

Lidar Wind Sensor

Wind Scout



- Affordable, compact, eye-safe cw wind lidar
- Near range measurements with fine range resolution
- Measuring distance set according to request (10 m – 100 m)
- Easy and fast transportation and installation
- Set-up at sites where wind masts cannot be mounted
- Easy to operate by web-interface for control and real time visualization
- Built-in quality control
- Automatic system monitoring
- Typical applications include wind farm planning, urban climatology, marine platform instrumentation, etc.



Lidar Wind Sensor **Wind Scout**

Power requirements	230 V, 36 W
Ambient conditions	-20°C ... + 50 °C, 5 ... 100 %
Measuring distance	Within range of 10...100 m, factory set according to customer's request
Weight	< 40 kg
Range of wind speed	0 ... 60 m/s
Range of wind direction	0 ... 360 °
Range of std. dev. of vertical wind	0.02 ... 3 m/s
Minimum measuring distance	10 m @ 0.16 m resolution
Maximum measuring distance	100 m @ 16 m resolution
Time resolution	1 s (complete 3D-VAD scan)
Data output and control	Ethernet
Built-in storage	32 GB
3-axis orientation and position	Optional (inclination sensor, compass, GPS)

The Metek **Wind Scout** is a compact, cost efficient and easy to use lidar wind sensor. It derives 3D wind vectors from continuous VAD scans ($\pm 10^\circ$) at a rotational speed of 1 rev./s for a designated measuring volume determined by the adjusted focal distance. The frequency modulation provides both, an unambiguous determination of the radial wind and a wide wind measuring range. It further prevents any bias in case of strong variations of back scattering along the line-of-sight observation which are typically caused by clouds. Spectra are determined at a rate of 100 Hz which yields an angular resolution for each sample of approx. 3.6° .

Because of the low energy consumption, a stand-alone operation in combination with solar power is easy to achieve. The internal memory collects wind data over long periods. For real time applications, the **Wind Scout** can be connected via ethernet to a PC or mobile router for distribution of measurements.

Typical applications of the **Wind Scout** include:

- Meteorological systems & networks
- Pollution dispersion parameters
- Air quality studies
- Wake vortex monitoring
- Wind energy
- Climatology at remote sites
- Research stations
- Urban & Industrial Sites
- Marine and offshore platforms
- Airports
- Sport events

