



IMIL-L LED Elevated Runway Edge Light
L-861E(L)/L-861T(L) LED Low Profile Runway Edge Light

Spare Parts

SP_3024, Rev. A, 2020/04/30


**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 FAA Airfield regulations. The FAA 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 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.

Standard Products 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 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 sales order contract for a complete warranty description.

FAA Certified product installed in the United States or in US Military installations guarantee

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 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 from date of installation, per FAA EB67 (applicable edition).

ADB SAFEGATE LED light fixtures (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).



Note

See your sales order contract for a complete warranty description.

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.

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

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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.
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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

2.0 LED Elevated Runway Edge Light

This is the IMIL-L LED Low-Profile Runway and Taxiway Edge Light installation and maintenance manual.



2.1 Introduction

IMIL L-861(L)/L-861E(L)/L-861T(L) LED Low Profile Runway Edge Light.

2.1.1 LED Elevated Runway Edge Light

Compliance with Standards

FAA:	Designed according to L-861(L), L-861E(L) and L-861T(L) AC 150/5345-46 (Current Edition) and the FAA Engineering Brief No. 67. ETL Certified.
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Uses

FAA L-861(L)	<ul style="list-style-type: none"> Runway edge General Aviation airports only
FAA L-861E(L)	<ul style="list-style-type: none"> Runway threshold/end General Aviation airports only
FAA L-861T(L)	<ul style="list-style-type: none"> Taxiway edge General Aviation airports only

Features

- Innovative fixture design provides for compliance with L-861(L), L-861E(L) and L-861T(L) photometric requirements at the lowest possible height
- Low overall height of <1.5" minimizes risk for damage during lawn mowing operation
- L-861E(L) available for mounting on either an L-867 or L-868 base can
- Average LED life of 56,000 hours under high-intensity conditions and more than 150,000 hours under typical operating conditions, resulting in significant reduction or even elimination of ongoing maintenance costs and periodic re-lamping expenses
- Improves safety due to elimination of airplane to fixture contact during a rollover event versus traditional elevated fixtures
- L-861(L), L-861E(L) and L-861T(L) (L-867 mounting) robust optical glass and mounting plate design exceed L-867 base plate static compressive load requirements defined in FAA AC 150/ 5345-46 (Current Edition) par. 3.4.2.2.d. L-861E(L) (L-868 mounting) complies with same load bearing requirements of standard in-pavement runway and taxiway fixtures.
- Slots on L-861(L), L-861E(L) or L-861T(L) fixture mounting plate provide for proper orientation of the fixture when mounted on FAA L-867 base cans. Mounting plate design allows a continuous overall azimuth adjustment of 35 degrees.
- An optional bevel for L-867B 12-inch base cans is available to provide up to 4° adjustment to level the fixture
- Also available for use on DC PWM Advanced Power Supply system applications. See catalog sheet 3010 for more details on this system.

- A gasket is used between the lens and the top cover and also between the top and bottom fixture cover to form a watertight seal
- Direct replacement for existing elevated L-861/L-861E/L-861T fixtures using existing base can, reducing installation time
- 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 350 mph (560 kph)



Note

Top of Page: L-861/E/T(L) and (L-867 mounting) shown

Electrical Supply, Current Driven

Medium-intensity runway fixtures should be operated on 3-step power supplies. 6.6 A through an L-830-1 (for 60 Hz) or L-831-1 (for 50 Hz) isolation transformer. IMIL lights have been designed to work with any IEC or FAA-compliant transformer up to 30/45 W without affecting performance or lifetime of the light or the transformer. See catalog sheet 3033 for more details on recommended isolation transformers specified below.

	Fixture Load	Isolation Transfmr.	Isol. XF Load	CCR Load
IMIL L-861(L)				
W/out heater	19.6 VA	20/25 W	7.6 VA	27.2 VA
With heater	42 VA	30/45 W	12 VA	5 4 VA
IMIL L-861E(L) -Bidirectional				
W/out heater	11.8 VA	10/15 W	6.2 VA	1 8 VA
With heater	33 VA	30/45 W	14 V A	4 7 VA
IMIL L-861E(L) -Unidirectional				
W/out heater	9.9 VA	10/15 W	6.1 VA	1 6 VA
With heater	31 VA	30/45 W	14 VA	4 5 VA
IMIL L-861T(L)				
W/out heater	12 VA	10/15 W	3 VA	1 5 VA
W/out heater	12 VA	30/45 W	8.4 VA	20.4 VA
With heater off	12 VA	20/25 W	7.5 VA	19.5 VA
With heater off	12 VA	30/45 W	8.4 VA	20.4 VA
With heater on	25 VA	20/25 W	7.5 VA	32.5 VA
With heater on	25 VA	30/45 W	9 VA	3 4 VA

3.0 Parts

This section provides parts information for the IMIL light fixtures.

