

# AUTOMATIC WEATHER STATION (AWS)

## WEATHER STATION SENSORS

- Wind Speed
- Wind Direction
- Temperature
- Relative Humidity
- Rain Fall
- Solar Radiation
- Barometric Pressure

## Features

- ☞ It can be customized according to the application.
- ☞ Can be mounted on buildings, vehicles or tripod.
- ☞ Data can be output to a remote server using various means of communications.
- ☞ Support MQTT, IEC 104 protocol.
- ☞ High sensor accuracy.
- ☞ Easy to install and to maintain.
- ☞ Plug & Play sensor.
- ☞ Solar powered option available.
- ☞ Robustness.
- ☞ Automatic Telemetry / Communication.
- ☞ Data storage.



## LIVE AND ANALYSIS SOFTWARE FOR AWS

- Possible to add formatted data from .csv file.
- Possible to give command from the software to the remote weather station for different purpose.
- Live Graphical view for all parameter.
- Monthly / yearly / daily weather parameter analysis in graphical and text format and report exported into PDF.
- Wind Rose and Solar day Calculation.

## DATA LOGGER



### Features

- Protocol Support: Modbus, IEC-104, MQTT
- GPRS / GSM Support
- RS-232, TCP port available for communication to central server.

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**RDE**  
Scalable Energy Management

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The REDE Automatic Weather Station (AWS) measures all weather data like wind speed, wind direction, PV temperature, ambient temperature, humidity, rainfall, solar radiation, evaporation etc along with inverter data and energy meter data. REDE AWS have different communicates facilities RS485 MODBUS, Ethernet, MQTT and to cloud on GSM/GPRS by which it can easily communicate with the third party SCADA/ PLC or any control system.

## Data logger Features:

- Local Storage and online remote data transmission
- Data download and several report
- Uninterruptible Power Supply (Optional - Solar Panels available)
- Robust Instrumentation Tower and Mounting Hardware
- Web Interface



## Central Software Basic Features

- See current conditions at a glance on the instant weather bulletin.
- Graph data on a daily, weekly, monthly, or yearly basis.
- Generate Weather Watcher reports in National Climatic Data Center (NOAA) format
- Choose a storage interval of 1, 5, 10, 15, 30, 60, or 120 minutes.
- Store up to six months worth of data, depending on the chosen storage interval. The data Logger uses non-volatile memory, so you won't lose the data in the logger, even if you lose power.
- Transfer data from the data logger to your computer as often as you like to create your own weather database.

## [Contact](#)

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## Technical Specification

<b>Wind Speed Sensor-Specification</b>	
<b>Sensor Type</b>	3 cup type anemometer
<b>Sensor</b>	Solid state magnetic sensor
<b>Sensor Material</b>	Wind Cup- Polycarbonate
<b>Range</b>	1 to 200 mph, 1 to 173 knots, 0.5 to 89 m/s, 1 to 322 km/h
<b>Starting velocity Typically</b>	0.3m/s
<b>Threshold</b>	0.3m/s
<b>Resolution</b>	1 mph (1 knot, 0.1 m/s, 1 km/hr)
<b>Accuracy</b>	±2 mph (2 kts, 3 km/h, 1 m/s) or ±5%, whichever is greater
<b>Wind Direction Sensor-Specification</b>	
<b>Sensor Type</b>	Wind Vane
<b>Sensor</b>	Wind vane and potentiometer
<b>Sensor Material</b>	UV-resistant ABS
<b>Range</b>	0 - 359°
<b>Resolution</b>	1°
<b>Accuracy</b>	±3°
<b>Solar Radiation Sensor-Specification</b>	
<b>Sensor Type</b>	Silicon photodiode
<b>Range</b>	0 to 1800 W/m <sup>2</sup>
<b>Accuracy</b>	±5% of full scale (Reference: Eppley PSP at 1000 W/m <sup>2</sup> ) plus 45 W/ m <sup>2</sup> per 100' (30 m) of additional cable
<b>Drift</b>	up to ±2% per year
<b>Housing Material</b>	UV-resistant PVC plastic
<b>Temperature Sensor-Specification</b>	
<b>T Sensor Probe</b>	NTC
<b>T Measuring Range</b>	-30 to +60°C
<b>T Accuracy</b>	±0.3°C
<b>T Resolution</b>	0.1°C
<b>RH Sensor Probe</b>	Humidity Capacitance
<b>T Measuring Range</b>	0 - 100%RH
<b>T Accuracy</b>	±3 % RH
<b>T Resolution</b>	31% RH
<b>Interface</b>	RJ45
<b>IP Class</b>	IP64
<b>Rainfall Sensor-Specification</b>	
<b>Sensor Type</b>	Tipping bucket with magnetic reed switch
<b>Aperture</b>	214 cm <sup>2</sup>
<b>Resolution</b>	0.01" (0.2 mm)
<b>Accuracy</b>	±4%, ±1 rainfall count between 0.01" and 2.00" per hour (0.2 mm and 50.0 mm per hour); ±5%, ±1 rainfall count between 2.00" and 4.00" per hour (50.0 mm and 100.0 mm per hour)
<b>Capacity</b>	9999 mm

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