Nubo Sphere

Application Note

Installation poles for Nubo Sphere sensor node and wind meter

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Installation poles for Nubo Sphere

To install the Nubo Sphere sensor node, solar panel and wind meter, customers can use either existing poles on their sites, or put up new dedicated poles.

Installation poles should be stable and easy to put up. The goal is that the Nubo Sphere measurement setup withstands usual wind speeds. It is also important that the installed setup remains firmly in the initial position and does not rotate.

In order for data analytics to be performed correctly, it is critical to ensure that the wind sensor always faces the same direction that was recorded and transmitted to Sensirion Connected Solutions (SCS) during the installation on site.

A pole with the following characteristics is recommended:

- Wind speed resistance: >90 mph (144.8 km/h)
  - This corresponds to the wind speed at which the pole begins to tip over.
  - 90 mph is a common wind speed rating for equipment placed in any region of the US territory.
  - Note that for certain geographies, higher wind speed resistance may be desirable (e.g., >100 mph in the Permian basin).

- Pole height: at least 7 ft. 1 in. (2.15 m)
  - The pole needs to be high enough to enable simultaneous placement of wind sensor, solar panel and sensor node so that the bottom of the sensor node is 5 ft. (1.50 m) above the ground.
  - It is important to choose a pole that allows a mounting height for the Nubo that corresponds to the height of the potential emission sources to be measured – please consider any requirements during the siting process in case these are differing from the standard installation height at 1.50 m above ground.

- Pole rotation: None.
  - The pole needs to be attached to its base such that rotation of the pole around its axis is not possible.
  - This is crucial to guarantee the wind sensor orientation does not change.

- Pole diameter: 50 – 300 mm (1.95 – 12 in.)
  - The pole design can be round, square, or U-channel
  - The pole should ideally be made from aluminum or any other material that is anti-corrosive and durable.

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