



Turning Pad Light

User Manual

96A0458, Rev. C, 2019/10/23


**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 directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

ETL certification

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

LED Product Guarantee

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



Note

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

Standard Product Guarantee

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



Note

See your sales order contract for a complete warranty description.

All Products Guarantee

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

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

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

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

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

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

Liability



WARNING

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

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

Unintended uses includes the following actions:

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

© ADB SAFEGATE BVBA

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

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

TABLE OF CONTENTS

1.0 Safety	1
1.1 Safety Messages.....	1
1.1.1 Introduction to Safety.....	2
1.1.2 Intended Use.....	2
1.1.3 Material Handling Precautions: Storage.....	3
1.1.4 Material Handling Precautions: Fasteners.....	3
1.1.5 Maintenance Safety.....	4
1.1.6 Material Handling Precautions, ESD.....	4
1.1.7 Arc Flash and Electric Shock Hazard.....	5
2.0 TPL	7
2.1 About this manual.....	7
2.1.1 How to work with the manual.....	7
3.0 Introduction	9
3.1 Turning Pad Elevated Taxiway Edge Light.....	9
4.0 Installation	11
4.1 Unpacking.....	11
4.2 Placement.....	11
4.2.1 Base Mounting.....	11
4.2.2 Light Base Mounting.....	12
4.3 Light Fixture Leveling.....	13
5.0 Maintenance	15
5.1 Maintenance Safety.....	15
5.1.1 Maintenance Schedule.....	15
5.2 Troubleshooting.....	15
6.0 Parts	17
6.1 Parts Lists.....	18
A.0 SUPPORT	21
A.1 ADB SAFEGATE website.....	21
A.2 Recycling.....	22
A.2.1 Local authority recycling.....	22
A.2.2 ADB SAFEGATE recycling.....	22

1.0 Safety

Introduction to Safety

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

1.1 Safety Messages

HAZARD Icons used in the manual

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

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



WARNING

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



DANGER - Risk of electrical shock or ARC FLASH

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



WARNING - Wear personal protective equipment

Failure to observe may result in serious injury.



WARNING - Do not touch

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



CAUTION

Failure to observe a caution may result in equipment damage.

Qualified Personnel



Important Information

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

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

1.1.1 Introduction to Safety



CAUTION

Unsafe Equipment Use

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

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

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

Additional Reference Materials



Important Information

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

1.1.2 Intended Use



CAUTION

Use this equipment as intended by the manufacturer

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

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

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

1.1.3 Material Handling Precautions: Storage



CAUTION

Improper Storage

Store this equipment properly

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

Failure to follow this instruction can result in equipment damage

1.1.4 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.

1.1.5 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, 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

1.1.7 Arc Flash and Electric Shock Hazard



DANGER

Series Circuits have Hazardous Voltages

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

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

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

2.0 TPL

Turning Pad Light installation and maintenance manual.

2.1 About this manual

The manual shows the information necessary to:

- Install and maintain the Turning Pad Light (TPL).

2.1.1 How to work with the manual

1. Become familiar with the structure and content.
2. Carry out the actions completely and in the given sequence.

3.0 Introduction

This section provides an introduction to the L-861 & L-861E LED Elevated Runway Edge Light.

Compliance with Standards

ICAO: Designed in accordance with applicable requirements in ICAO Annex 14, Vol. 1, para. 5.3.17.

Uses

L-861T(L)

- Elevated runway turning pads as defined in ICAO Annex 14, Vol. 1, para. 3.3.
- Visual runways or non-precision IFR runways.

The L-861T(L) LED turning pad elevated light fixture is used to delineate the edges of airport taxiways.

3.1 Turning Pad Elevated Taxiway Edge Light

Compliance with Standards

ICAO: Designed in accordance with applicable requirements in ICAO Annex 14, Vol. 1, Ed. 6, para. 5.3.18.

Uses

- ICAO**
- Elevated runway turning pads as defined in ICAO Annex 14, Vol. 1, para. 3.3
 - Visual runways or non-precision IFR runways
 - Used to delineate the edges of airport turning pads.