Optional Bevel Spacer Ring

Ordering Code

T-MIN
XXX = Minimum thickness (inches)

T-MAX
XXXX = Maximum thickness (inches)

Notes
For L-861(L), L-861E(L) or L-861T(L) applications mounted on an L-867 base can, bevel provides up to 4° adjustment to level fixture (if required). Measure "T-MIN" and "T-MAX" at opposing bolt holes. Minimum T-MIN is 0.250 inches and maximum T-MAX is 1.250 inches. For example, if T-MIN is 0.250 inches and T-MAX is 0.669 inches, the ordering code is 60A4237-250-0669. Contact the ADB Sales Department if additional guidance is needed.

Ordering Code

LED Color
1 = Omnidirectional White (L-861)
2 = Omnidirectional Yellow (L-861)
3 = Bidirectional White/Yellow (L-861)
4 = Bidirectional White/Red (L-861)
5 = Bidirectional Yellow/Red (L-861)
7 = Bidirectional Red/Green, L-867 mounting (L-861E)
8 = Bidirectional Red/Red, L-867 mounting (L-861E)
9 = Unidirectional Green, L-867 mounting (L-861E)
A = Bidirectional Red/Green, L-868 mounting (L-861E)
B = Bidirectional Red/Red, L-868 mounting (L-861E)
C = Unidirectional Green, L-868 mounting (L-861E)
D = Omnidirectional Blue, L-867 mounting (L-861T)³
E = Omnidirectional Green (MOS - Australia)¹

Power
1 = Current Driven, 2.8 A to 6.6 A, 60 Hz
2 = Current Driven, 2.8 A to 6.6 A, 50 Hz
C = APS using L-823 cord ^{1,2,4}

Arctic Option
0 = Without arctic option
1 = With arctic option

Notes
Contact the ADB Safegate Sales Department for green/yellow applications
¹ Not ETL Certified
² APS uses a Teflon® cord set. Teflon is a registered trademark of DuPont
³ Use of this fixture should be limited to where elevated lights may be damaged by jet blast or where they interfere with aircraft operations.
⁴ APS Safegate fixture is not available with an arctic option.

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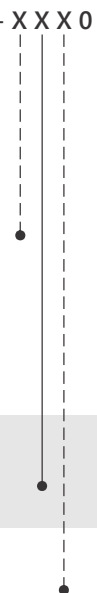


Table 1: Spare Components

Description	Part No.
Cable clamp	4071.50.090
Cord set, L-823, 2-pin, Style 6	73A0136-31
Cord set grommet	63A1014
Gasket, lens protection	4071.76.060
Lens, white (L-861, L-861T)	63A1128-00
Lens, yellow (L-861)	63A1128-11
Lens, white/yellow (L-861)	63A1128-01
Lens, white/red (L-861)	63A1128-05
Lens, red/yellow (L-861)	63A1128-15
Lens, red/green (L-861E)	63A1128-23
Lens, red/red (L-861E)	63A1128-22
Lens, green/obscure (L-861E)	63A1128-39
Seal, lens	4071.76.041

3.1 IMIL Parts

Table 2: IMIL L-861E Top Cover Parts

Item Number	Part Number	Description	IMIL-7100/QTY	IMIL-7100/ QTY
1	44A6976-700	L-861E In-pavement Upper Cover Assembly Red/GRN L-867 MTG	1	-
2	44A6976-A100	L-861E In-pavement Upper Cover Assembly Red/GRN L-867 MTG	-	1
3	44A6975-XX	L-861 Semi-flush Bottom Cover Assembly Current	1	1
4	64A0925-10	M5x10 FLT Phil SS	4	4

