



Mesotech's Thunderstorm/Lightning Sensor detects electrical discharges associated with lightning within a 200 nautical mile radius of the system. This passive lightning detection sensor uses a receiving antenna to listen for electromagnetic signals. It has no transmitter, thus no harmful transmissions.

The antenna mounts to a 28" x 32" ground plane and includes a processor housed in a NEMA 4X enclosure. The entire lightning detection package mounts to a 2.5" pipe (2.875" O.D.) with two U-bolts.

### High Sensitivity Lightning Detection Antenna

The Thunderstorm/Lightning Sensor has a combined crossed-loop and sense antenna (with patented sense channel technology), which offers superior correlation of the electric and magnetic signatures of lightning strikes. The antenna is designed to help filter out pulsed noise from sources other than lightning discharges.

### On-Board Lightning Detection Data Processor

The sensor's lightning detection processor houses the data acquisition circuitry, along with circuitry to process lightning strike data and communicate with the data collection platform (DCP). Communication with the DCP is via an RS-485 link.

#### Key Features:

- Detects and plots cloud-to-ground electrical discharges
- 200 nautical mile range
- Passive sensor – no transmitter or harmful transmissions
- Built-in, ongoing self-tests
- Status information sent at regular intervals to assure proper sensor operation

### Dependable Lightning Detection Data

The sensor's lightning detection antenna detects the electrical and magnetic fields generated by cloud-to-ground lightning that occurs within a 200 nautical mile radius of the antenna, and sends the resulting "discharge signals" to the processor. The lightning detection processor

### Technical Specifications

Output:	Digital
Measuring range:	0-200 nautical miles
Operating temperature:	-60°C to 70°C
Internal Voltage:	11-32 volts DC
Current:	0.82 A (maximum) @ 12 volts DC 0.38 A (maximum) @ 28 volts DC
Relative Humidity:	Up to 100%
Communication:	RS-485, 4800 baud
Mounting:	2½" pipe (2.875" O.D.)
Weight:	40 lbs. (18 kg)

digitizes, analyzes, and converts the discharge signals into range and bearing data, then stores the data in memory.

The DCP polls the lightning detection sensor every two seconds via a 2-wire RS-485 link. When polled, the sensor transmits a data package consisting of strike data and status information. When errors are detected, a command can be sent from the DCP requesting a complete error log from the sensor. This error log provides greater detail on the nature and severity of the error.

**The Thunderstorm/Lightning Sensor is an excellent choice for aviation use.**

