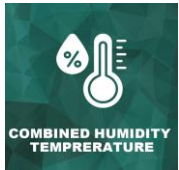


Meteorology Station Professional Ultrasonic Weather Station

odak® R&D
CENTER
smart city technologies



General Application Areas



Highways



Weather
Observation
Stations



Ports



Research
Centers



Universities

Features

- Durable design and easy installation with no moving parts thanks to ultrasonic technology,
- Thanks to the built-in heater; uninterrupted 24/7 operation regardless of summer/winter,
- Communication via RS485, RS 232 or SDI-12 protocol. Modbus-RTU or SDI-12 output possibility,
- Non-contact and accurate measurement of precipitation (Snow, Rain, Hail) with radar technology,
- GNSS (Global Positioning Module) module can be added upon request.

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General Information

The Professional Ultrasonic Weather Station is a weather station integrated with multiple high accuracy sensors. The Ultrasonic Weather Station can perform simultaneous measurement of multiple parameters: wind speed, wind direction, atmospheric temperature, atmospheric humidity, barometric pressure, precipitation, solar radiation, brightness and particulate matter pollutant measurement from 1 micro meter to 10 micro meters (PM1.0/PM2.5/PM10).

Thanks to its ultrasonic technology, wind direction and intensity are measured with high accuracy, while its design does not require moving parts and provides easy installation.

Our meteorological station is made of thermoplastic material also known as ASA. The body material ASA, which has high resistance to all weather conditions, is also extremely resistant to UV rays. With its non-corrosive outer surface, it can meet a service life of 10 years thanks to its sun, frost and high temperature resistant structure.

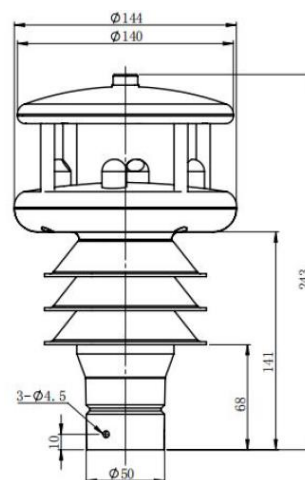
Thanks to the built-in heater, it provides uninterrupted 24/7 operation even in cold weather. It does not require on-site calibration and is simple to install and can be commissioned quickly. Integrated 24GHz radar module that can quickly detect the type and intensity of rain, snow and hail.

With the optional GPS / GNSS module, latitude and longitude and movement speed can be measured and the accuracy and location information can be compared with additional software and the accuracy rate can be increased.

Technical Specifications

Input Voltage	: 12-24 VDC, 220V AC (Optional)
Power Consumption	: 10~110mA@12V excluding heating, <250mA@12V including heating
Data Output / Communication Protocol	: RS232, RS485, SDI-12 / Modbus-RTU or SDI-12
Contact	: Modbus-RTU or NMEA-0183 or SDI-12
Product Dimension	: $\varnothing 144 * 248$ mm
Operating Conditions (Temperature / Humidity)	: -40°C - +70°C / 0 - %100
Body Material	: ASA Thermoplastic
Warranty Period	: 2 Years

Technical Drawing



Meteorology Station Professional Ultrasonic Weather Station

Measurement Parameters

	Measurement Technique	Measurement Range	Accuracy	Resolution
Wind Speed	Ultrasonics	0-60m/s	±2%	0.01m/s
Wind Direction	Ultrasonics	0-359°	<3°	1°
Air Temperature	MEMS sensor	-40°C - +80°C	±0.5°C	0.1°C
Air Humidity	MEMS sensor	0-100%	±2%	0.1%
Air Pressure	MEMS sensor	150-1100hPa	±1 hPa	0.1hPa
Precipitation				
Accumulation / Intensity: Rain Type: Rain/Hail/Snow	24Ghz Radar	0-500mm/hr	±10%	0.01mm
Brightness	Silicone	0-200000 lux	±5%	1 Lux
Solar Radiation	Silicone	0-2000 W/m2	±5%	1 W/m2
PM1.0/PM2.5/PM10	Laser scattering	0-500ug/m3	±10%	1 ug/m3
Compass Direction	Flux gate	0-359°	<3°	1°