Table 3: IMIL L-861 Top Cover Parts

Item Number	Part Number	Description	/XA00	/XA110
1	44A6975-620	L-861 Semi-flush Bottom Cover Assembly APS	1	-
2	44A6976-X00	L-861 In-pavement Upper Cover Assembly without Arctic kit	1	-
3	44A6976-X10	L-861 In-pavement Upper Cover Assembly with Arctic kit	-	1
4	64A0925-10	M5x10 FLT Phil SS	4	4
5	44A6975-XX	L-861 Semi-flush Bottom Cover Assembly Current	-	1

Figure 1: L-861E In-pavement Diagrams

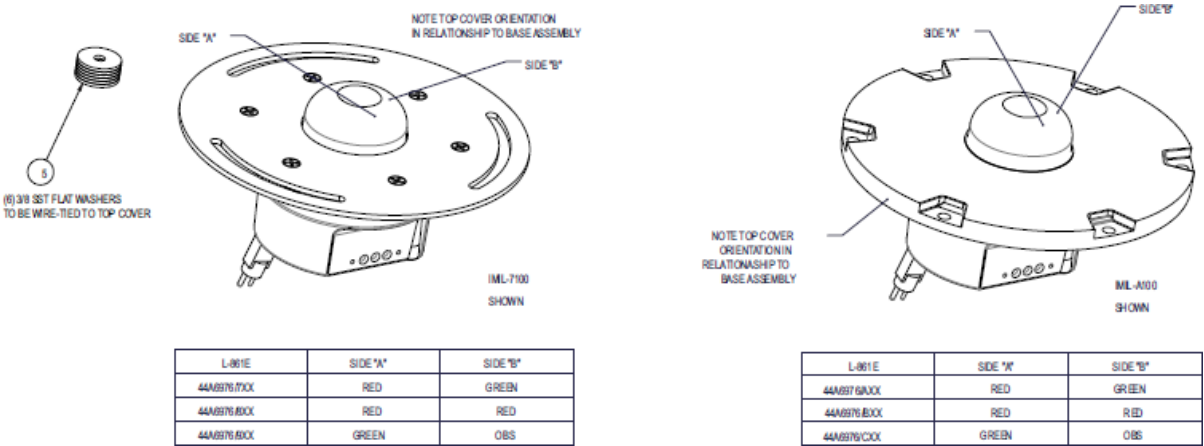
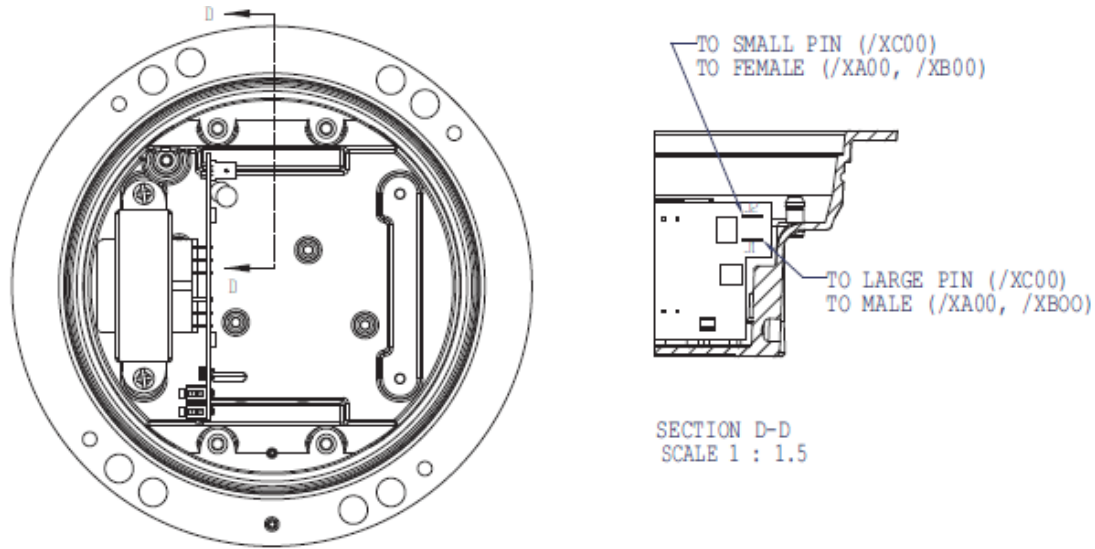
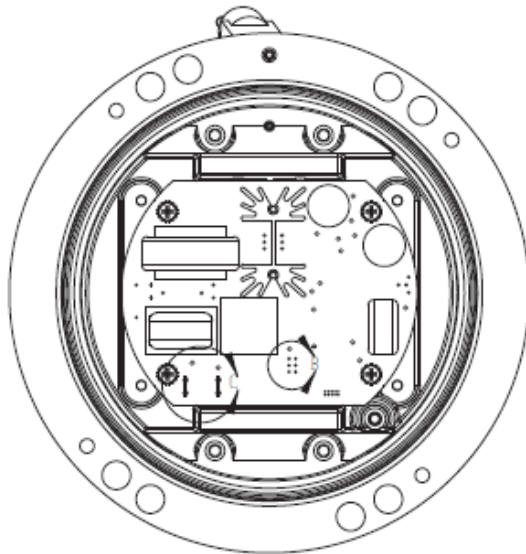


