



Lightning/Storm Warning System



32km
detection
range!



State-of-the-art **EARLY DETECTION SYSTEM**
for Critical Industrial Installations



**BE ALERTED OF IMPENDING LIGHTNING STRIKES
AND ACTIVATE DEFENSIVE MEASURES!**

Compliance Standards

Lightning Warning and Analysis of
Warning Threats Risks for Human
Life is in Compliance to
Requirement of IEC 62305 and
NFPA-780 International Standards

Industry Needs Assessment

Mitigating the lightning threat at a facility

- Eliminate all responsibility, data interpretation, or intervention from staff or management for safety decisions regarding lightning alarm and all clear conditions (STRIKEGUARD).
- Lightning alarm and all clear conditions are communicated automatically to staff and patrons (WAVE SIRENS / STROBES, STRIKE VIEW).
- Sensitive equipment is automatically isolated and protected during a thunderstorm and reconnected after the storm passes (WAVE SEQUENCERS).

Lightning - what is done now? Facilities have adopted a fully automated lightning warning systems consisting of:-

- On-site detection system monitoring for cloud and cloud-to ground lightning in various ranges to determine alarm and all-clear conditions (Strike Guard)
- Automated triggering of wireless siren system for warning and all-clear conditions (WAVE Siren)
- Automated shutdown of irrigation system and pump station (WAVE Sequencer)

**Generally, two concerns are addressed:
Human safety & equipment protection**

StrikeGuard Key Features:

- ★ Fully automatic alarm triggering with user-set range categories
- ★ 32 km detection range
- ★ No false alarms. Patented technology
- ★ Sensor and communication self-test
- ★ Sensor is battery-powered for easy installation
- ★ Durable fiber-optic communications with connector-less technology
- ★ NEMA 4X Sensor enclosure (equivalent of the IP 67 Standard)
- ★ Lightning Data Receiver with battery back-up
- ★ Optional, Strike View Software for Windows® and Macintosh®
- ★ Strike Guard Simulator Software for training and testing



Fully Automated Patented
Warning System



On-site Cloud-Cloud & Cloud-Ground
real time monitoring



StrikeGuard applications include protection
of schools and education centres



StrikeGuard proactively protects electrical
components from transient overvoltages

