Chemicals may be required to remove compacted snow from in-pavement light fixtures. However, extensive chemical use may damage in-pavement light fixtures and underground electrical components resulting in additional electrical maintenance requirements and costs. De-icing liquids should be used moderately; excessive use will have a negative impact on the environment and will contaminate the light outlet.

ADB Safegate light fixtures are tested to work with common chemicals on the airfield such as:

- Potassium Acetate
- Potassium Formate
- Sodium Acetate
- Sodium Formate

The pH value of such chemical solutions should not exceed pH 11 to protect the light fixtures from corrosion and other damage.

Winter Operation Training

Most airports conduct dry-run winter operations training in advance of the winter season. Winter operation tests and simulations should be performed on designated and suitable sections of taxiways or runways equipped with the fittings to be tested. This will help to identify any potential problems and will avoid excessive damages on luminaries and maintenance vehicles during winter.

Snow and Ice Removal

To prevent damage of in-pavement lights during snow and ice removal a combination of different techniques should be used.

- In-pavement **lights should be turned on** at maximum intensity approx. 30-40 min. before the start of snow and ice removal. The purpose is to ensure melting of snow and ice formation at the light outlets before snow and ice removal.
- Anti-icing chemicals may be used to prevent ice bonding to the pavement surface. Once the ice has bonded to the pavement surface, approved de-icing chemicals may be used to melt through the ice pack and/or to break up or weaken the ice bond.

- For actual removal snowplows, rotary runway brooms and blowers should be used in combination. By principle:

  Snowplows should be used with the plow blade set at a small distance from the pavement surface for removal of the majority of snow and ice.

  Note
  Refer to the Cutting Edge Height paragraph of the Snowplows section.

  Rotary runway brooms are more effective at removing snow from in-pavement lighting fixtures than plow blades and should be used for removal of the last layer.
- If snow removal is a frequent winter job, the use of **high-strength steel snowplow rings** is advised to better withstand the impact of snow plowing and to protect aluminum alloy in-pavement lights. Please refer to FAA Engineering Brief 85 for further information concerning design and installation of snowplow rings.

  IMPORTANT
  The most effective counter-measures in case of damages to in-pavement lights are to slightly increase the plow blade/ cutting edge height above ground and reduction of snowplow speed.

Snowplows

Material and Structure of the Cutting Edge

To protect in-pavement lights from damage during the snow removal it is important that the snowplows are equipped with plastic cutting edges.

- The plastic cutting edge should be made of polyurethane, rubber or material of similar consistence and characteristics.
- The plastic cutting edge should consist of a minimum of plastic segments, accurately aligned and free of steps between them.

Figure 75: Snowplow blade with well aligned segments

- It is not recommended to have steps between the plastic segments.
- Vertical or horizontal steps between the plastic segments will increase the risk of luminaire damage. Hitting inset fixtures with steps between plastic segments should be avoided.
- Check regularly for wear and abrasion marks on plastic cutting edges.
- The plastic cutting edges should be replaced when worn down to the wear limit marking. Wear down to the metal portion of the plow should be avoided in any case.

Figure 76: Snowplow blade with wear and steps between segments

Cutting Edge Height

- In order to prevent damage to in-pavement lights and to protect vehicle operators from uneven pavement joints and edges, the plow blade / cutting edge should be set slightly above ground level.
- In a stationary position the clearance between the plastic cutting edge and the pavement should be 10 to 15 mm. Any remaining snow/ice should be removed with rotary brooms and/or de-icing or anti-freeze agent. No clearance between the plastic cutting edge and the pavement may damage in-pavement lights.

Figure 77: Snowplow blade without clearance

- Use casters, shoes and/or support wheels on plow moldboards and on the front of rotary plows to stabilize the plow blade and to support maintaining a pre-defined clearance between the snowplow cutting edge and the pavement during operation.

Figure 78: Snowplow with support wheels

Figure 79: Snowplow without support wheels

- Do not use guidance and support wheels that are made of steel.
- Any protruding bolts and metal elements whose clearance to pavement is less than 20 mm during operation shall be avoided

Speed and angle of the plow

High snowplow speeds can damage the light outlets and prisms could eventually break. The allowable speed should be determined before start of operation, based on the configuration of the equipment.

- A speed of greater than 40 km per hour is not advised.
- Whenever snowplows must traverse over in-pavement light fixtures, they should be traveling at less than 10 km per hour or should lift the blades clear of the fixture.
- Some plow blades are made of a series of movable segments. These segments are spring loaded and are able to move vertical to follow uneven pavement. Do not block blade segment mechanics which allow for such movement.
- Adjust and regularly control plow angles as per manufacturer recommendation.
- If frequent prism damages exist during the winter operations it may be necessary to reduce the snowplow's swivel angle versus the driving line of the vehicle.
- Different temperatures and snow quantities influence the parameters described. Applied settings need to follow supplier recommendations.

Rotary brooms

Rotary runway brooms can be used for both snow and ice removal.

- **Snow:** Rotary runway brooms are more effective at removing snow from in-pavement light fixtures than plow blades.
- **Ice:** The type of brooms used to remove a layer of ice is important since in some cases the broom may actually "polish" the ice, thus reducing traction.