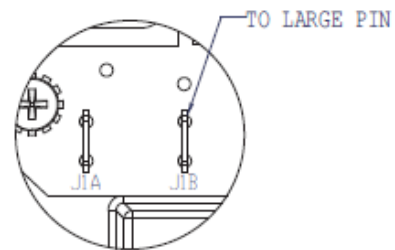
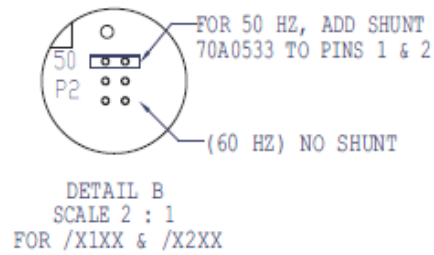
Figure 2: Bottom Cover Interior View

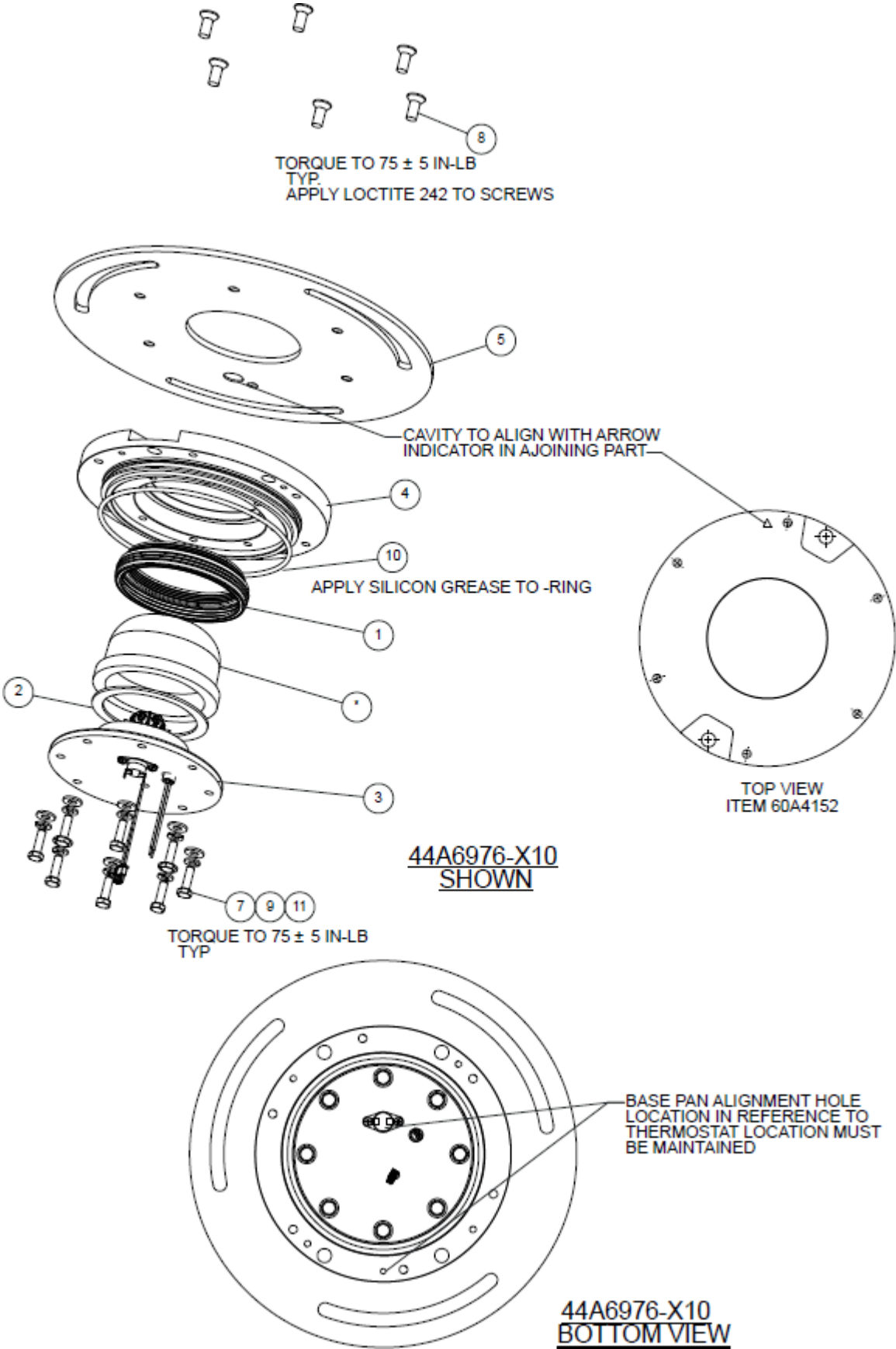


BOTTOM COVER FOR /XA00, /XB00, /XC00 (APS)



BOTTOM COVER FOR /X1X0 & /X2X0 (50HZ OR 60HZ)