Features

- Provides constant light output with an input current range of 2.8 A - 6.6 A. Allows Turning Pad Lights to be connected to existing runway edge circuits.
- Average LED life of 100,000 hours under high-intensity conditions and more than 180,000 hours under typical operating conditions, resulting in significant reduction or even elimination of ongoing maintenance costs and periodic re-lamping expenses
- The TPL-L with heater fixture MTBF is 180,000 operating hours minimum.
- Single-latch, stainless steel clamp allows easy removal and replacement of top cover and lens
- A gasket is used between the lens and the top cover and also between the top and bottom fixture head assemblies to form a watertight seal
- TPL-L with arctic option (U.S. Patent 7192155 B2) uses a thermostatically controlled heater to prevent ice and snow buildup from obscuring light output. Melts ice similar to traditional incandescent fixtures.
- Three screws allow a 4° leveling adjustment of the fixture after installation
- Fixture comes standard with a 1.5-inch coupling, but is available with a 2-inch coupling and in alternative thread patterns
- Sealed entry at cord set to optical assembly interface prevents insect entry
- For additional features common to all of ADB SAFEGATE's elevated LED fixtures, see data sheet 3043.

Operating Conditions

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

Electrical Supply, Current Driven

6.6 A through a 30/45 W L-830-1 (for 60 Hz) or L-831-1 (for 50 Hz) isolation transformer. To ensure proper operation, a minimum transformer size of 30 W must be used. TPL-L lights have been designed to work with any IEC or FAA-compliant transformer up to 100 W without affecting performance or lifetime of the light or the transformer. See data sheet 3033 for more details on recommended isolation transformers specified below.

Turning Pad Light	Fixture Load	Isolation Transformer	Isol. XF Load	CCR Load
W/out heater	14 VA	30/45 W	9 VA	23 VA

Packaging

Assembled Fixtures	Dimensions of Cartons		Weight (ea)
	Individual in (cm)	9/Box in (cm)	
14-inch OAH	6.5 × 6.5 × 20.5	19.5 × 19.5 × 20.5	5 lb
	(17 × 17 × 52)	(50 × 50 × 52)	2.3 kg
24-inch OAH	6.5 × 6.5 × 31	19.5 × 19.5 × 31	6.25 lb
	(17 × 17 × 79)	(50 × 50 × 79)	2.8 kg
30-inch OAH	6.5 × 6.5 × 37	19.5 × 19.5 × 37	7 lb
	(17 × 17 × 94)	(50 × 50 × 94)	3.2 kg

4.0 Installation



Warning

Read the instructions in their entirety before starting installation.

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

4.1 Unpacking

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

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

4.2 Placement

This subsection describes the placement of the TPL light fixtures.

L-861T(L) Light Fixture Placement

Follow the guidelines below when placing the L-861 light fixture.

- The L-861T(L) light fixture is normally positioned a maximum of 20 feet (6.096 m) off the edge of the hard surface of the runway, and in a straight line with all other light fixtures on the same side of the runway.
- The longitudinal spacing of the light fixtures should not exceed 200 feet (60.96 m).

