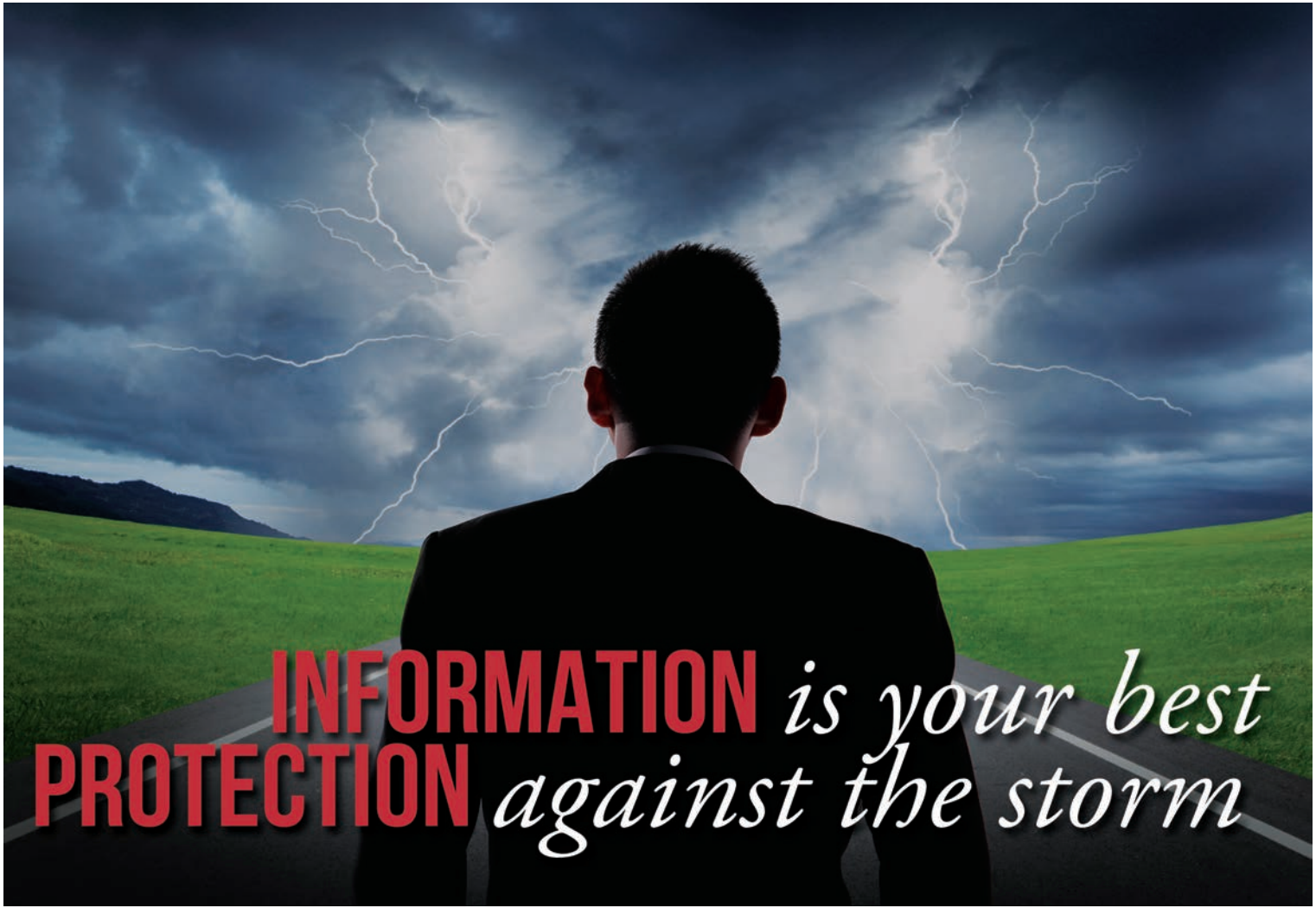
Introducing

ATSTORM®v2

THE MOST ADVANCED
LIGHTNING WARNING SYSTEM


INFORMATION is your best
PROTECTION against the storm

CONTENTS

Introduction

There are 50 cloud-to-ground discharges per second globally. One of the most potentially catastrophic consequences of these discharges is the loss of human life. Additionally, these discharges affect over 30% of US businesses causing over $5 billion in damages due to loss in production time and economic damages from the lightning or its consequences such as fire.

