Close to 100 years
Since 1925

SIAP+MICROS
Environmental Monitoring Solutions

ULTRASONIC ANEMOMETER

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 feautures

- **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 [°]			
Measurement range	0 ÷ 359.9		
Resolution	0.1		
Accuracy	±3		
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	-
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 output RS485-Modbus serial, SDI-12 serial, Tension			PSM-t035-WINSON-1
RS485-Modbus serial output, SDI-12 serial output, Tension output			PSM-t035c-WINSON-2

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

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