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Smart Agriculture Weather Station

Product Description

The small automatic weather station is a highly integrated, low-power, easy-to-install high-precision meteorological observation device that is particularly suitable for field monitoring. This device consists of five main components: meteorological sensors, data collectors, a solar power supply system, a pole bracket, and a cloud platform. The meteorological sensors can monitor various elements in real-time, including temperature, humidity, air pressure, wind speed, wind direction, and rainfall. The data collector is responsible for aggregating and processing this data. The solar power supply system ensures continuous operation of the equipment in environments without power sources, while the pole bracket provides a stable installation base, ensuring the equipment works reliably in various terrains. Additionally, the small automatic weather station requires no complex debugging; users can quickly assemble and deploy it with simple construction. This plug-and-play design not only enhances the convenience of the device but also significantly reduces deployment time and labor costs.

The equipment is widely used in meteorological monitoring, agricultural production, forestry management, environmental protection, marine research, airport and port operational safety, scientific research, and campus education. Whether conducting precision agricultural monitoring in large-scale farmlands, monitoring fire risks in forests, or collecting meteorological data in marine environments, the small automatic weather station provides reliable data support, helping users make informed decisions.

Product Features

1. Low-power collector: static power consumption is less than 50uA.
2. Standard configuration includes GPRS network connectivity, supports extended Bluetooth, and wired transmission.
3. Solar charging pipe MPPT automatic power point tracking
4. SMS alert, send a message to the specified mobile phone after exceeding the limit.

Product parameters

Name	Measuring range	resolution	Accuracy
wind speed	0~30M/S	0.01M/S	±(0.1+0.03V)M/S
wind direction	0~360°	1/16	<3°(>1.0M/S)
air temperature	-40-80℃	0.1℃	±0.3℃(25℃)
Air humidity	0-100%RH	0.10%	±3%RH
Atmospheric pressure	30-110KPA	0.01KPA	±0.02KPA(relatively)
rainfall	≦4MM/MIN	0.01MM	±0.2MM
illumination	0-18.8W LUX	1 LUX	5%
carbon dioxide	500-5000PPM	1PPM	±50PPM±reading3%
soil temperature	-40~80℃	0.1℃	±0.5℃
soil moisture	0-100%	0.1%	3%
soil conductivity EC	0-20000US/CM	10US/CM	±5%
Soil pH (electrode)	0-14	0.01	±0.1
Soil nitrogen, phosphorus and potassium	0~1999MG/KG	1 MG/KG	±2%
soil evaporation	0~75MM	0.1MM	±1%

Application Scenarios

Chemical plant automatic weather station

weather observation station

Field automatic weather station