# OPERATE AT THE SPEED OF LIGHT

# **RELIANCE** INTELLIGENT AIRFIELD LIGHTING





# RELIANCE

# RELIANCE improves operations and maintenance

Increasing air traffic capacity demand, shortening airfield maintenance windows and system complexity are rapidly changing how we look at airfield equipment. An airfield light is not just a light anymore, it is part of an ever-expanding ecosystem of products that contributes to increased capacity in a safe and efficient manner. As these systems grow larger and more complex the importance of harmonized interfaces and compatible products is brought to the forefront.

Airports should be able to focus on the day-to-day operations, maintaining the capacity and performance while not having to worry about system integration. That is the ease of mind we want to provide with RELIANCE.

RELIANCE represents our focus on the intelligent airfield. Every part of the RELIANCE portfolio is designed for maximum performance and full compatibility, based on the same technical and mechanical platforms. And while all portfolio products belong together, they are also best in class on their own merits, with stand-alone functionality. RELIANCE meets your airport's challenges when it comes to the needs for improved operations and maintenance, today and tomorrow.





# **RELIANCE** benefits

RELIANCE is a portfolio of products and systems that are thoroughly designed and tested to flawlessly work together so that airports can focus on their core business. It is built on more than 70 years of AGL experience to make sure that all aspects of airfield maintenance and operations run smoothly, such as:

- Re-use of components to ensure efficient stock-keeping of spare parts
- Robustness requirements that far surpass any international standards
- Light calibration stored on LED boards to ensure light conformity, year after year, spare part change after spare part change
- Data logging in each product to help taking correct and efficient corrective actions
- I00% compatibility between RELIANCE LED fixtures and ILCMS, whether the remotes are external or integrated
- Fully configurable products, through versions and options, to ensure there is always a perfect fit for the task
- Designed for easy expansion to ensure longevity in a changing world

Talk to your ADB SAFEGATE expert to discuss how we can help your airport to operate at the speed of light.



# The RELIANCE portfolio

The RELIANCE portfolio consists of a series of airfield lighting products, which are able to interact with each other to create the intelligent airfield. RELIANCE is modular and built for the future, letting you choose the parts needed, with the possibility for further integration and expansion.

RELIANCE AGL	06	RELIANCE Power	12
The most complete line of robust LED lights with low power consumption, and LED signs for long life and high visibility.		The RELIANCE Power HF CCR boosting efficiency by optimizing space, reducing downtime and increasing regulation precision.	

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#### RELIANCE Airfield Lighting Control Systems

Enables control and monitoring of visual aids installed at the airport and helps manage high traffic volumes steadily and safely. RELIANCE Intelligent Lighting

A state-of-the art individual light control and monitoring system (ILCMS) that makes ground movements safer and faster.

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# Airfield light fixtures with robust and modular design

RELIANCE airfield light fixtures are designed for best performance with the highest quality, robustness, compatibility, modularity and minimized maintenance. All products are designed to withstand the harsh environments and weather conditions they are exposed to. The portfolio consists of LED lights, allowing for a long-lasting light source with low power consumption. Maintenance is made easy, the modular platforms keep cost of stock and maintenance down. All RELIANCE airfield light fixtures are built to comply with the latest industry standards, and the high ADB SAFEGATE quality often exceeds the standard requirements.

#### **Monitoring Options**

RELIANCE airfield light fixtures are available in three versions, for applications where a need for monitoring options has been identified.

#### 1. In-built IQ

Unique fully integrated internal ILCMS remote: all-in-one solution. One connector with the possibility to control both sides. The IQ option also provides the possibility to operate at 2 Ampere, decreasing power consumption further.

#### 2. Monitored (fail-open technology)

Converter to present a true open circuit to its power source (CCR monitoring) or with external remote for ILCMS.

#### 3. Non-Monitored

A low-cost solution for applications where monitoring is not required.



### Approach LED lights & systems

#### **RELIANCE Approach Flash System**

elevated and inset System for LED Sequential Flashing (SFL) and Threshold Identification Lights (TIL) with inset and elevated light fixtures. The RELIANCE appraoch system enhances visibility in all low and poor visibility conditions.