**Take PREVENTIVE &
DEFENSIVE measures to
ensure safety of
personnel & equipments**

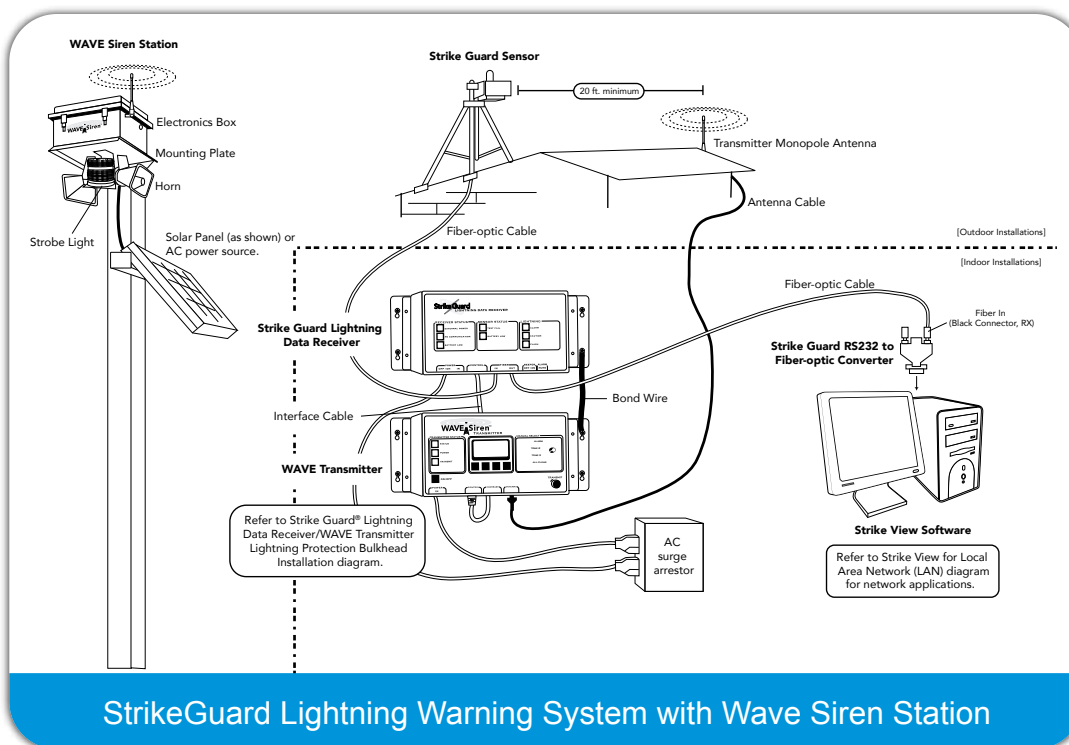
Warning System for people: WAVE SIREN

(Wireless Audible and Visual Enunciator)

- WAVE Siren Stations receive wireless signals from the WAVE Transmitter within a three kilometer radius
- High-intensity strobe light remains illuminated during lightning alarm condition and turns off with all-clear sound
- Configurable for one to four compression-driver horns per Siren Station
- Solar power option or 90-240 VAC (battery back-up)
- Hourly self-tests with status indicator
- High-quality materials (stainless steel, aluminum)

StrikeGuard Lightning Warning System

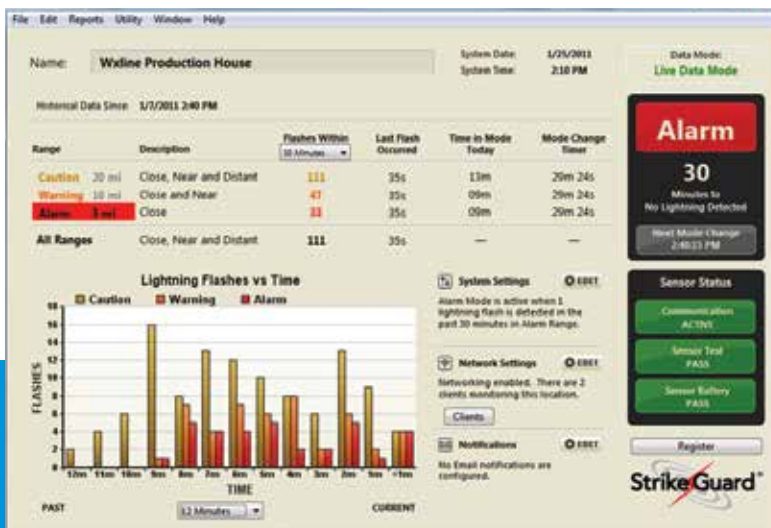
- ★ Optical-coincidence lightning detector with proven performance
- ★ Fiber-optic communication
- ★ Sensor operates autonomous of mains power
- ★ No maintenance for three years – no sensor cleaning
- ★ 20-mile detection range.
- ★ Triggers on 20, 10 or 5 miles
- ★ Hourly self-test with status indicator



WAVE Transmitter sends RF messages to WAVE Siren Stations and WAVE Sequencers



Solar powered Remote WAVE Siren Station with three horns



Strike View Software for Windows provides for additional features:

- Data logging, additional alarming, countdown timer to all-clear, histogram, e-mail notification, and more
- Strike View operates across a LAN. Strike View Clients run on workstations across the Network for easy data sharing

**SENSE the storm
before it reaches you!**

An Award Winning Company

with a solid track record and portfolio



TESTED AND CERTIFIED
COMPLIANT TO
MS IEC 62305 &
BS EN 62305 : 2006

As the nation's leading lightning protection and security solutions provider, TOKAI is proud to provide quality products and services that protects your homes, buildings, lives and businesses. We are the only ISO certified lightning and security solutions provider in the nation. Our products are registered with Jabatan Kerja Raya and SIRIM. Tokai's Earthing & Lightning Protection Systems are in full compliance to **IEC 62305 & BS EN 62305:2006** and are tested in accordance to ***BS 50164-1 and 50164-2**

Established in 1993, Tokai has grown from strength to strength, winning numerous projects that have become landmarks in the nation. Tokai is the dominant force in the field of lightning & surge protection as well as engineering security solutions.

* tested to 100KA of lightning currents



for more information, visit us at

www.tokai.com.my

Did you know about these key lightning facts?

- On a global scale, Malaysia is ranked #2 hotspot for lightning activity.
- Malaysia has an average of 280 lightning days per year, which is equivalent to 40 strikes per square kilometers.
- Thousands of people are struck by lightning every year with at least 50 recorded fatalities.



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