A proper preventive protection, Lightning Warning System, can avoid these catastrophic incidents. Having site-specific information about the risk of thunderstorms allows the user to take preventive measures in advance to protect today's modern operations.

ATStorm® is a state of the art, patented, cost-effective, site-specific solution that is the most technologically advanced Lightning Warning System available today. Lightning Warning is a key part of our Total Site and Facility Protection Systems for sensitive electronics, prevention of losses in industrial processes, assuring basic service continuity, and prevention of serious accidents.

WHY ATSTORM®V2

LYNCOLE

XIT® GROUNDING

A DIVISION OF VFC

Lyncole continue's as the Nation's leader in Lightning Protection, Grounding and Surge Suppression Systems. We are proud to partner with Applications Technologies to announce our latest product, ATStorm®.

LIGHTNING WARNING

Where to apply ATStorm®v2

OPEN AREAS

Workplaces, sports or open air activities, competitions, multitudinous events, farming, ranching or fishing activities.

INDUSTRIAL PROCESSES

Prevention of loss in industrial processes and operations.

TECHNOLOGY

Computers, electric or electronic controls, emergency, alarm or security systems.

CONTINUITY OF SERVICE

Operations where basic service continuity has to be assured: telecommunications, power supply, energy transport and distribution, health and emergency services.

INFRASTRUCTURE

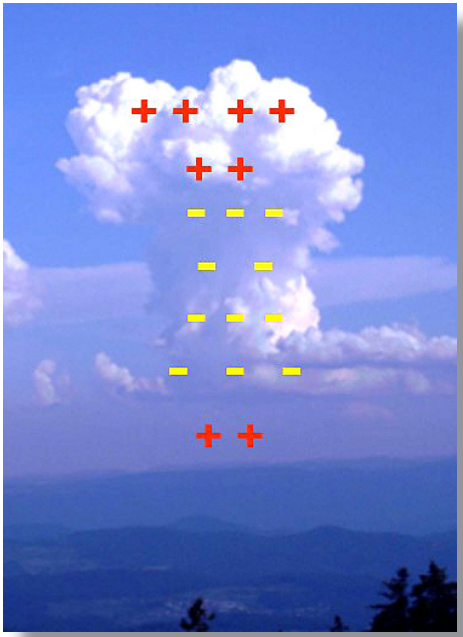
Harbors, airports, trains, roads, highways, cable railway.

HAZARDOUS PRODUCTS

Prevention of serious accidents involving hazardous products and processes (flammable, radioactive, toxic, explosive).

APPLICATIONS

Once the hazard is detected, preventive actions can be taken. They should always be specific for the "object" (people, structure, open area...) to be protected. Switch off the main electrical service. Switch on UPS or back up generators. End/Postpone high risk activities. Run devices or operations in "safety mode." Evacuation of individuals.



"IN NORMAL WEATHER CONDITIONS THERE IS A BALANCE BETWEEN POSITIVE AND NEGATIVE CHARGES IN THE ATMOSPHERE, WHERE THE EARTH IS MORE NEGATIVELY CHARGED THAN THE ATMOSPHERE AND THE ELEMENTS SITUATED ON THE GROUND!"

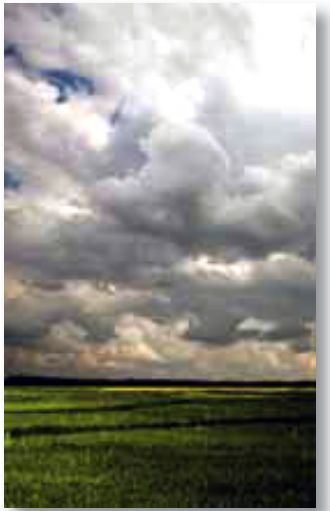
EVOLUTION & LIFE CYCLE OF A

THUNDERSTORM

However, when the storm clouds are developed, there is a change in polarization: positive charges on the top part of the cloud, a zone of negative charges in the middle (temperatures of -10 to -20°C) and a small positive charge near the freezing point.