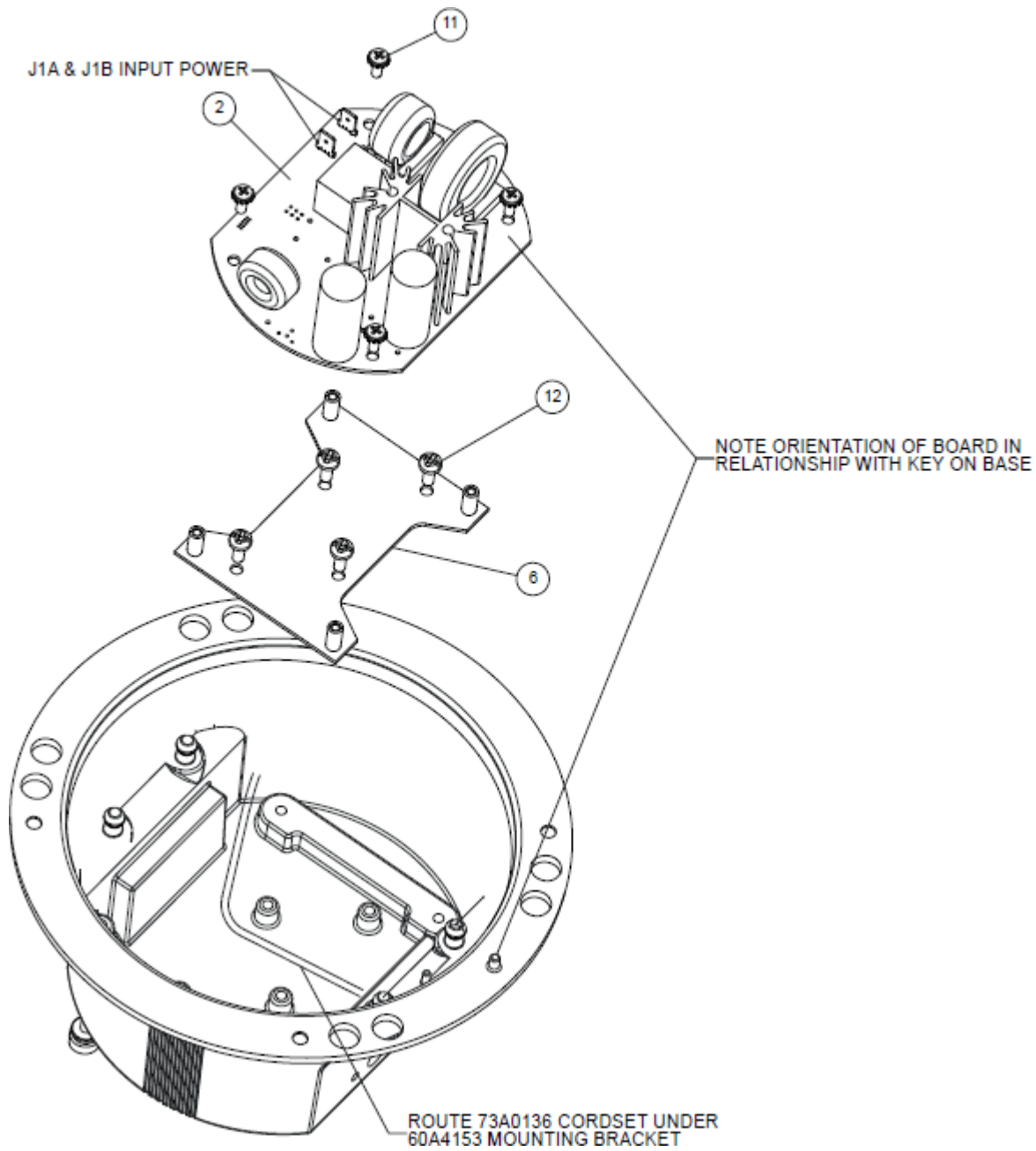


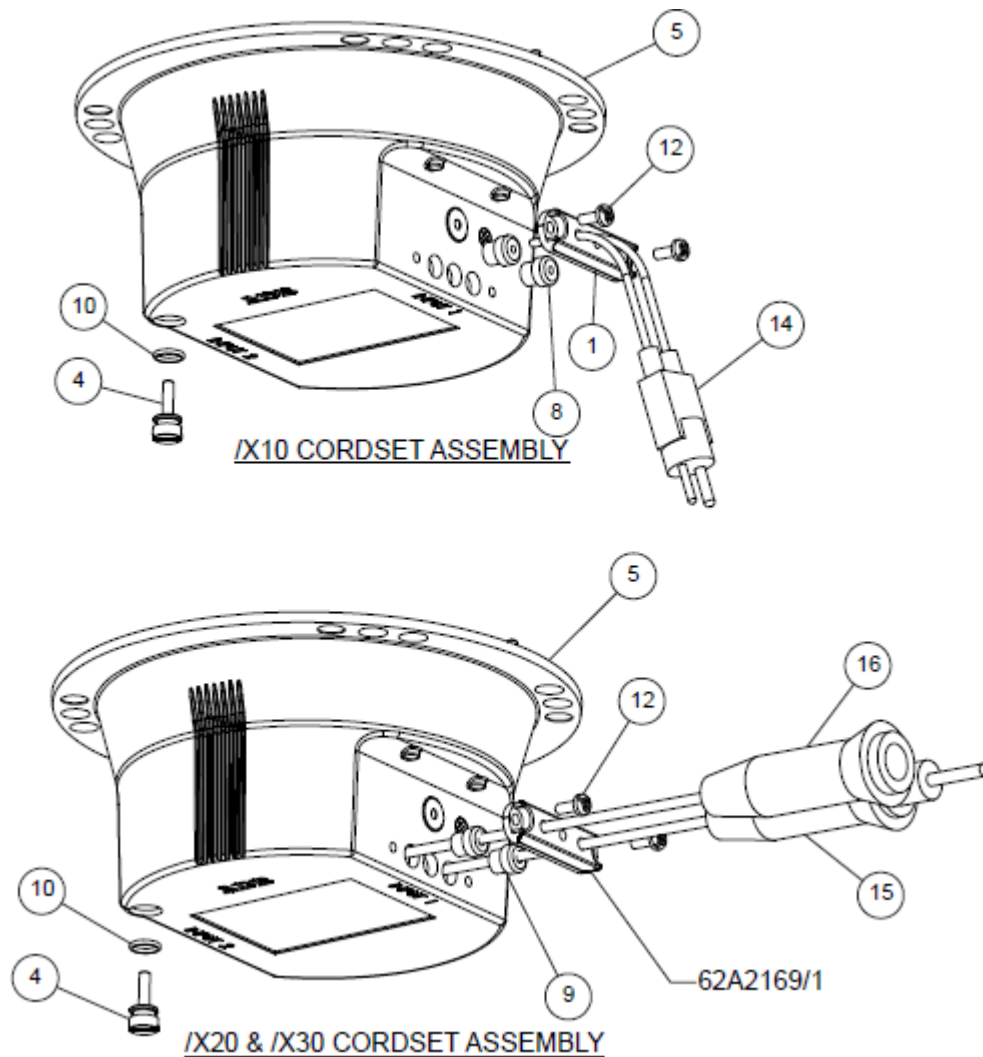
Table 4: IMIL Bottom Pan Parts

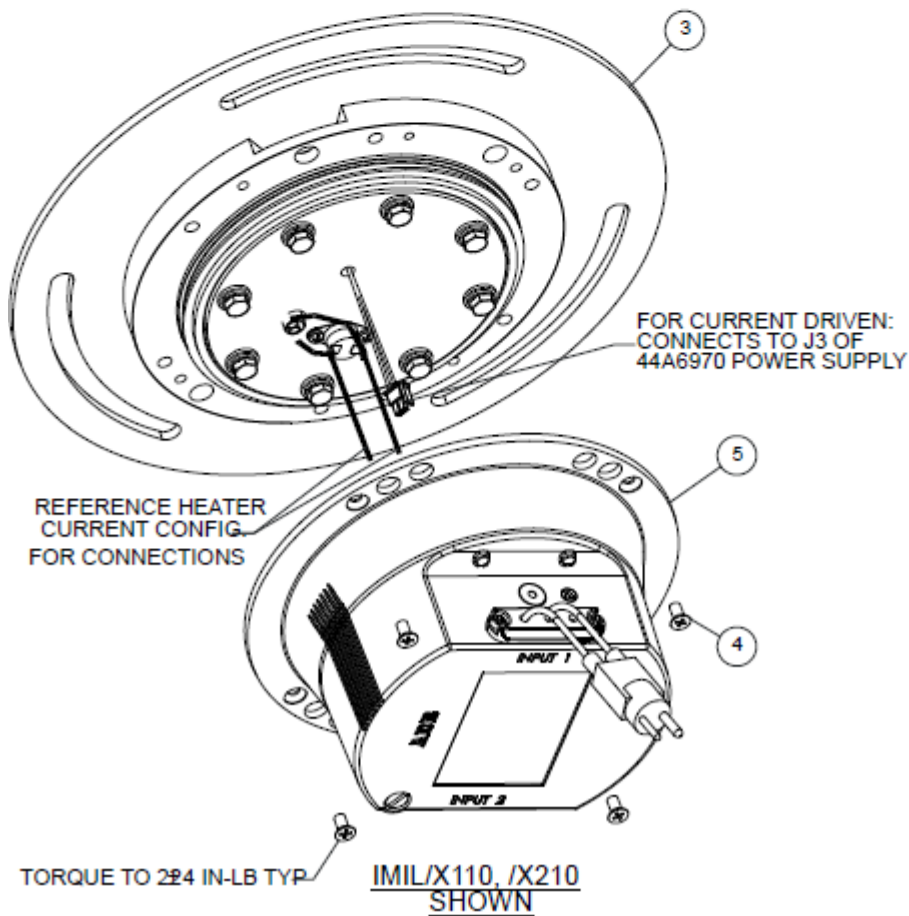
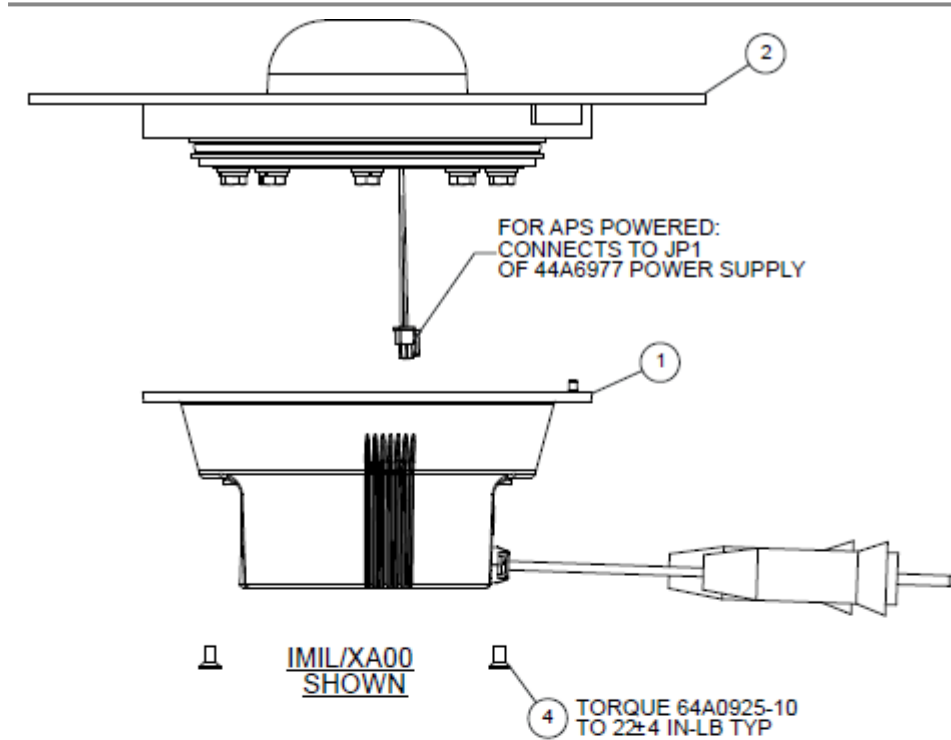
ITEM NO.	PART NUMBER	DESCRIPTION	/X10	/620	/610
1	4071.50.090	INNER PAN CABLE CLAMP	1	-	1
2	44A7257/X	PCB ASSEM, L-861 LED	1	-	-
3	44A6977	APS F-RANGE (ITCF) PWR SUPPLY PCB ASSY.	-	1	1
4	60A2602	PRESSURE RELEASE SCREW F-RANGE	1	1	1
5	60A3339-1	1 CORDSET W/O MONITORING	1	1	1
6	60A4153	L-861 INSET POWER SUPPLY MOUNTING BRACKET	1	-	-
7	62A2169-1	ITEL/ITCL INNER PAN CABLE CLAMP MOD APS	-	1	-