#### RELIANCE PAPI

L-880(L) / L-881(L) LED Precision Approach Path Indicator. The RELIANCE PAPI system uses a single light channel to provide precise visual information and improve accuracy and safety of approach procedure.

#### **RELIANCE Approach Centerline** elevated

A undirectional elevated LED light fixture for approach centerline and crossbar applications (white).

#### **RELIANCE Approach Centerline** inset 12"

A low-protrusion 12" unidirectional LED inset light for approach centerline and cross bar applications (white).

#### **RELIANCE Approach Crossbar** elevated

A undirectional elevated LED light fixture for approach centerline and crossbar applications (white).

#### **RELIANCE Approach Crossbar** inset 12"

A low-protrusion 12" unidirectional LED inset light for approach centerline and cross bar applications (white).

### **RELIANCE** Approach Siderow elevated

A undirectional elevated LED light fixture for approach siderow applications (red).

#### **RELIANCE Approach Siderow**

inset 12"

A low-protrusion 12" unidirectional LED inset light for approach siderow applications (red).



### Runway LED lights

#### **RELIANCE Runway Centerline**

**inset 8"**, **L-850A(L)** A low-protrusion 8" bidirectional LED inset light for runway centerline applications (white-white, white-red).

#### **RELIANCE Runway Centerline**

inset 12", L-850A(L) A low-protrusion 12" bidirectional LED inset light for runway centerline applications (white-white, white-red).

#### **RELIANCE Runway Edge**

elevated, L-862(L) A bidirectional LED light fixture for elevated runway edge applications (white, red, yellow, green).

#### RELIANCE Runway Edge inset 12", L-850C(L)

A low-protrusion 12" bidirectional LED inset light for runway edge applications (white, red, yellow, green).

#### RELIANCE Runway Edge

elevated, medium, L-861(L) A medium-intensity omnidirectional elevated LED light fixture, used to delineate the edges of airport runways (white, yellow, red, green).

#### RELIANCE Runway End elevated

A unidirectional elevated LED light fixture for runway end applications (red).

#### RELIANCE Runway End inset 12", L-850D(L)

A low-protrusion 12" unidirectional LED inset light for runway end applications (red).

#### **RELIANCE RETIL**

inset 8" A low-protrusion 12" unidirectional LED inset light for rapid exit/RETIL applications (yellow).

#### RELIANCE RETIL inset 12"

A low-protrusion 12" unidirectional LED inset light for rapid exit/RETIL applications (yellow).

#### **RELIANCE Runway Status Light** inset 12", L-850T(L)

A low-protrusion 12" unidirectional LED inset light for runway status light applications (red).

#### **RELIANCE Stopway**

**elevated** A unidirectional elevated LED light fixture for stopway applications (red).



#### **RELIANCE Stopway**

**inset 12**" A low-protrusion 12" undirectional LED inset light for stopway applications (red).

#### **RELIANCE Runway Threshold**

elevated

A unidirectional elevated LED light fixture for runway threshold and threshold wing bar applications (green).

#### **RELIANCE Runway Threshold**

inset 12", L-850D(L) A low-protrusion 12" unidirectional LED inset light for runway threshold applications (green).

#### RELIANCE Runway Threshold/End elevated, L-862(L), L-862E(L)

A bidirectional elevated LED light fixture for runway threshold/end applications (red, green).

#### **RELIANCE Runway Threshold/End**

inset 12", L-850D(L) A low-protrusion 12" bidirectional LED inset light for runway threshold/end applications (green, red).

#### RELIANCE Runway Threshold/End

elevated, medium, L-861E(L), L-861SE(L) A medium-intensity bidirectional elevated LED light fixture, used to delineate the runway threshold/end (red, green).

#### RELIANCE Touch Down Zone inset 8", L-850B(L)

A low-protrusion 8" unidrectional LED inset light for runway touchdown zone applications (white).

#### RELIANCE Touch Down Zone inset 12", L-850B(L)

A low-protrusion 12" unidrectional LED inset light for runway touchdown zone applications (white).

#### **RELIANCE Turnpad**

**elevated** A omnidirectional elevated LED light fixture for airport taxiway edge and runway turning pad applications (blue).

#### **RELIANCE Runway Wingbar**

elevated A unidirectional elevated LED light fixture for runway threshold and threshold wing bar applications (green).

