

ULTRASONIC ANEMOMETER

t035 Winson



High accuracy

Reduced wing profile

Description

WINSON is an ultrasonic anemometer for the measurement of wind speed and wind direction. The sensor exploits the principle for which the acoustic waves, along their path, are influenced by the movements of the air they pass through. The sensing element is composed of 3 transducers with dual function of transmitters and receivers.

WINSON is much more performant than the traditional wind sensors. Indeed, it simultaneously carries out 6 measurements on three different sonic trajectories generating a very precise measuring model, especially at higher ranges. Usual wind transducers instead can develop only 2 acoustic trajectories, and then they give as output only 4 measurements at the same time.

The sensor is supplied with power and signal cable (12m).



Main features

- **High accuracy**
- **Reduced wing profile**
- **Analog and digital electrical outputs**
- **Diagnostic system for reporting measurement errors**

Technical Specifications*

Measurement Performance

Wind speed [m/s]

Measurement range	0 ÷ 75
Resolution	0.1
Accuracy	2% in the range 2 ÷ 30, < 5 % outside 2 ÷ 30 range

Wind direction [°N]

Measurement range	0 ÷ 359.9
Resolution	0.1
Accuracy	±3

Thermostating

Programmable thermostating	0 ÷ +50°C
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Operating conditions

Temperature	-40°C ÷ +60°C
Humidity	0% ÷ 100%

Outputs

RS485 Modbus	Wind speed, wind direction, sonic temperature
SDI – 12	Wind speed, wind direction, sonic temperature
Tension	Configurable (0 ÷ 2V) wind speed and direction

Power supply and consumption

Voltage supply	10 ÷ 24 Vdc
Power supply	For wind speeds over 30 m/s, a 12Vdc power supply is required in order to achieve the declared performance

Consumption (mA)	Min	Typical	Max
Absorbed current during the measurement (8 samples/second)	-	20	-
Current consumption with active heater	-	-	550

Mechanical specifications

Protective body	Polipropilene and Poliammide
Level of protection (IP)	IP66
Weight	620 g
Dimensions	Ø = 160 mm; Height: = 190 mm
Installation mast size (diameter)	External Ø _{MAX} = 50 mm, Internal Ø _{MIN} = 45 mm
Electrical connections	10 pole male connector

Ordering codes

Heated sensor and compass with RS485-Modbus, SDI-12, analog output	PSM-t035-WINSON-1
Sensor with RS485-Modbus, SDI-12, analog output	PSM-t035c-WINSON-2

*Changes on technical performances can be applied upon request of specific calibration