



ATFLASH SENSOR (AT-530)

Thunderstorm detector by
electromagnetic field measurement



ATFLASH SENSOR gives the user information about the electroatmospheric activity in real-time, detecting thunderstorms and providing early warnings for preventive purposes.

ATFLASH SENSOR works during the storm phases 2, 3 and 4, with a detection distance of 60km, thus allowing preventive actions well in advance.

***Note: Only detectors that measure the electric field are able to provide information about the initial phase of the thunderstorm, thus not requiring previous flashes. For further information about those detectors please consult our ATSTORMv2 catalogue.**

ADVANTAGES:

- Large detection distance: 60km.
- Optimized design for obtaining a low number of false alarms and a high rate of detected events.
- Voltage-free outputs for the 3 existing alarm levels (thunderstorm at 15, 30 and 60km).
- No need of internet connection for warning about the thunderstorm.
- No need of being part of a detectors network for giving a full information of the risk of lightning.
- No need of calibration.
- Accomplishes with Electromagnetic Compatibility standard IEC 61326-1.



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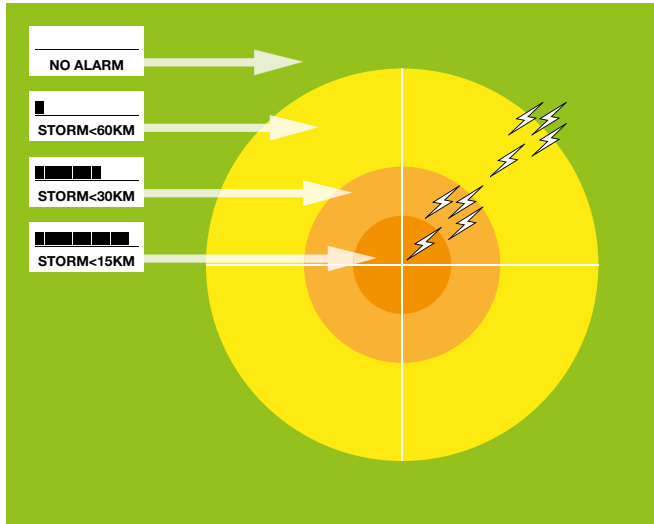


APPLICATION

According to the standard EN 50536, storm detectors are especially useful for personal responsible for decisions (national or local governments, public or private companies) in situations such as:

- People in open areas: labour, sports or other open-air activities, competitions, crowded events, agricultural activities, farms and fisheries.
- Safeguard sensitive equipment: computer systems, electric or electronic systems, emergency systems, alarms and safety.
- Prevention of losses in operations and industrial processes.
- Prevention of serious accidents involving dangerous substances (e.g.flammable, radioactive, toxic and explosive).
- Operations in which the continuity of the basic services is needed to be guaranteed: telecommunications; the generation, transport and distribution of energy; sanitary services and emergency services.
- Infrastructures: ports, airports, railroads, motorways and cableways.
- Civil defence of the environment.
- Occupational health and safety prevention.
- Structures with public open areas.

Working and installation



Lightning discharges cause electromagnetic impulses.

ATFLASH SENSOR measures those impulses and processes them, thus giving alarms when an active thunderstorm approaches (existing cloud to cloud and cloud to ground discharges).

ATFLASH SENSOR presents 3 alarm levels, providing a warning when thunderstorm is between 60 and 30km, a second warning when lightning is between 30 and 15km and a last warning when it is closer than 15km.

ATFLASH SENSOR is provided with a display that shows, using a progress bar, the evolution of the storm within each interval.

ATFLASH SENSOR is formed by 3 elements:

- **Sensor:**

Placed inside a watertight and UV resistant polypropylene element.

To be installed always outside the building and protruding the roof. It is supplied with a circular female connector.

- **Cable:**

25m cable with a circular male connector for connecting with the sensor and a plug-in terminal for the connection with the control console.