Table 4: IMIL Bottom Pan Parts (continued)

ITEM NO.	PART NUMBER	DESCRIPTION	/X10	/620	/610
8	63A1014	GROMMET CORDSEAL F-RANGE	2	-	2
9	63A1133	GROMMET CORDSEAL F-RANGE APS	-	2	-
10	63B0267-011	O RING L852A/B/C/D	1	1	1
11	64A0957-06	6-32 PAN HD PHIL W/CAPTURED EXT STAR WASHER	4	-	-
12	64A0964-10	M4x10 PNHD POSDRV W/CAP LWASH SS SLFTAP	6	4	4
13	70A0329	FEM DISC 16-14AWG .25X.03 INS	2	2	2
14	73A0136-31	L823 CORDSET, STYLE 6, LED ELEVATED	1	-	1
15	73A0140	L823-APS, Type 1, Style 2, 16 AWG, 36"	-	1	-
16	73A0141	L823-APS, Type 1, Style 9, 16 AWG, 36"	-	1	-

¹ /X10 Configuration Defines /110, /210, /310, /410, & /510. These assemblies are identical except for the version of the 44A7257/X power supply.





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.

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

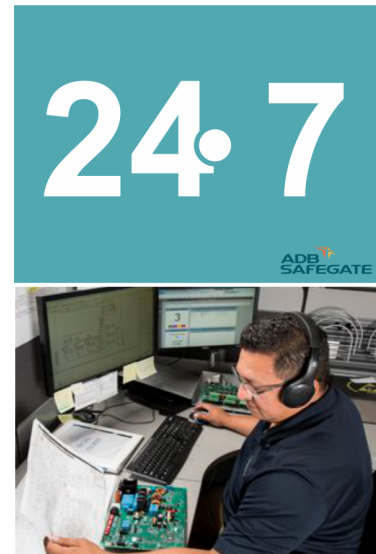
ADB SAFEGATE Americas Technical Service & Support (International): +1-614-861-1304

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

ADB SAFEGATE	ADB SAFEGATE, Belgium: Leuvensesteenweg 585, B-1930 Zaventem Belgium
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Americas LLC	ADB SAFEGATE, Americas: 977 Gahanna Parkway, Columbus, 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 AB	ADB SAFEGATE, Sweden: 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 Airfield Technologies Ltd. China	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
Contact: Tel.: +86 (10) 8476 0106, Fax: +86 (10) 8476 0090	Email: china@safegate.com Internet: www.adbsafegate.com
ADB SAFEGATE Germany GmbH	ADB SAFEGATE Germany GmbH, Mannheim: 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



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