#### **RELIANCE Runway Wingbar**

inset 12" A low-protrusion 12" unidirectional LED inset light for runway wing bar (green).







### Taxiway **LED** lights

#### **RELIANCE Runway Guard Light**

elevated A unidirectional alternately flashing elevated LED light fixture (yellow).

**RELIANCE Runway Guard Light** inset 8", L-852S(L) A unidirectional alternately flashing LED inset light (yellow) available in 8".

**RELIANCE Runway Guard Light** 

inset 12", L-852S(L) A unidirectional alternately flashing LED inset light (yellow) available in 12"

**RELIANCE Stopbar** elevated, L-862(L)

A unidirectional elevated LED light fixture for Stop bar applications (red).

## RELIANCE Stopbar inset 8" ICAO

A low-protrusion 8" unidirectional LED inset light for stop bar applications (red).

#### **RELIANCE Stopbar** inset 12" ICAO

A low-protrusion 12" undirectional LED inset light for stop bar applications (red).

**RELIANCE Stopbar** inset 8" FAA, L-852S(L) A low-protrusion 8" unidirectional LED inset light for stop bar applications (red).

#### **RELIANCE Stopbar**

inset 12" FAA, L-852S(L) A low-protrusion 12" undirectional LED inset light for stop bar applications (red).

RELIANCE Taxiway Centerline inset 8", L-852C(L), L-852D(L), L-852K(L) A low-protrusion 8" bidirectional LED inset light for taxiway centerline applications (yellow, green)

RELIANCE Taxiway Centerline inset 12", L-852C(L), L-852D(L), L- 852K(L) A low-protrusion 12" bidirectional LED inset light for taxiway centerline applications (yellow, green).

# RELIANCE Taxiway Edge elevated, L-861T(L)

A medium-intensity omnidirectional elevated LED light fixtures are used to delineate the taxiway edge (blue).

#### **RELIANCE** Taxiway Edge\*

**inset 8"** An 8" omnidirectional LED inset light for taxiway edge applications (blue) with the unique protected prism design.



### **Apron LED** lights

#### **RELIANCE Stand Guidance\***

inset 8", L-850T(L)

An 8" omnidirectional LED inset light for stand guidance applications (yellow) with the unique protected prism design.



## Heliport **LED** lights

#### **RELIANCE FATO\*** inset 12"

An 8" omnidirectional LED inset light for heliport FATO applications (white) with the unique protected prism design.

#### **RELIANCE TLOF\***

inset 12"

An 8" omnidirectional LED inset light for heliport TLOF applications (green) with the unique protected prism design.



## **Obstruction LED** lights

#### **RELIANCE Obstruction Light** elevated

An omnidirectional, steady-burning elevated LED light fixture (red) with IR option for marking all fixed obstructions to eliminate air navigational hazards.



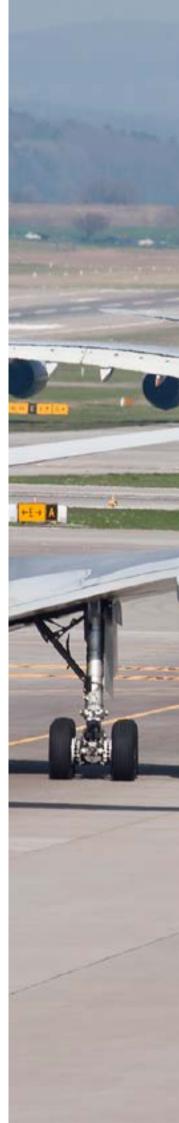
### **LED Signs**

#### RELIANCE Sign

**Airfield guidance, Gate information** RELIANCE single-sided LED signs are used for information and mandatory instructions, and as position and direction indicators on the airfield. Available also as Gate information sign.

# Signs for safe and clear guidance

RELIANCE Signs for airfields are used for information and mandatory instructions, and as position and direction indicators. The illuminated signs use energy-efficient LED technology for long life and high visibility in all weather conditions. They are built to handle the higher wind load requirements and harsh conditions and are still some of the slimmest designs in the industry. The mounting system ensures that the mounting profile can be installed and aligned for a quick and easy setup. All signs are designed with the customer in focus to fit their individual needs for clear and safe information.









