NEULOG ANEMOMETER LOGGER SENSOR GUIDE

NeuLog anemometer logger sensor
NUL-242

The NeuLog anemometer sensor can be used for any science experiment that utilizes wind speed such as in the fields of: Environmental Science, Weather Science, Ecology, Biology, etc.
The sensor comes pre-calibrated so you can start experimentation right out of the box using this guide.
Among hundreds of possible experimental subjects that can be studied with the NUL-242 sensor are: weather studies, plant growth, animal behavior, insect flight, and many more.
The anemometer sensor's measurement units are:
Kilometers per hour (km/hr): An SI measurement of velocity.
Miles per hour (mph): English system measurement of velocity.

Included with the sensor:

- NeuLog General Guide
- Anemometer probe made from durable plastic, attached to the sensor's body by a strong rubber-coated wire

Sensor's specifications		
	Miles per hour (mph)	**Kilometers per hour (km/hr)**
Range and operation modes	0 to 75 mph	0 to 120 km/hr
ADC resolution	16 bit	
Resolution	0.01 mph	0.01 km/hr
Max sample rate (S/sec)	100	

Experiment Duration: 1 second to 31 days.

Sensor's features:

- Fully digital data
- Rugged plastic ergonomic case
- Durable anemometer probe attached by a strong rubber-coated wire
- Push button switch for Start/Stop experiments in off line mode
- LED indicator of experiment status (blinks while collecting data)
- Pre-calibrated sensing equipment

Note: NeuLog products are intended for educational use.

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Videos and experiment examples:

- Videos, literature and other probes can be found at www.NeuLog.com.
- In order to access the anemometer sensor's page, choose "Products" on the main menu and then "Anemometer logger sensor".
- In order to access the anemometer sensor's experiments, choose "Example Labs":
    - Wind Speed Measurements (E-4)

Technical background:

The philosophy behind NeuLog's plug and play technology is based on each sensor's ability to store its own data due to an internal flash memory chip and micro-controller in each plastic NeuLog body. This technology allows the sensor to collect and then store the digital data in the correct scientific units (^{o}C, ^{o}F, Lux, %, ppm, for example).

The sensor is pre-calibrated at the factory. The built-in software in the logger can be upgraded for free at any time using the provided firmware update.

Inside the anemometer sensor a magnet is situated within a metal coil. The magnet is connected directly to the wind speed detector which causes it to spin with the same velocity as the wind propelling it.

The shaft is installed in a bearing and has a magnet at its end. A digital sensor based on the Hall Effect sensor, an analog circuit and a very sophisticated digital processor are located near the rotating magnet.

The analog and digital circuits analyze the rotating magnetic field, calculate the rotation speed and transfer this data to the controller upon its request. The controller converts this data into air flow velocity.

Maintenance and storage:

- Never submerge the NeuLog plastic body in any liquid.
- Do not allow liquid into the anemometer sensor's body.
- After use, gently wipe away any foreign material from the anemometer sensor.
- Store in a box at room temperature out of direct sunlight.

Warranty:

We promise to deliver our sensor free of defects in materials and workmanship. The warranty is for a period of 3 years from the date of purchase and does not cover damage of the product caused by improper use, abuse, or incorrect storage. Sensors with a shelf life such as ion selective probes have a warranty of 1 year. Should you need to act upon the warranty, please contact your distributor. Your sensor will be repaired or replaced.

Thank you for using NeuLog!

NeuLog

Flexible, simple, fast, forward thinking.
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