Wind Speed and Wind Direction Sensors Placement:

Site Selection:

Location of the sensor is critical for accurate wind measurements. The standard exposure of an anemometer or vane on open, level terrain is 10 meters above the ground. Open, level terrain is defined as level ground with no obstruction within 300 meters.

In locations where obstructions are not large, such as residential areas, and are distributed more or less evenly, the sensors may be placed at an effective height of h+10 meters, where h is the approximate height (in meters) of the various obstacles. As an example, in a location where trees and buildings reach to about 5 meters, the sensor must be placed on a 15 meter mast to avoid erroneous results.

In areas where large obstructions do exist within 300 meters of the sensor, the following table can be used to calculate the proper height of the sensor (h is the height of the obstruction). When the sensor is mounted on a building, the building itself disturbs the wind flow and must be taken into account before installation. For large buildings (other than buildings such as light houses and skyscrapers) the sensor must be mounted as far away from the edge of the building as possible and at a height of at least 3/4 the height of the building. Thus, with a building 28 meters high, a rooftop tower at least 21 meters high should be used.

Distance to obstruction	Minimum height of anemometer above ground:
h	1.75h to 2.25h
5h	1.67h
10h	1.5h
20h	1.25h
25h	1.13h

Rain Gauge Placement:

Mounting of the rain gauge can be close to ground level or pole mounted, but should not be mounted in the rain shadow of any surrounding tall objects.