### Constant Current Regulator

**RELIANCE Power HF** A modular, pure sine wave transistor Constant Current Regulator (CCR), with exceptional small footprint.

# Power to boost efficiency

RELIANCE Power HF is a modular, pure sine wave transistor Constant Current Regulator (CCR) that boosts efficiency by optimizing space restrictions, reducing downtime and increasing regulation precision. It is specifically designed to supply airport lighting series circuits at various intensity levels. The high processing speed of the CCR contributes substantially to coping with present days circuits and their ever-changing demands. The CCR is designed to be small and lightweight, allowing it to be stacked on industrial shelves, significantly reducing the substation footprint.

# Airfield Lighting Control Systems for safe and efficient traffic flows

RELIANCE Airfield Lighting Control System (ALCS) is a modular and scalable system platform that can grow with airport requirements and is designed to serve small regional airports as well as large international hubs. The RELIANCE ALCMS enables control and monitoring of visual aids installed at the airport and helps manage high traffic volumes steadily and safely. The system has a wide range of functionalities to support airport operations staff, including Air Traffic Controllers (ATCOs), engineering, and maintenance personnel.

**RELIANCE ALCS for the ICAO market** ranges from Compact, Standard and Enhanced to Custom. Compact is the most basic of the systems while Custom provides the most flexible solution, allowing an airport to adjust and integrate the system with other tower systems.

**RELIANCE ALCS for the FAA market** ranges from basic to the most complex systems with server-based architecture. Three levels of systems are offered for the FAA market; RELIANCE Elite, RELIANCE Commander and RELIANCE Navigator.



### Airfield Lighting Control Systems

#### RELIANCE Airfield Lighting Control System Reliance Control Systems - (FAA and

ICAO versions)

Our range of RELIANCE Control Systems for the ICAO market are industry-leading systems used to control and monitor all airfield ground lighting equipment installed on the airfield.

The ADB SAFEGATE RELIANCE ALCS product family for regional and international hub airports ranges from basic to the most complex systems with server-based architecture, enabling the selection and specific adaptation of airfield lighting control features for all sizes and levels of complexity.







# Intelligent Lighting increases capacity

RELIANCE Intelligent Lighting is an individual light control and monitoring system that makes ground movements safer and faster, while it visually complements the verbal communication between tower and pilots. It is multi-functional, modular and flexible, and can be customized on request depending on airport size, traffic volume, specific conditions or different CAT operating modes. You get full control of everything that happens on the airfield, giving the best conditions for guiding aircraft the safest and fastest way, resulting in increased accessibility and optimal turnaround time.

Installation is quicker and easier as RELIANCE Intelligent Lighting is designed to communicate via the existing airfield series circuit power line. Together with software-defined segments, this allows for fewer cables and less digging.

Maintenance is streamlined with minimal disturbance, as RELIANCE Intelligent Lighting gives you a detailed status presentation, pointing out exactly where a problem occurs and distinguishing between critical and non-critical alarms.



# Individual Light Control & Monitoring System

#### **RELIANCE Intelligent Lighting**

A state-of-the-art individual light control and monitoring system that makes ground movements safer and faster while it visually complements the verbal communication between tower and pilots.

# Standards and regulations compliancy

- ICAO Annex 14 Volume I
- FAA AC 150
- IEC 61827

For country specific standards and more exact product compliancy and certification, or if you want to know more details about specific RELIANCE portfolio products and systems, you will find all datasheets and available certificates at **adbsafegate.com/product-center** 







ADB SAFEGATE provides integrated solutions that raise efficiency, improve safety, boost environmental sustainability and reduce operational costs for airports, airlines and ANSPs. The company works with airports and airlines to solve operational bottlenecks from approach to departure. Solutions encompass airfield lighting, tower-based traffic control systems, intelligent docking automation and services, as well as applying advanced IT and analytics to deliver industry-leading Total Airport Management. With more than 1,200 employees, ADB SAFEGATE serves more than 2,500 airports in more than 175 countries, from the largest like Atlanta, Dubai, Heathrow, Frankfurt, Istanbul and Changi to fast-growing airports across Asia and Africa.

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