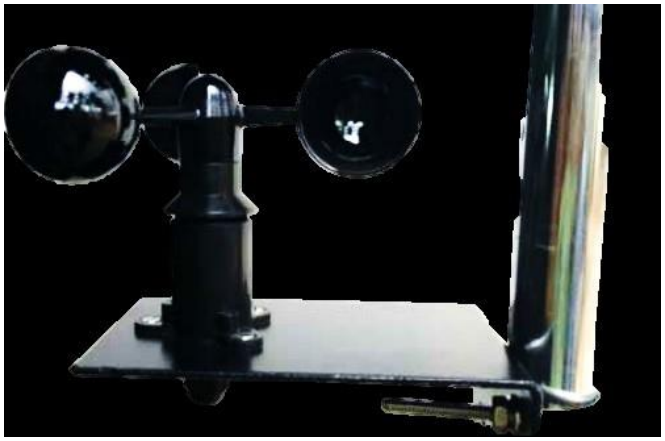
WIND SPEED SENSOR WS102

INTRODUCTION

Wind Speed Sensor is designed with rugged components stand up to hurricane-force winds, yet are sensitive to a light breeze. Includes sealed bearings for long life. The range and accuracy specifications have been verified in wind-tunnel tests. In areas where icing of the anemometer is a problem, drip rings deflect water from the joint between moving parts.

- Sensor Type : Three cups
- Material : Control Head UV-resistant ABS
- Wind Cups : Polycarbonate
- Range : 0 to 250 km/hr
- Startup wind speed : 0.5m / s
- Accuracy : ± 3%
- Output :Pulse , 62 Hz = 250 km/hr
- Dimensions : 3 cup Dia 15 cms
- Cable length : 2 mts
- Temperature : - 40 ~ 75 ° C
- Potential lead : Two wire



INSTALLATION

The wind speed sensor comes in three different parts. We have the sensor body, the anemometer cup wheel and an Allen key to mount the cup wheel on the sensor body. There are different ways to mount the sensor.

When selecting your mounting system, take into consideration that you will occasionally need to access the anemometer for preventive maintenance and possible component replacement.

The goal of installing a wind speed meter (anemometer) is to position it in a location where the wind flows freely and is not influenced by nearby objects.

For the most accurate wind speed readings, mount the sensor as the highest object for 50 feet in all directions.

TOOLS AND MATERIALS NEEDED

Read this manual before beginning the installation to be sure you have everything you need.

- Wire cutters and stripper
- Multimeter
- Electrical Tapes to cover the wire
- Wire ties and tabs

LOCATION RECOMENDATION

Use the following guidelines to determine the best location for mounting the module surface temperature Sensor

- Allow sufficient clearance for the wind sensor. Install the wind sensor away from buildings or any other objects that might affect the airflow
- Try to make the anemometer the highest object around. 7 feet or more above the surrounding obstructions is best
- The anemometer must be mounted in an upright position; otherwise, water can enter the anemometer and destroy it.

MOUNTING

Observe the following requirements regarding the mounting location of the wind speed sensor:

- Cups should be on the top of the sensor. Mount vertically.

Example Installations :

CALIBRATION

- If using Modbus sensor then the Wind speed Sensor is factory calibrated.

- If using analog output senor then use the following info to calibrate .
  Output - 0 to 5 VDC (0 to 250 km/hr)
  Wind Speed=50*Output voltage (in Volt)

If the cable length is insufficient for the installation, additional cable can be added to the existing cable. If this is done, an accuracy derating factor must be added to the overall wind speed accuracy of this sensor.

It is highly recommended that the calibration be checked annually

SENSOR MAINTENANCE

Maintenance includes inspection of mechanical operation and cleaning.

- Rotate vane assembly; look for smooth rotation and a gradual stop.
- Inspect mounting hardware for secure fasteners; mounting pipe must be vertical.
- Replace any loose or corroded fasteners.

- It is recommended to check the ball bearings of the anemometer and the vane every year. If the cup wheel or the vane is not rotating smoothly or it creates detectable noise, the bearings must be replaced.
- Clean any accumulation of dirt, dust, or bird droppings that may affect proper rotation of the vane. Use only soapy water and a soft cloth. Never use solvents or abrasive cleansers. Do not immerse the anemometer in water.
- Inspect the cable and connections.