

Wind direction sensor



Description

The sensor is made up of a vane rotating around a vertical axis, designed to be always aligned to the wind direction.

The vane is placed at the end of a counterbalanced support and it's joint to the rotating vertical axis. All the rotating group is linked on stainless steel bearings with low friction, this allows a very high sensitivity.

The vane is joint to a magnetic potentiometer that converts the angular position to an electrical voltage signal. The magnetic technology currently represents the state of the art with respect to other systems of transduction of the angle of rotation; this ensures high precision and a useful life in excess of optical type sensors or potentiometric traditional. In addition, the magnetic transducer eliminates completely the blind spots characteristic of traditional circular pots.

The sensor body is made in anticorodal aluminum, a material which guarantees a substantial durability and high resistance to corrosion, making the instrument suitable for applications in marine environments.

On the bottom end of the sensor there is a connector for the signal and supply cable. The connector is watertight and has a screw connection.

The measurement of the wind direction is basic information for the monitoring of transmission of pollen or pollutants present in the air.

The sensor requires minimal maintenance: at least once a year, it is recommended to check the regular rotation of the cup-wind mill, which must take place without any particular friction, but rather with the normal smoothness of a mechanical component rotating on bearings.

Optionally, a heating set is available in order to avoid the block of the rotor due to freezing.



Vane wind direction sensor



MTX anemometric monitoring station

Technical specifications may be varied without prior notice

Technical Specifications

Sensor type	Gonioanemometer
Measuring principle	Magnetic potentiometer
Measuring range	0 ... 360°
Accuracy	±1°
Resolution	0,1°
Sensitivity threshold	≤0,25m/s
Electrical output	0 ... 1V; 0 ... 2V; 0 ... 5V; 4 ... 20mA; RS485 (Modbus)
Power supply	9 ... 24Vdc
Power consumption	≤10mA
Surge protection	Fast Zener (ICTE diodes) and varistors
Operating range	-30 ... +70°C
Dimensions	H=280mm D=600mm
Weight	1Kg
Heater (optional)	Power supply: 10...15Vdc Power consumption: 0,9A Threshold start: 4°C

Ordering codes

Wind direction sensor with electrical output 0 ... 1V; 0 ... 2V; 0 ... 5V (to define at the order)	FAR305AA
Wind direction sensor with electrical output 0 ... 1V; 0 ... 2V; 0 ... 5V (to define at the order) and internal heater	FAR305CA
Wind direction sensor with electrical output 4 ... 20mA	FAR305BA
Wind direction sensor with electrical output 4 ... 20mA and internal heater	FAR305DA
Wind direction sensor with electrical output RS485	FAR305EA

Technical specifications may be varied without prior notice