4.2.1 Base Mounting

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



Note

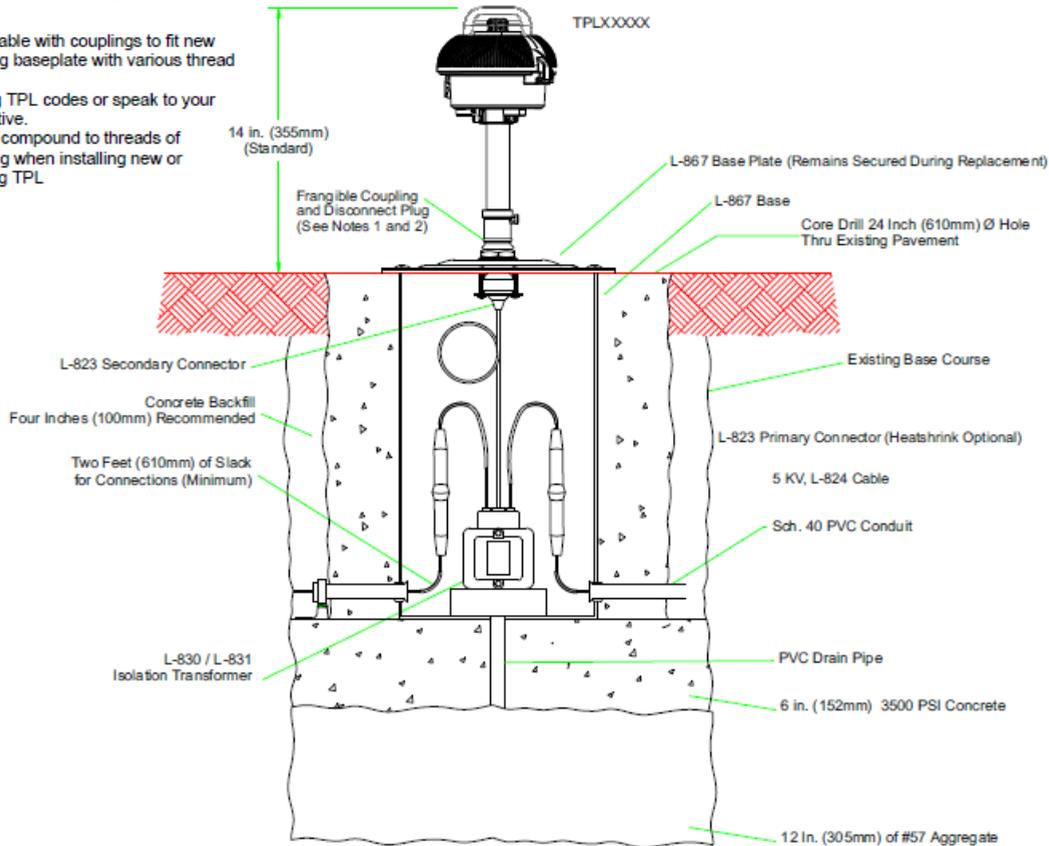
Install the base according to FAA Advisory Circular AC 150/5340-30 and site plans.

See Figure 1. The L-861T(L) light fixtures can be mounted on an L-867 base mated with a base plate with a diameter and bolt-hole corresponding to either a 12-inch- or 16-inch- (304.8 or 406.4 mm-) diameter L-867 base. The base plate is designed to receive a frangible coupling (8) using a female thread.

Figure 1: Base Mounting

NOTES:

1. The TPL is available with couplings to fit new design or existing baseplate with various thread designations:
See the ordering TPL codes or speak to your ADB representative.
2. Apply anti-seize compound to threads of frangible coupling when installing new or replacing existing TPL



4.2.2 Light Base Mounting

To install the base, perform the following procedure:

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



Note

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

2. Orient the cable entrance hubs of the light base in the proper direction according to site plans.
3. Level the light base so that the mounting flange surface is level with respect to Earth.
4. With the base at the proper orientation and held at proper elevation, place approximately 4 inches (101.6 mm) of concrete backfill around the outside base.



Note

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

5. Slope the top of the concrete away from the flange portion of the base so the sloped outer edges of the concrete are at surface grade.
6. Hand screw the entire TPL fixture onto the base plate.
Finish tightening the fixture by using a wrench on the flat areas of the frangible coupling.

7. Place the assembled base plate/fixture close to the base can.
8. Connect the fixture leads to the isolation transformer.
9. Bolt the base plate with the base plate gasket to the L-867 base using six 3/8–16 stainless steel bolts.
Apply a drop of Loctite number 243 to each bolt thread, and use a torque wrench to torque bolts down to 100/110 inch-pounds (11.3 N•m).

