

Compact Anemometer



General

The wind sensor measures and transmits the horizontal wind speed. The measured values are available at the output as digital signal to control for instance wind power plant. However, with the resp. design, it can be used as input signal for data loggers or alike.

An electronically-regulated heating system has been installed for wintertime use, in order to prevent the ball bearing and the external rotation parts from freezing. Power for the heating system could be provided for instance by our Power Supply.

When using fastening adapters (angle, traverses etc.) please notice that turbulences could possibly influence the characteristic curve.

Construction and mode of operation

The wind velocity is recorded by means of a low-inertia plastic cup star the ball-bearing axis of which is connected to a slotted disk or cup wheel.

The external parts of the instruments are made of corrosion-resistance material (plastic) resp. the aluminium housing is additionally protected by means of an anodic coat.

Labyrinth sealing protect sensitive parts inside the instrument against humidity.

Selecting a site

In general wind measurement instruments should be able to detect the wind conditions of a large area. In order to obtain comparable values when determining the surface wind, measurements should be taken at a height of 10 meters over an even area with no obstacles. An area with no obstacles means that the distance between the wind transmitter and an obstacle should be at least 10 times the height of the obstacle. If it is not possible to fulfil this condition, then the wind transmitter should be set up a height where local obstacles do not influence the measured values to any significant extent (approx. 6-10 m above the obstacle).

The wind transmitter should be set up in the centre of flat roofs and not on the roof side in order to avoid bias in the direction (privileged directions).

Mounting

The mounting of the transmitter could be done for example onto a central mast tube with a boring thread Pg 21 or on hangers with a boring of 29 mmØ.

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(LiYCY, uv-resistant) is passed through the boring, wind transmitter could be fixed with hexagonal nut (WO 36). For electrical connection please refer to the connection diagram.

Attention: Storing, mounting and operation under weather conditions is permissible only in vertical position, as otherwise water can get into the instrument **Maintenance**

Technical Data	Anemometer Compact
Protection	IP55
Cups	Plastic
Measuring range	0.5 ... 50 m/s
Resolution	< 0.5 m/s
Measuring accuracy	± 3% of measured value or ± 0.5 m/s
start-up wind speed	0,5 m/s
Stability	max. 60 m/s
Distance constant	5 m
Housing material	anodized aluminum and plastic
Operating voltage	4 - 18 V DC < 1 mA
Scanning	lightbarrier - cup wheel
Heating	24 V AC/DC max. 20 W
Ambient temperature	-30 °C ... + 70 °C
Cable	12m
Weight	0,40 kg

After proper mounting of the instrument works maintenance free. Heavy pollution

can clog up the slit between the rotating and the stationary parts of the wind transmitter. This slit must be kept clean.