Bristles for rotary brooms are available as steel or poly bristles.

- Steel bristles cut the ice surface while, poly bristles flip / wipe away snow. However, using steel bristles will faster scratch and wear out especially the glass prisms of in-pavement lights, negatively impacting the light photometry.

- When possible avoid using steel bristles, or run rotary brooms with a mix of steel and poly bristles (e.g. 1/3) to reduce the wear and damage to in-pavement lights.
- Check for adequate contact pressure; evaluate during pre-winter dry-run tests.
- Check for bristle wear according to manufacturers recommendation and replace the brooms when necessary. If worn down the bristles will be more stiff and will increase the wear on the light fixtures and especially the prisms significantly.
- When possible avoid using silica or glass sand. If necessary to use, remove it as soon as operational conditions allow. When removing sand use caution with rotating brushes (rotate at low speed).
- Use of reinforced prisms, which are about four times as hard as regular glass prisms, can significantly increase the prism maintenance interval, though scratches will still occur over time.

Steel brushes:

- The use of steel brushes is very effective for snow removal, it is however very important to pay special attention on how it is being used and replace the brushes when they are worn to make sure that the brushes are not too rigid and risk decreasing the service life of the prisms.

Tip

We recommend the use of "sapphire"™ prism (available in the AXON range) which is about four times harder than a regular glass prism if steel brushes are used.

The use of sapphire prisms will not make the prisms scratch proof as scratches can still occur over time but it will increase the service interval and service life of the prism.

Appendix D: 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.

ADB SAFEGATE Support

Technical Support – Global

Customers in Europe, the Middle East, Africa or Asia Pacific are more than welcome to our portal for technical support. 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. In the Americas, we also offer live technical support.

Live Technical Support – Americas

If at any time you have a question or concern about your product, contact ADB SAFEGATE's US-based technical support specialists, available 24 hours a day, seven days a week, to assist you via phone.

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

ADB SAFEGATE Americas Technical Service & Support (Canada): **+1-905-631-1597**

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

We can also be reached via email during regular business hours:

Airfield and Gate: **techservice.us@adbsafegate.com**

Gate: **gateservice.us@adbsafegate.com**

We look forward to working with you!

Before You Call

When you have an airfield lighting or system control system problem, prior to calling, please ensure the following:

- Review the product's manual and troubleshooting guide.
- Be located with the product ready to troubleshoot.
- Have all necessary information available: airport code/company name, customer id number, contact phone number/email address, product/part number.
- Have a True RMS meter available and any other necessary tools.

When calling about an issue with Safedock A-VDGS, we can serve you better if you collect the following information before you call:

- Relevant information regarding the issue you are calling about, such as gate number, flight number, aircraft type and time of the event.
- What, if any, actions have been taken to resolve the issue prior to the call.
- If available, provide a CCTV recording of the incident to aid in aligning the information from the Safedock log file.

Note

For more information, see www.adbsafegate.com, contact ADB SAFEGATE Support via email at support@adbsafegate.com or

Europe: +32 2 722 17 11

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

China: +86 (10) 8476 0106

Middle East and Africa: +971 4 452 7575

D.1 ADB SAFEGATE Website

The ADB SAFEGATE website, www.adbsafegate.com, offers information regarding our airport solutions, products, company, news, links, downloads, references, contacts and more.

D.2 Recycling

D.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.

D.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 labeled 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.

Company Addresses

ADB SAFEGATE, Belgium	ADB SAFEGATE BV Leuvensesteenweg 585 B-1930 Zaventem Belgium
Contact: Tel.: +32 2 722 17 11 Fax: +32 2 722 17 64	 Email: marketing@adbsafegate.com Internet: www.adbsafegate.com
ADB SAFEGATE, Americas	ADB SAFEGATE Americas, LLC 700 Science Blvd Gahanna, OH 43230 USA
Contact: Tel.: +1 (614) 861 1304 Fax: +1 (614) 864 2069	 Email: sales.us@adbsafegate.com Internet: www.adbsafegate.com
ADB SAFEGATE, Sweden	ADB SAFEGATE Sweden AB Djurhagegatan 19 SE-213 76 Malmö Sweden
Contact: Tel.: +46 (0)40 699 17 00 Fax: +46 (0)40 699 17 30	 Email: marketing@adbsafegate.com Internet: www.adbsafegate.com
ADB SAFEGATE, China	ADB SAFEGATE Airfield Technologies Ltd. China Unit 603, D Block, CAMIC International Convention Center, No 3, Hua Jia Di East road, ChaoYang district, Beijing 100102 P.R. China
Contact: Tel.: +86 (10) 8476 0106 Fax: +86 (10) 8476 0090	 Email: china@safegate.com Internet: www.adbsafegate.com
ADB SAFEGATE, Germany	ADB SAFEGATE Germany GmbH Konrad-Zuse-Ring 6, D-68163 Mannheim Germany
Contact: Tel.: +49 (621) 87 55 76-0 Fax: +49 (621) 87 55 76-55	 Email: marketing@adbsafegate.com Internet: www.adbsafegate.com