As the lower part of the cloud gets charged negatively, a positive charge is induced on earth and on the elements on it, transforming the atmosphere into an electric field that can reach tens of kilovolts

PHASES: STAGES OF A LIGHTNING STORM



PHASE 1 >>

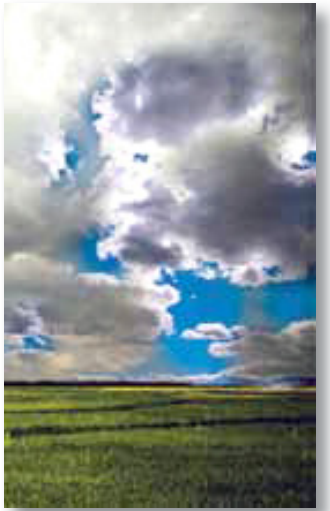
BEFORE THE FIRST LIGHTNING DISCHARGE, CHARGE SEPARATION CAN BE DETECTED AT GROUND LEVEL USING ELECTRIC FIELD MEASURING DEVICES LIKE ATSTORM.

PHASE 2 >>

THE FIRST LIGHTNING STRIKE FOLLOWS THE INITIAL CHARGE SEPARATION ABOUT 5 MINUTES LATER. IN MOST CASES THE FIRST DISCHARGES ARE THE INTRA-CLOUD TYPE.

PHASE 3 >>

INTRA-CLOUD DISCHARGES ARE OFTEN FOLLOWED BY THE CLOUD-TO-GROUND DISCHARGES WITH A DELAY THAT IS IN THE RANGE OF A FEW MINUTES TO AN HOUR. THIS IS ASSOCIATED TO A MORE MATURE PHASE OF THE STORM.



PHASE 4 >>

REDUCTION OF THE ELECTROSTATIC FIELD UNTIL IT GETS TO REPOSE. AT THIS STAGE THERE IS A LOW PROBABILITY OF LIGHTNING STRIKES.

THE TOUCHSCREEN INTERFACE

The key elements of any storm detector are the SENSOR and the INTERFACE.

The state of the art, touch screen interface allows for intuitive system set up and programming. All configuration options are available from the touchscreen. No clumsy switches or dials.
The touchscreen allows a friendly and easy programming of all the system parameters:

- *Alarm levels*
- *Alarm signal (existence and duration of the sound alarm)*
- *Tolerances for the starting and ending of the alarm.*

THE SENSOR

Is able to detect the formation of a storm over the area where the detector is placed (within a radius of 20 kilometers). It has been designed to protect the measurement system from the inclemency of the weather, thus enhancing its functioning and its working life.

Based on the FCES technology (field-controlled electrometric sensor), developed by Aplicaciones Tecnológicas, S.A. to enhance the storm detection. This technology is totally electronic and has no mobile or mechanical parts. It allows detecting even storms which are formed over the area where the detector is placed.

KEY ELEMENTS

COST EFFECTIVE

When we envisioned our new Lightning Warning System, we landed on a remarkable innovative design, we also however, were able to uphold the integrity of the design while remaining cost effective to all of our clients. Creating a Lightning Warning System, which is the final piece of our Total Site and Facility Protection Systems, meant upholding Lyncole's innovative engineering capabilities and heightening industry standards.

We understand the challenge of having to make the decision to halt activities such as:

- *Sporting Events*
- *Workplaces where operations for basic service continually have to be assured (telecommunications...)*
- *Infrastructures such as harbors, airports, trains, and highways.*
- *Making this decision to halt or even postpone these activities due to lightning and when to resume can be frustrating due to the unpredictability of nature. Lightning in particular is most random in its behavior and cannot be ignored.*

Our ATSTORM®v2 Lightning Warning System alleviates these challenges and virtually pays for itself after one use. Industry leaders across the nation have been provided with peace of mind by protecting their employees and customers, infrastructures, and equipment by installing ATSTORM®v2 Lightning Warning System as part of their Total Site and Facility Protection Plan.

CONTACT US

Lyncole is your best source for Total Site & Facility Protection needs including: Grounding, Lightning Protection, Surge Suppression and Lightning Warning Systems. Additionally we offer engineering and design services, installation services and educational courses all of which are available coast to coast and internationally. Contact us today to ensure your facility is protected.

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