4.3 Light Fixture Leveling

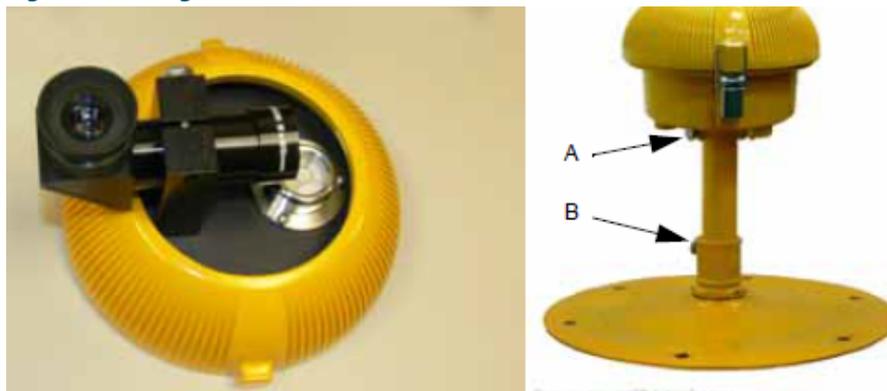
Level the light fixture only after mounting the aiming device on the light base. The equipment is aligned in azimuth by looking at a reference mark through the alignment tool. Depending on the position of the equipment, the reference mark may be another light in the same row or a stick installed for this purpose.

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

To level the light fixture, perform the following procedure:

1. Remove power to the light circuit.
2. Remove the glassware assembly and unplug from the lower body.
3. Install the Aiming Device.
See [Figure 2](#). (3 phillips screws on the bottom of the Aiming Device allow the rotation to the desired position for reference.)
4. Slightly loosen the three hex screws at the bottom of the housing (A).
5. Using the bubble level on top of the Aiming Device, adjust the housing until level.
6. Tighten the three hex screws finger tight.
7. Remove the alignment device.
8. Reinstall the glassware assembly.
9. Restore power and verify the fixture illuminates properly.

Figure 2: Aiming Device



Note

The aiming eyepiece is not used with the TPL as it is omnidirectional.

5.0 Maintenance

5.1 Maintenance Safety



DANGER

Electric Shock Hazard

This equipment may contain electrostatic devices

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

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

5.1.1 Maintenance Schedule

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

Table 1: L-861T(L) Light Fixture Maintenance

Interval	Maintenance Task	Action
Daily	Inspect for outages Check cleanliness of lenses	Repair as necessary Clean as necessary
Weekly	Check for vegetation.	Remove vegetation. Use weed killer.
Monthly	Check for misaligned fixture.	Straighten, level, and align.
Annually	Check for improper ground elevation. Check for improper light elevation. Check for corrosion present or paint loose or chipped. Check gaskets/seal for leakage	Grade so frangible point is approximately 1 inch (25.4 mm) above ground elevation. Maintain same elevation for all light fixtures. Scrape and repaint. Touch up paint as necessary. Replace gasket/seal if torn or damaged
Unscheduled	Make prediction of heavy snowfall, if necessary.	Use red flags or sticks to mark the location of fixtures to facilitate snow removal and lessen the chance of damage to fixtures by snow removal equipment.

5.2 Troubleshooting

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

Refer below for troubleshooting procedures for the TPL.

Table 2: Troubleshooting Process

Problem	Possible Cause	Corrective Action
1. LED will not turn on.	Defective LED	Replace LED Assembly.
	Defective PCB	Replace PCB. See Figure 5 .
	Loose connection(s)	Tighten wires.
	Transformer on series circuit bad	Replace the transformer.
	Jumper P2 of power supply set to wrong frequency.	Set to proper frequency. See Figure 5 .

Table 2: Troubleshooting Process (continued)

Problem	Possible Cause	Corrective Action
2. LED blinks at turn on.	50/60 Hz jumper in wrong position.	For 50Hz, jumper must be present at P2 position (1) as shown in Figure 5 . For 60Hz, insure that no jumper is present at P2 position (1).
3. Moisture present in fixture.	Broken lens or faulty gasket.	Open up and dry light fixture. Inspect lens for cracks. Replace gasket. Replace the LED assembly and any damaged parts.
4. Ice forming on lens.	Defective or missing arctic kit	Remove the glassware assembly and check to see if heating element is installed. If missing or defective install new PCB with arctic kit. See Figure 7 .