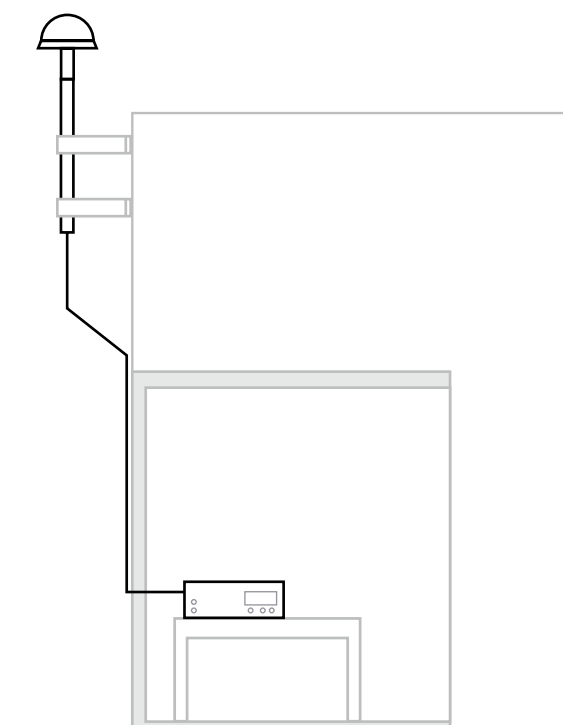
- **Control console:**

Placed inside a metallic box with an LCD display at the front part that shows the presence of the storm in real time, as well as the state of the alarm.

The console is provided with:

Leds for power supply, communication failure and storm event, an internal audible element that activates whenever an alarm occurs, 4 Voltage-free outputs at the back panel, being 3 of them related to the thunderstorm alarms and one for indicating a failure of the communication with the sensor.

The control console should be always installed inside the building.



Technical data

Reference AT-530

Operational

Detection range:	60 Km around the sensor
Alarm levels:	3 alarm levels
Sound level of the console alarm:	80 dB

Electrical

DC Voltage of the sensor:	+/-12Vdc
Power supply of the console:	110-250Vac
Frequency:	50-60Hz
Power consumption:	15 W
Voltage-free outputs:	4 outputs (3 for storm alarms and one for communication failure)

Plug-in terminal
(250Vac, 2A)

Protections:	Protection against overvoltages and overcurrents for both the sensor and the console.
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Environmental

Working temperature of the sensor:	-40 to 85° C
Working temperature of the console:	-10 to 85° C

Mechanical

Sensor

Weight:	348 g
Dimensions:	Ø170 x 95 mm
Cable:	25m
Maximum separation length:	100m (with optional cable)
Material of the enclosure:	Polypropylene
Tightness:	IP54
Fixing:	Fixed to 1 1/2" tube

Control console

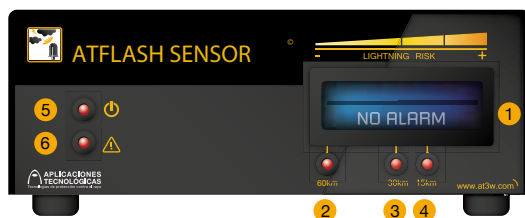
Weight:	1,3 Kg
Dimensions:	227 x 203 x 81 mm
Material of the enclosure:	Galvanized steel coated with black epoxy

Mounting

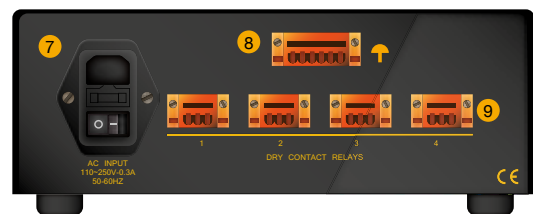
Mást*	Includes galvanised steel, 1 1/2" mast, 2 meters long.
Anchorage*	Includes galvanised steel anchorage formed by 2 U-shaped, 30cm supports for being screwed to the wall
Corrugated tube	Includes tube for cable protection

* These parts are not included in reference AT-533.

Configuration



- 1 Information display.
- 2 Alarm led: storm between 60 and 30km away.
- 3 Alarm led: storm between 30 and 15km away.
- 4 Alarm led: storm closer than 15km.
- 5 Power supply led.
- 6 Communication failure led.



- 7 ON/OFF switch and power supply connector.
- 8 Connector for the sensor cable.
- 9 Potential-free outputs.