



THUNDERSTORM WARNING METEOROLOGICAL STATION

Introduction

Thunderstorm warning monitoring meteorological station is a special meteorological monitoring device designed for thunderstorm disasters (including cloud-to-cloud lightning and cloud-to-ground lightning).

Equipped with high-precision sensors and intelligent algorithms, it realizes early warning and precise monitoring of thunderstorm risks, providing data support for lightning protection and disaster reduction in various scenarios.

Functions

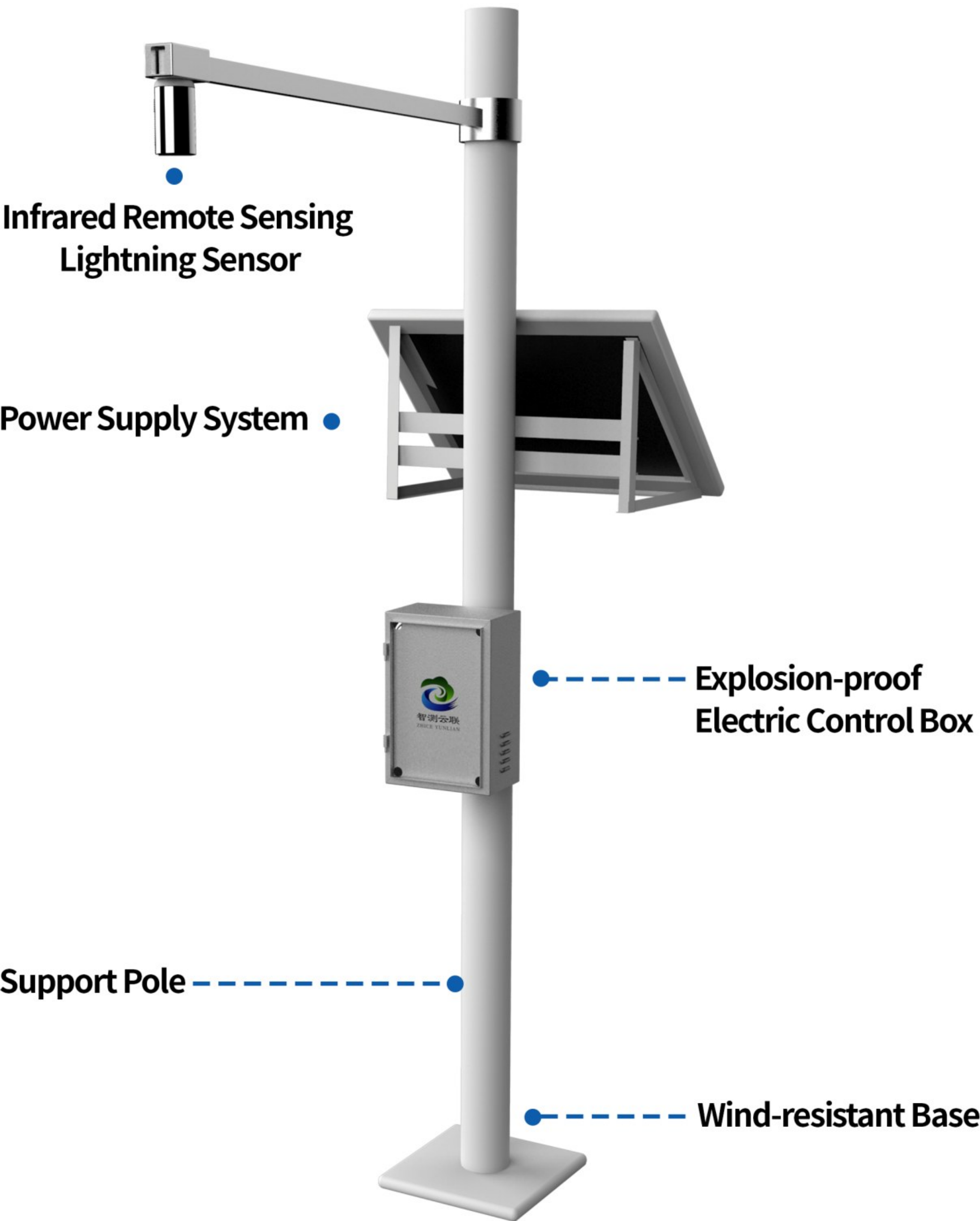
Lightning Location Sensor
Multi-specification Electric Control Cabinet
Data Visualization Cloud Platform
Mobile Terminal APP

Advantages

- Precise monitoring
- Integrated all-in-one assembly
- Data visualization cloud platform
- Reliable data transmission guarantee



 Structure



⚡ Lightning Location Sensor

It supports multi-source data fusion analysis linked with atmospheric electric field thresholds and meteorological factors to reduce false alarm rate. The device features anti-electromagnetic interference and IP67 protection grade, adaptable to complex environments such as outdoor open areas, high-altitude regions and coastal zones. It transmits data in real time, supports local audio-visual alarm and SMS push, and synchronously connects to regional disaster prevention platforms for joint early warning and linkage control.

📦 Specifications

Thunderstorm Parameter	Specification Description
Electric Field Measuring Range	-50 kV/m ~ 50 kV/m
Resolution	20 V/m
Accuracy	Better than 5%
Detection Radius	10 ~ 15 km
Response Time	1 s
Power Supply	AC 220 V / DC 12 V
Sensor Power Consumption	0.7 W (12 V)
Data Communication Power Consumption	1.8 W
Alarm Output Mode	Three-level alarm output

123 Capability Table

Function Module	Core Capability Description	Key Parameters & Supplementary Info
Real-time Lightning Monitoring	Real-time detection of surface atmospheric electric field, lightning position & direction, thunderstorm cloud mapping and other characteristic parameters	Matched with electric field sensor Measuring range: -50~50kV/m Response time: 1s Detection radius: 10–15km
Thunderstorm Advance Warning	Issue advance lightning risk alerts to assist lightning protection preparation	Three-level alarm output Warning lead time: 10–30 minutes Warning coverage ≥10km Effective warning rate ≥80%
Real-time Lightning Monitoring	Real-time detection of surface atmospheric electric field, lightning position & direction, thunderstorm cloud mapping and other characteristic parameters	Matched with electric field sensor Measuring range: -50~50kV/m Response time: 1s Detection radius: 10–15km