6.0 Parts

To order parts, call ADB Safegate Customer Service or your local representative.

Figure 3: Spare Parts

Ordering Code

Color

1 = Omnidirectional Blue

Fixture Height

1 = 14-inch OAH with 1.5-inch coupling, 12 TPI
 2 = 24-inch OAH with 1.5-inch coupling, 12 TPI
 3 = 30-inch OAH with 1.5-inch coupling, 12 TPI
 4 = 14-inch OAH with 2-inch coupling, 11.5 TPI
 5 = 24-inch OAH with 2-inch coupling, 11.5 TPI
 6 = 30-inch OAH with 2-inch coupling, 11.5 TPI
 7 = 14-inch OAH with 2-inch coupling, 11 TPI1
 8 = 24-inch OAH with 2-inch coupling, 11 TPI1
 9 = 30-inch OAH with 2-inch coupling, 11 TPI1
 A = 14-inch OAH without coupling2
 B = 20-inch OAH with 1.5-inch coupling, 12 TPI

Power

1 = Current Driven, 60 Hz
 2 = Current Driven, 50 Hz

Arctic Option

0 = Without arctic option
 1 = With arctic option

Cord Set

0 = Standard Configuration

Notes:

- ¹ Normally used in metric applications
- ² Configuration sold with no column and no coupling

