MetConsole® LLWAS

(Low Level Wind Shear Alert System)

Enhancing aircraft safety under wind shear conditions

Make the most of your energy℠

Schneider Electric™

MetConsole® Low Level Wind Shear Alert System

The Schneider Electric MetConsole® Low Level Wind Shear Alert System (LLWAS) – a module of the company's MetConsole Aviation Weather Suite – provides the reliable and timely information and alerting to the gust fronts, downbursts or microbursts induced by thunderstorms. It helps minimize disruptions, caused by these wind shear conditions, to aircraft flying below 1,000 feet while approaching and departing airports.

Minimize wind shear disruptions to aircraft flying below 1,000 feet while approaching and departing airports

An integrated and comprehensive system, the Schneider Electric MetConsole LLWAS —

- Collects real-time wind speed and direction readings from a carefully placed array of wind sensors around the airport runways
- Processes the wind information through a central redundant server, applying U.S. Federal Aviation Administration (FAA)-approved NCAR LLWAS algorithms, to determine the location and strength of wind shear and microburst events
- Evaluates these determinations to optimize alert accuracy
- Displays resulting wind shear information in the Air Traffic Control (ATC) tower in both graphical (LLWAS map) and tabular form (ADD) using standard aeronautical formats, including headwind loss or gain associated with the wind shear and the determined location of the aircraft's first encounter with the wind shear
- Generates audible warnings that must be acknowledged by the ATC controllers
- Provides outputs formatted for direct broadcast on the airport's ATIS system and transmission via a meteorological switch to weather networks

Uniquely designed

Experience in system implementation. Appropriate sensor siting is key to an effective LLWAS. Specialized Schneider Electric staff assist in conducting a site survey according to FAA 6560.21A (Siting Guidelines for LLWAS). The resulting network is then tested using a computer model to verify the effective area of LLWAS protection.

> Reliable and timely information and alerting to the gust fronts, downbursts or microbursts induced by thunderstorms.

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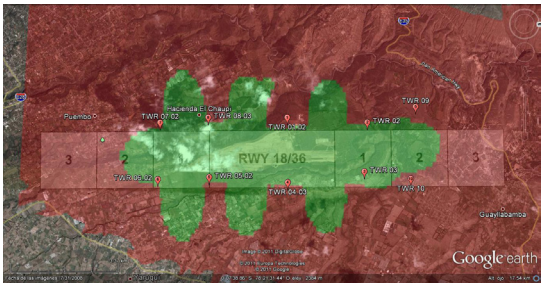
Proven solution. The system implements the latest LLWAS Phase III algorithm, developed by NCAR for the U.S. Federal Aviation Administration and implemented successfully in more than 100 airports around the world. Schneider Electric has been a licensee of this algorithm, and applying it in LLWAS solutions, since 1996.

Inherent analysis for optimized accuracy. The Schneider Electric MetConsole LLWAS includes the Site Performance Evaluation System (SPES) module that implements an algorithm developed by MIT Lincoln Lab for continuous evaluation of the quality of data coming in from the wind sensor stations. When the wind speed and direction values, calculated based on the algorithm described above, differs by a pre-determined limit from data received directly from the sensors, a data quality analysis algorithm determines if the sensors involved are malfunctioning or siting requires some adjustment.

The expertise built into the Schneider Electric MetConsole LLWAS solution reduces the probability of false wind shear alerts and increases the probability of corrections where needed: the Probability of Detection (POD) of this solution has shown to be greater than 90 percent, while the False Alert Rate (FAR) is less than 10 percent.

Schneider Electric makes it work for you

Scalability is assured through the MetConsole open and modular technology, which enables installation of six to 52 wind sensor stations along your airport's runways. This scalability enables the necessary protection as your airport coverage requirements change or grow.



Interoperability means the system exchanges LLWAS information with other modules of the Schneider Electric MetConsole Aviation Weather Suite or with third-party AWOS, ATIS and ATC systems. You efficiently realize as much mileage as possible from this accurate data.

Safety and reliability are optimized with two independent servers connected in a hot standby configuration. This fully redundant, failsafe infrastructure assures system availability and the data you rely on for safe operations.

A technician/maintenance tool provides a range of functions for technicians and system administrators. A powerful BITE module continuously monitors all hardware and software performance and stores all data, events and alarms.

Operator interface is configurable and intuitive, based on Microsoft Windows® menu-driven design.

Rely on Schneider Electric expertise

You can rely on Schneider Electric's vast knowledge of information management and communications systems involved in efficient and effective aviation weather. We offer more than 30 years of experience in developing and deploying the solutions relied on by operations worldwide.

Reduce the probability of false wind shear alerts and increase the probability of corrections where needed

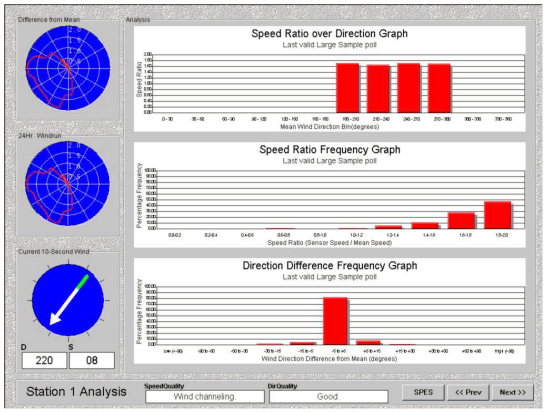
16 years

Well-established solution with proven performance for more than 16 years

MetConsole® Low Level Wind Shear Alert System

Further, our experienced project managers and technical staff can guide you through the entire life cycle of your project.

Contact us for more information about putting Schneider Electric's advanced aviation weather systems to work to improve the safety and efficiency of your airport operations.



SPES "Station Analysis" Screen from the Schneider Electric MetConsole LLWAS Solution

Schneider Electric, Inc.

Parallelweg West 7
4104 AX Culemborg
The Netherlands
Phone: +31 345 544 080
Fax: +31 345 544 099
http://www.schneider-electric.com

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