



Shutter box weather station

Portable and foldable design



Introduction

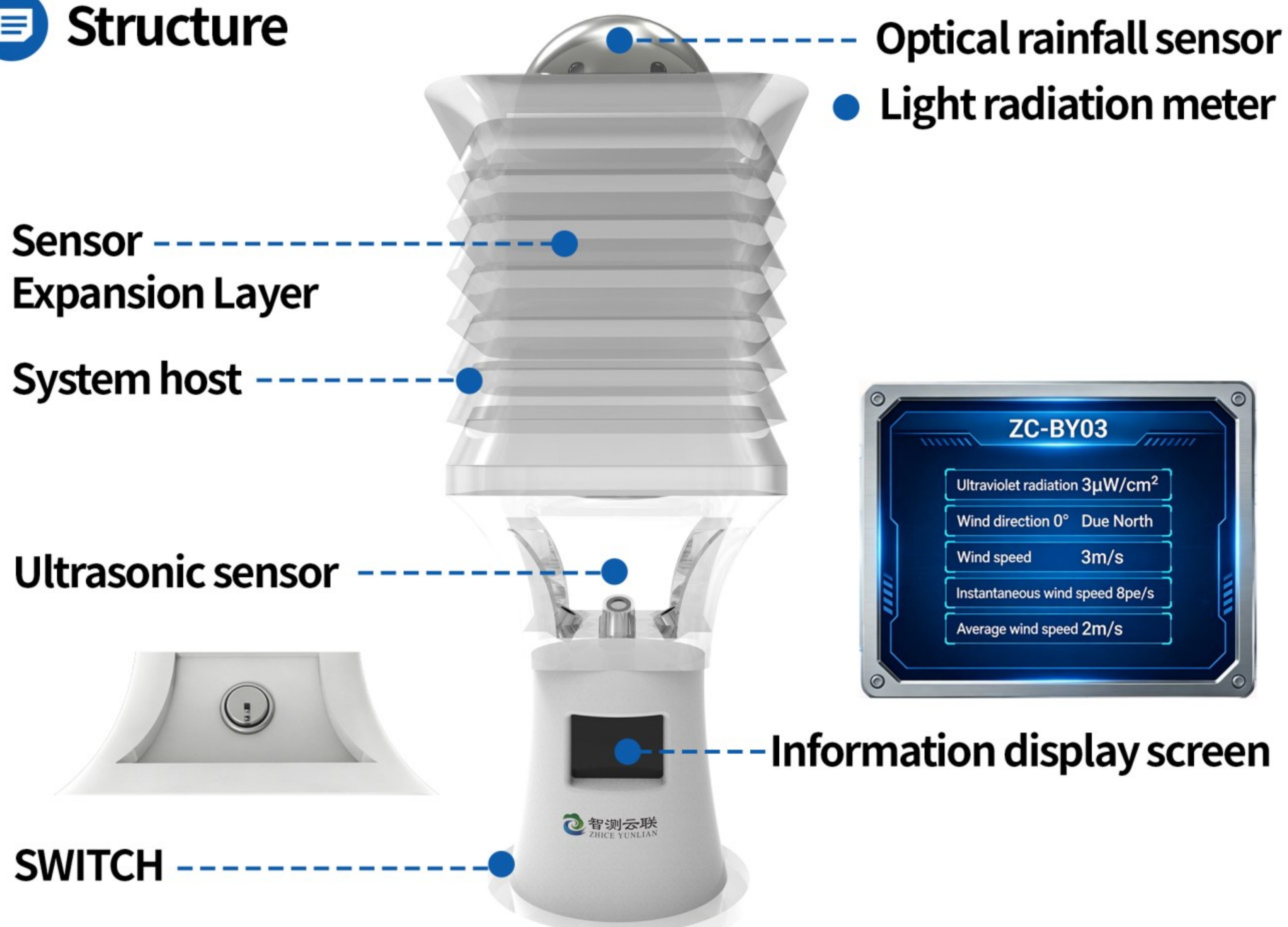
This equipment is an integrated multi-factor intelligent weather station that integrates various meteorological and environmental monitoring elements such as solar radiation, temperature, humidity, wind speed and direction, air pressure, rainfall, gases, and noise, enabling simultaneous monitoring of all these factors.

Application fields

By adopting modular and customized design, the monitoring items can be flexibly configured according to actual needs, and it can be adapted to various scenarios such as field research, photovoltaic power stations, ecological environment monitoring, and agricultural meteorology. It has core advantages such as portability, easy deployment, high precision, and remote linkage control, providing a one-stop solution for environmental monitoring, data research, and engineering applications.



Structure



Various installation methods





Sensor parameters

Parameter	Measurement Range	Resolution	Accuracy
Ambient Temperature	-40 ~ +80°C	0.1°C	±0.2°C
Relative Humidity	0 ~ 100%RH	0.1%RH	±2% (≤80%RH)±5% (>80%RH)
Ultrasonic Wind Direction	0 ~ 359°	1°	±3°
Ultrasonic Wind Speed	0 ~ 70m/s	0.1m/s	±(0.3+0.03V)m/s
Atmospheric Pressure	300 ~ 1100hPa	0.1hPa	±0.3hPa
Solar Radiation	0 ~ 2000 W/m ²	1 W/m ²	≤5%
Photosynthetically Active Radiation (PAR)	0 ~ 2000 W/m ²	1 W/m ²	≤5%
Illuminance	0 ~ 200,000 LUX	10 LUX	±5%
Optical Rainfall	0 ~ 999.9mm	0.01/0.2mm	±10% (Indoor Static)
PM2.5/PM10	0 ~ 1000μg/m ³	1μg/m ³	±10%FS
Noise	35 ~ 100dB	0.1dB	±0.5dB
SO ₂	0-500 ppb	1 ppb	±10%FS
NO ₂	0-500 ppb	1 ppb	±10%FS
O ₃	0-500 ppb	1 ppb	±10%FS
CO	0-4000 ppb	1 ppb	±10%FS





Introduction to the upper computer software

Function Category	Specific Description
Core Functions	Realize integrated management of data reception, storage, viewing and analysis in the PC standalone environment
Data Reception and Processing	1. Support data reception via serial port, as well as data processing and visual display 2. Compatible with communication methods such as JSON string and MODBUS485
Parameter Configuration	1. Allow independent setting of data storage time 2. Support custom collection time in MODBUS485 collection mode
Monitoring Parameter Management	Support users to independently add, delete and modify monitoring parameters, including information such as parameter protocols, names and icons
Data Processing Expansion	1. Equipped with data post-processing function 2. Support external running of JAVASCRIPT scripts



Introduction to Cloud Platform

Function Category	Specific Description
Architecture & Access Method	Adopts a CS architecture software platform, supporting direct access and observation via mobile phones and PC browsers without additional software installation
Account & Device Management	Supports multi-account and multi-device login, meeting the collaborative management needs of multiple users and terminals
Data Display Function	1. Provides dashboards for real-time data display and historical data display 2. Supports data curve analysis 3. Supports map display and device information viewing
Data Storage & Stability	Implements cloud data storage based on cloud servers, featuring stability, reliability, easy scalability and load balancing
Alarm & Threshold Management	Supports SMS alarm function, allowing custom alarm threshold settings to respond to abnormal data in a timely manner
Data Processing & Output	1. Supports data export in table format 2. Has data post-processing function 3. Supports external running of JAVASCRIPT scripts to enhance customization capabilities
Data Forwarding Function	Supports data forwarding via multiple protocols, including HJ-212 protocol, TCP forwarding, HTTP protocol, etc.