TPL - X X X X

44A7061

Leveling Device

6.1 Parts Lists

Figure 4: TPL Assembly Diagram

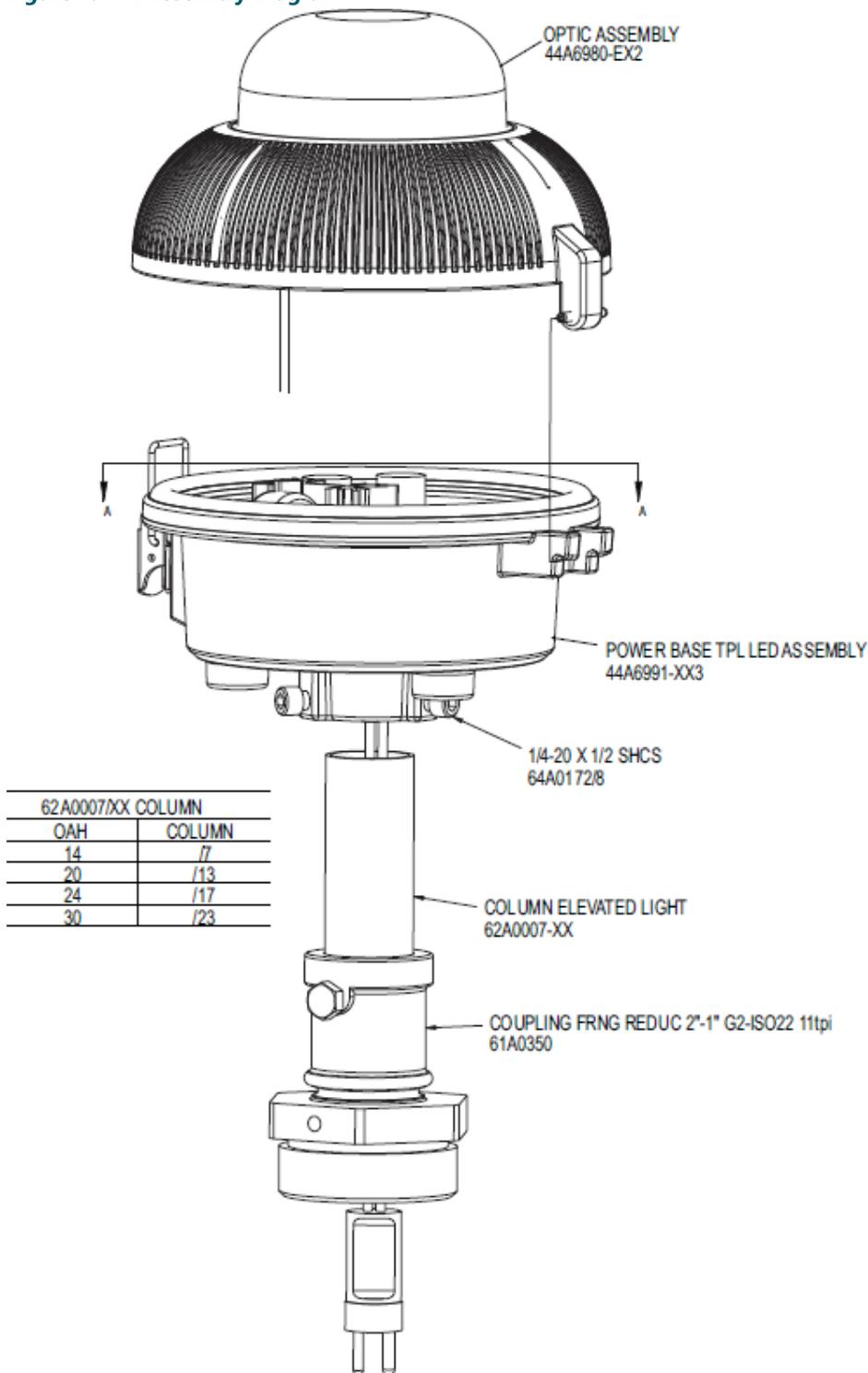


Figure 5: TPL Base Diagrams

