



RK900-11 Ultrasonic Automatic Weather Instrument



Overview

RK900-11 Ultrasonic Automatic Weather Instrument can simultaneously measure atmospheric temperature, humidity, air pressure, wind speed, wind direction, rainfall, solar radiation, illuminance, dust, visibility and other parameter. The product uses low-power chips with a power consumption of only 1.7W, Especially suitable for solar/battery-powered applications. Due to the adoption of new technologies and processes, the structure is more compact and very suitable for agricultural meteorological systems. The outer shell is made of ASA engineering plastic and comes in two colors: black and white.

Features

- High accuracy, fast response
- Compact structure and multi parameter measurement
- RS485/RS232/SDI-12 output
- No moving parts, maintenance free
- Low power consumption

Applications

- Agricultural meteorology
- Smart city
- Bridges and tunnels
- Home Weather
- Environmental monitoring of high-altitude equipment
- General environmental monitoring

Technical Parameter

| Item | Range | Resolution | Accuracy |
|-------------------------|-------------------------|---------------------|----------------------------|
| Wind speed | 0~40m/s | 0.1m/s | ±5%FS |
| Wind direction | 0~359° | 1° | ±3° |
| Atmospheric temperature | -40℃~+80℃ | 0.1℃ | ±1℃ |
| Atmospheric humidity | 0~100% | 1% | ±3% |
| Atmospheric pressure | 300~1100hPa | 0.1hPa | ±1hPa |
| Rainfall | 0~200mm/hr. | 0.1mm | ±8% (@ wind speed ≤5m/s) |
| Altitude | -500m~9000m | 1m | ±8% |
| Irradiance | 0~2000W/m ² | 0.1W/m ² | ±5% (@ vertical light) |
| Illumination | 0~200000lux | 0.1 lux | ±5% (@ vertical light) |
| PM2.5 | 0~2000μg/m ³ | 1μg/m ³ | ±5% |
| PM10 | 0~2000μg/m ³ | 1μg/m ³ | ±8% |



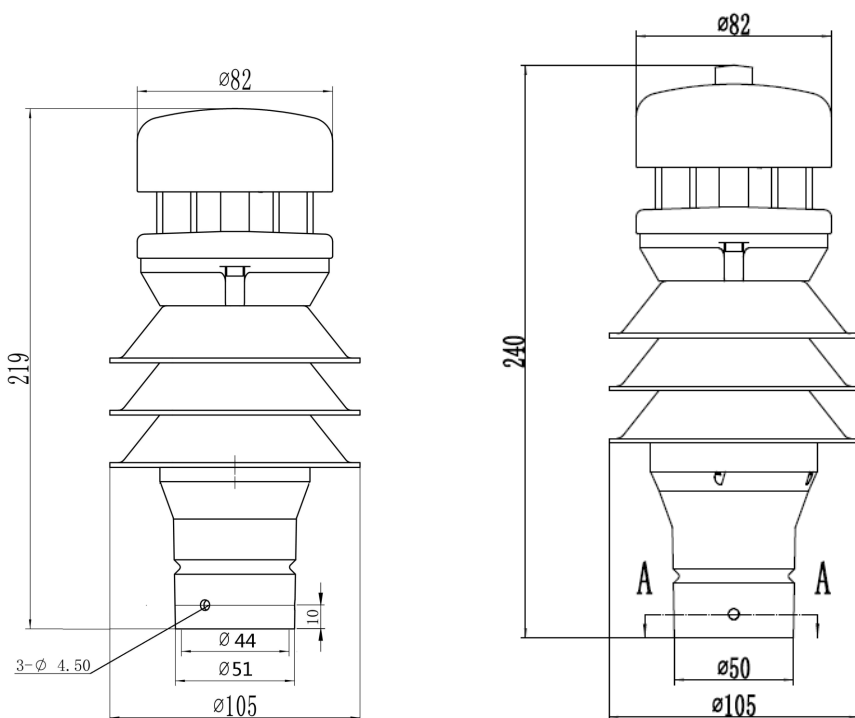
RK900-11 Ultrasonic Automatic Weather Instrument

Technical Parameter

| Item | Technical Specification |
|-----------------------|--|
| Power Supply | 7-30VDC |
| Power consumption | 1.7W |
| Output Signal | RS232/RS485(Modbus or NMEA-183), SDI-12 |
| Operating Temperature | -20°C-+60°C |
| Ingress Protection | IP65 |
| Dimension | Φ82mm×(108-240)mm (Dimensions will vary depending on the parameters) |
| Weight(unpacked) | 0.38kg |
| Main material | ASA(white or black optional) |

Dimension

Unit:mm

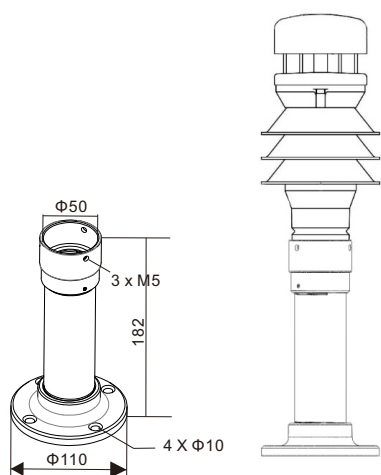


With Irradiance measurement

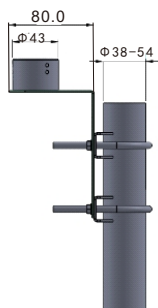


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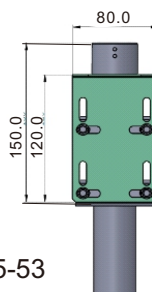
Mounting



RK95-54



RK95-53



Note:

During installation, use a standard compass to determine the geographic north direction, and align the instrument's northward wind direction with the compass direction for optimal setup.

Parameter Selection Table

| Remark | Series | Type | Supply | Output | Communication protocol | Measure parameters | |
|--------|--------|------|--------|--------|------------------------|--------------------|---|
| RK | | | | | | | |
| | 900 | | | | | | |
| | | 11 | | | | | |
| | | | A | | | | 7-30VDC |
| | | | X | | | | Other |
| | | | | A | | | RS232 |
| | | | | B | | | RS485 |
| | | | | C | | | SDI-12 |
| | | | | | A | | Modbus-rtu(default) |
| | | | | | B | | NMEA-0183 |
| | | | | | C | | SDI-12 |
| | | | | | X | | Other |
| | | | | | | M5 | Wind speed,wind direction temperature & humidity air pressure |
| | | | | | | M6 | Wind speed, wind direction temperature & humidity air pressure , rainfall |
| | | | | | | X | Customized① |

①Wind speed and direction are necessary, and other parameters can be combined freely, GPS/BDS and electronic compass are optional configurations. Please confirm with us before order.

| Revision time | Reviser | Current Version | Remarks |
|---------------|---------|-----------------|---------|
| 20250428 | Lee | V5.0 | |