

Vector Anemometer A100

General



The wind transmitter is used for the registration of the horizontal component of the wind velocity. The measuring value will be placed at the output as digital. The signal can be given to a data logger. The wind transmitter is equipped with an electronically regulated heating system in order to prevent icing of the ball bearings and the outer rotating parts. Power supply unit provides the transmitter and the heating system with current. It is advisable to attach a lightning rod in areas with considerable lightning activity.

Construction and Mode of Operation

A low-inertia light plastic cup star is set into rotation by the wind. Through the opto-electronical rotating-frequency-scanning the resulting pulse frequency is used for the digital data processing. Input and outputs have to be protected from overload by transzorb diodes. The outer parts of the instrument are made of corrosion-resistant parts and they are protected through a varnish. The wind

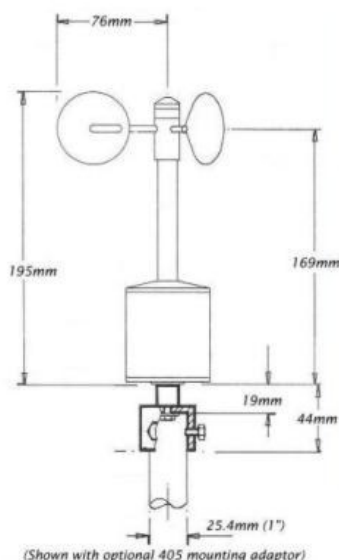
transmitter is shipped in a semi-mounted state in order to avoid transport damage and to keep the package small.

Selecting the measuring location

The anemometer should ideally be mounted at the top of a mast to be open to the wind from all directions. Only a lightning protection rod mounted below may overtop the sensor.

For the protection of the given it is urgently necessary to secure the mast with a lightning protection staff and appropriate grounding measures professionally. The standard instrument is designed to withstand all weather conditions; many thousands being in continuous use at all latitudes around the world. Marine versions are available and heaters can be fitted to prevent icing of the bearings.

Mounting of the Wind Transmitter



Mounting is by means of a single screw into the base. If required, a range of standard mounting adaptors are available to simplify mounting on masts and poles. These include a single mast-top adapter (the preferred method for accurate wind speed measurement), a single side mounting arm, or the anemometer can be mounted at one end of mast-top cross arm (the opposite end usually being reserved for the wind direction vane).

A100 series instruments are fitted with a 3 metre length of cable as standard, but other stock lengths of 6, 10 or 15m (or any custom length) may be specified. For many installations (and particularly when longer lengths are required) it is advisable to use one of our weatherproof junction boxes and extension cables.

Maintenance

If properly installed, the instrument requires no maintenance. Heavy pollution can lead to blockage of the slot between the rotating and the stable parts of the

transmitter. Thus it is advisable to remove the accumulated dirt from the instrument.

Certain symptoms of wear and tear can appear on the ball bearings after years of use. These symptoms are expressed in a lowered sensitivity of response, standstill or run-noises of the ball bearings. In case those disturbances might occur we recommend returning the instrument - in original package – to the factory for maintenance work.

Technical data	
Characteristics	Description
Measuring range	0,2 ... 75 m/s
Accuracy (without calibration)	$\pm 0,2$ m/s (< 10 m/s); ± 2 % of reading (> 10 m/s)
Maximal Wind speed	max. 75 m/s
Ambient temperature	- 30° ... + 70° C
Connection	8-plug Connection
Starting velocity	< 0,2 m/s
Resolution	0,05 m Winddistances
Distance constant	2,3 m \pm 10%
Heating	optional, 24 V AC/DC, 25 W
Power Supply	5 V DC
Output Signal	Frequency: 1000 Hz á 50 m/s
Mounting	mounting on mast with separate adapter (option)
Weight	ca. 1 kg
Protection	IP 55 (DIN 40050)