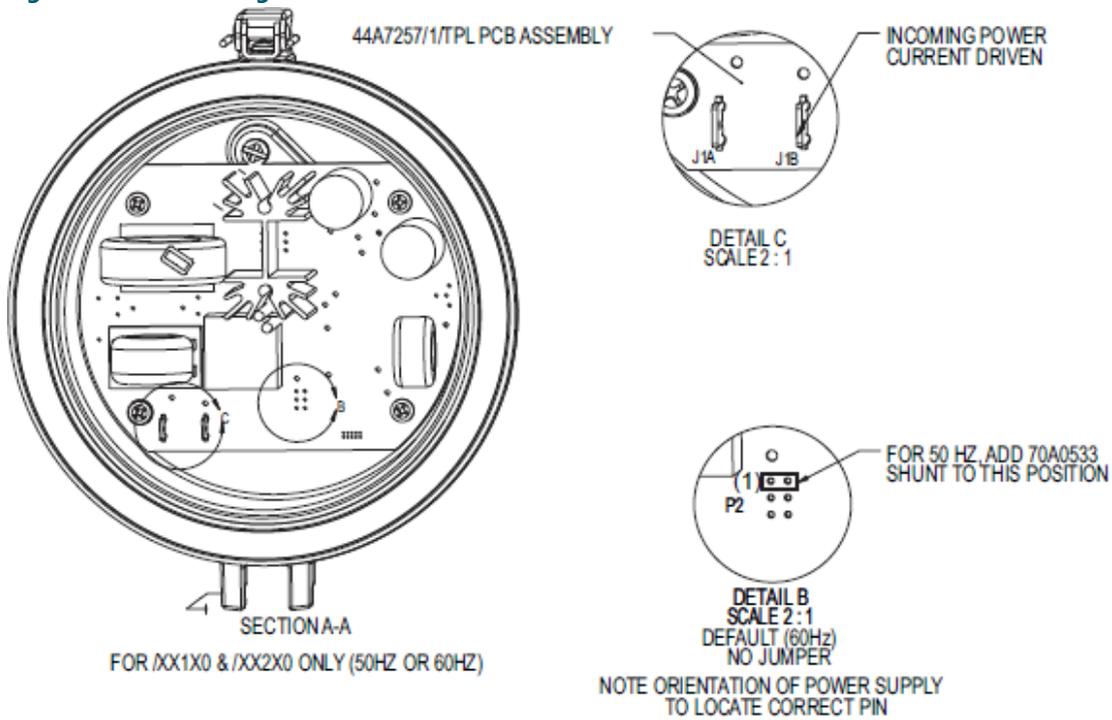


Figure 6: TPL Heater Wiring

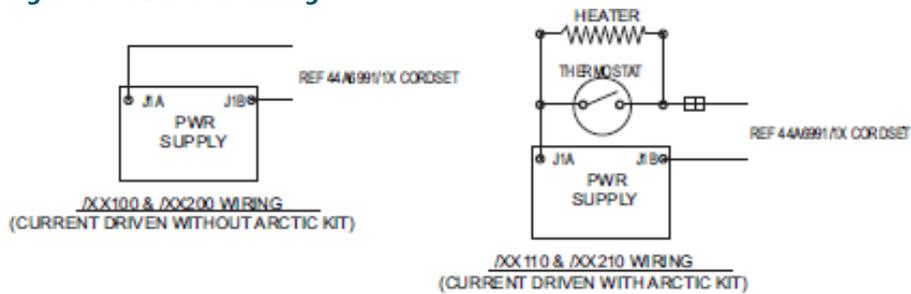
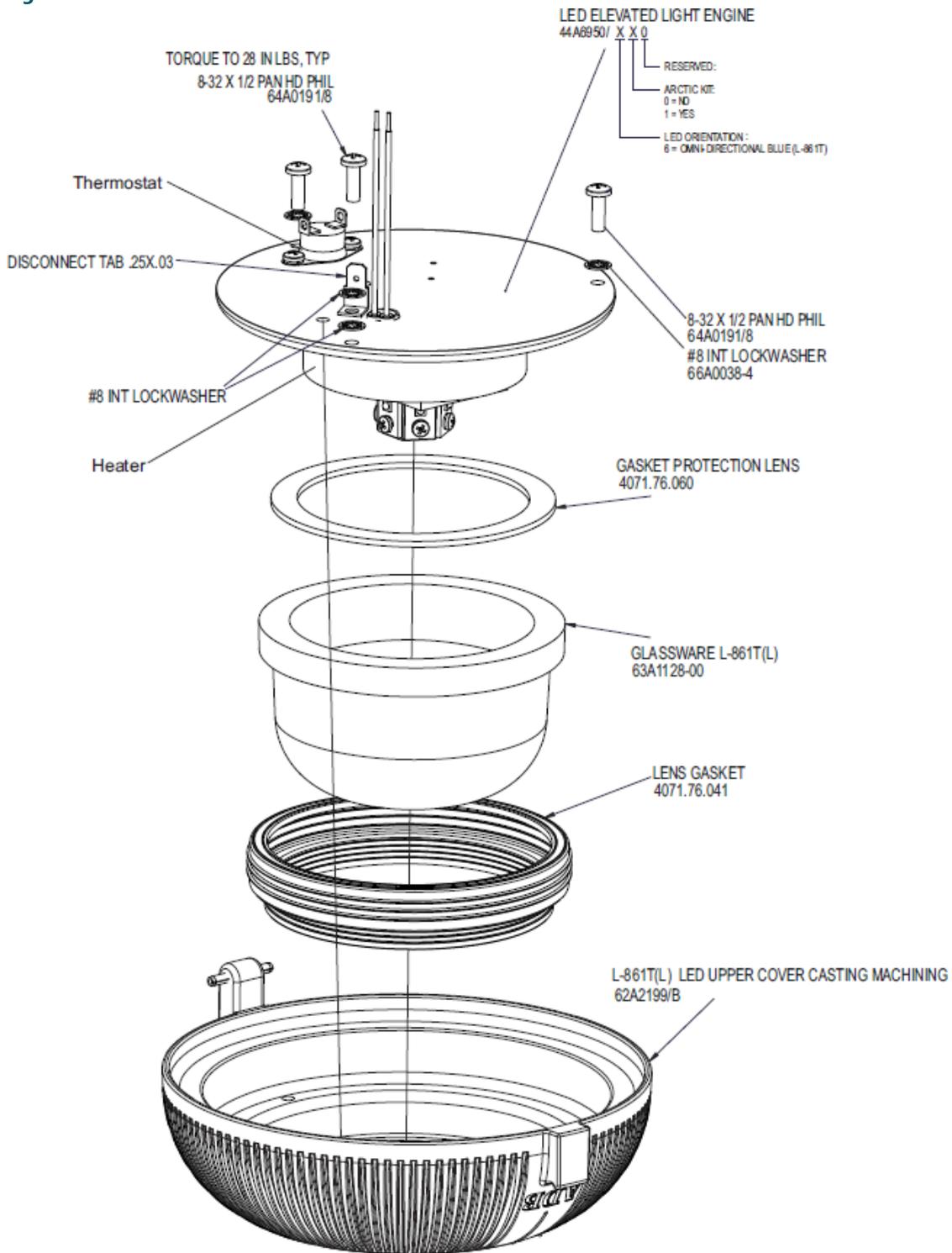


