



LOCAL STORM
DETECTION

 **APLICACIONES
TECNOLÓGICAS** | **LIGHTNING
& EARTHING**

ATSTORM[©] V.2
PREVENTIVE LIGHTNING PROTECTION SYSTEM

DEFINITION

ATSTORM®v3 is a thunderstorm warning system by electrostatic field combined with an electromagnetic field sensor. Thanks to the electrostatic field sensor, the system allows a margin of tens of minutes for pre-set preventive actions. The electromagnetic field sensor provides additional information to monitor the already active storms that approach the area to be protected.



No user interaction is required, the system continuously monitors local conditions and sends this information to the central servers from which the alarms are processed and released to the users. The system can be equipped with solar panel and batteries to act as power back up with an autonomy of up to seven days.

The system is formed by a minimum of two or more detection units, whose position is determined in an ad-hoc project that considers the specific characteristics of the site to be protected, providing outstanding accuracy and redundancy in the readings.

MAIN FEATURES

- Class A+B detector according to the standard IEC 62793, allowing local storm detection before the first lightning strike.
- Fully electronic, no moving parts, free of special maintenance.
- Able to operate in adverse weather conditions.
- Redundant power supply, AC-DC power system with solar panel and batteries.
- GPRS internal modem and possible redundant communication system through LAN connection
- Real-time remote manufacturer monitoring.
- Sending alarms:
 - E-mail
 - Private web portal
 - Remote relays
 - APP

The remote relay module pictured below is offered as a complementary accessory to control autonomous alarm systems located at any distance from the reading station as well as integrate into a PLC or DTS system of any type. The integration can be defined through various methods of integration



ATSTORM v.3 TECHNICAL CHARACTERISTICS

Electrostatic sensor

- Class A acc. to IEC 62793 2016
- Detection range: -32kV/m to 32kV/m.
- Resolution (max): 1V/m
- Range: 20km
- Fully electronic technology (FCES): without mobile parts.

Electromagnetic sensor

- Class B acc. to IEC 62793 2016
- Range: 40km
- Fully electronic technology (RFS)

Power supply:

- Solar panel powered
- 10Ah back up capacity batteries
- 110V ~ 250V_{AC} supply
- 15W electrical consumption

Communication:

- VPN Cellular 2G/3G
- Wired Lan

General Characteristics:

- IP65
- Working temp: -40°C +85°C

Control, analysis and diagnosis center:

- Redundant servers
- Expert system:
 - Auto-diagnosis of sensors
 - Redundant communication
 - Redundant power source
- Alarm services:
 - APP
 - Email
 - Website
 - Remote relays



COMMUNICATION

The different detection units on the protected area send the sensors readings by GPRS communication to our redundant servers located in Spain where the information is processed using our own algorithms for greater calculation capabilities and security.

Both regular readings and/or alerts are then sent back to the customer. This is a real-time process that takes seconds to be completed.