

Integrated Weather Station

»Product Introduction

The HY-WDS6E Integrated Weather Station is a consumer-grade device capable of measuring multiple meteorological parameters. It can simultaneously measure various key environmental parameters, including air temperature, humidity, wind speed, wind direction, atmospheric pressure, rainfall, illuminance, radiation, and dust concentration. It features highly integrated modules and fast response times.

A GPS module and an electronic compass can be installed internally. These functional modules can be freely combined and assembled according to user requirements to meet the needs of different customers.



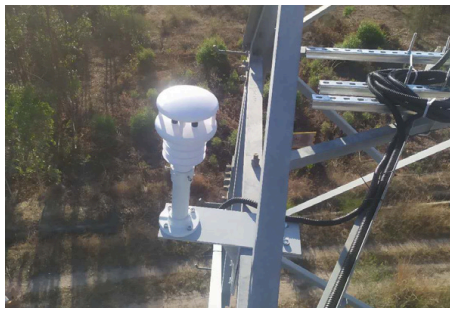
»Technical Indicators

Parameters	Range	Accuracy	Resolution
Wind Speed	0-60 m/s (Can be expanded to 75 m/s)	± (0.5 m/s + 0.03×V)	0.01 m/s
Wind Direction	0-360° (0° and 360° coincide)	±3° (V ≥ 1 m/s)	1°
Temperature	-50 ℃ - +80 ℃	±0.2 ℃ (25 ℃ Typical, -20~+50 ℃), Full Range ±0.5 ℃	0.01 ℃
Humidity	0-100%RH	±3%RH (≤80%RH), ±5%RH (>80%RH)	1%RH
Pressure	300 - 1100 hPa	±0.5 hPa (0~+40 ℃), ±1 hPa (Full Temperature Range)	0.1 hPa
Rainfall	0 - 400 mm	Daily Total: Within ±5%	0.01 mm
Illuminance *	0 - 200000 lux		
Radiation *	0 - 2000 W/m²		
PM2.5/PM10 *	0 - 2000 μg/m³		
Visibility *	10 m - 10 km (Can be expanded to 80 km)	±10% (≤1500 m), ±20% (>1500 m)	1 m
Lightning Detection *	0-40 km	±2 km	1 km
Operating Range	-40 ℃ ~ 80 ℃ / 0 - 100%RH		
Interfaces	RS232/RS485/SDI-12		
Power	VDC: 12-24; < 1 W (Heat 5 W)		
Protocols	ModBus-RTU, ModBus-ASCII, NMEA-0183		
Size/Material	Ø144 × 236 mm (The height depends on the configuration) / ASA		

Note: Parameters marked with an asterisk * are optional.

»Applications

- Smart Cities and Urban Environmental Monitoring
- Automated Agricultural Weather Stations
- Automated Traffic Weather Stations Along Highways
- Field Weather Stations
- High-Voltage Power Transmission and Distribution Lines
- Communication Tower Control



»Key Features

- Sturdy, durable, one-piece design that is easy to install and provides all-weather measurement
- No moving parts; the entire system is maintenance-free
- MODBUS communication protocol, standard RS485/RS232/SDI-12 output
- Can be equipped with an electronic compass and a GPS module
- Built-in heating system ensures normal operation in extremely cold weather
- Integrated automatic weather station with PM2.5 and PM10 particulate matter concentration monitoring



»Product Showcase