Table 3: Associated Parts

Description	Part No.
Gasket, lens protection	4071.76.060
LED optical ass'y, Blue, w/out arctic kit	44A6980-E02
LED optical ass'y, Blue, with arctic kit	44A6980-E12
Seal, lens	4071.76.041
Seal, top to bottom cover	63A1137

Figure 7: LED & Arctic Kit Connectors Not Shown



Appendix A: SUPPORT

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

Table 4: ADB SAFEGATE Support

Live Technical Support - Americas

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

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

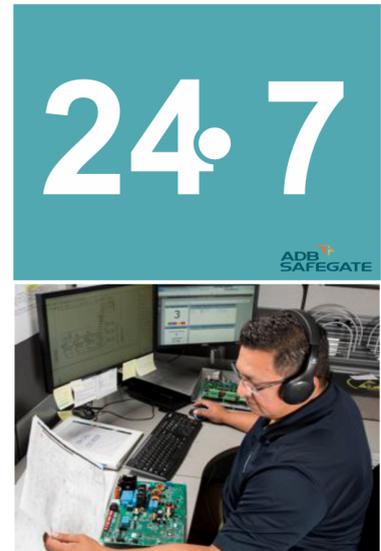
ADB SAFEGATE Americas Technical Service & Support (International): +1-614-861-1304

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

Before You Call

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

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



Note

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

Brussels: +32 2 722 17 11

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

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

China: +86 (10) 8476 0106

A.1 ADB SAFEGATE website

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

A.2 Recycling

A.2.1 Local authority recycling

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

A.2.2 ADB SAFEGATE recycling

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

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

All items returned must be clearly labelled as follows:

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

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

Company Addresses

<p>ADB SAFEGATE</p>	<p>ADB SAFEGATE, Belgium: Leuvensesteenweg 585, B-1930 Zaventem Belgium</p>
<p>Contact: Tel.: +32 2 722 17 11, Fax: +32 2 722 17 64</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Americas LLC</p>	<p>ADB SAFEGATE, Americas: 977 Gahanna Parkway, Columbus, OH 43230 USA</p>
<p>Contact: Tel.: +1 (614) 861 1304, Fax: +1 (614) 864 2069</p>	<p>Email: sales.us@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Sweden AB</p>	<p>ADB SAFEGATE, Sweden: Djurhagegatan 19 SE-213 76 Malmö Sweden</p>
<p>Contact: Tel.: +46 (0)40 699 17 00, Fax: +46 (0)40 699 17 30</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Airfield Technologies Ltd. China</p>	<p>ADB SAFEGATE, China: Unit 603, D Block, CAMIC International Convention Center, No 3, Hua Jia Di East road, ChaoYang district, Beijing 100102 P.R. China</p>
<p>Contact: Tel.: +86 (10) 8476 0106, Fax: +86 (10) 8476 0090</p>	<p>Email: china@safegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Germany GmbH</p>	<p>ADB SAFEGATE Germany GmbH, Mannheim: Konrad-Zuse-Ring 6, D-68163 Mannheim Germany</p>
<p>Contact: Tel.: +49 (621) 87 55 76-0, Fax: +49 (621) 87 55 76-55</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>



Powering Your Airport Performance from Approach to Departure

adbsafegate.com

Copyright © ADB SAFEGATE, all rights reserved

