

Cup Anemometer vector



Description

Very precise sensor for the measurement of the horizontal component of the wind speed.

Driven by the flow, the cups are set into rotation. A light barrier scans an optical disc in the interior of the sensor and provides a frequency linearly dependent on the wind speed.

The sensor meets with some restrictions the latest requirements of MEASNET and IEC for the assessment of wind resources and wind turbine power characteristics.

Technical Data

Sensor

Sensing element.....	Cup rotor
Transducer.....	Optoelectronic transmitter with frequency output
Output signal	0.75 m/s = 0.750 Hz
Pulse level	LO = < 0.2 V HI = > 3.6 V
Resolution	0.1 m wind run
Accuracy.....	0..10 m/s ± 0.2 m/s > 10 m/s ± 2% of reading
IEC 61400-121-CD classification	The anemometer has been classified as a Class 1 anemometer with some restrictions.
Starting threshold	0.2 m/s

Rotor

Type	3 conical cups
Material.....	Plastic / aluminium
Outside diameter	ø152 mm
Distance constant	2.3 m (for 63% recovery)
Bearings	Stainless steel ball bearings

Power Supply

Operating voltage	4.75..28 VDC
Current consumption	1 mA typical at 5 V, unloaded
Power-up time	2 s

Heating

Heating power The sensor is not heated.

Casing

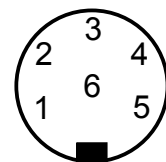
Material..... Aluminium
 Protection class IP 55 in vertical position
 Dimensions $\varnothing 55 \times 195 \text{ mm}$
 Weight 0.5 kg, cable exclusive
 Mounting The sensor mounts on a pipe with $\varnothing 25 \text{ mm}$ outside diameter.

Electrical Connection

Connection to the sensor The cable is directly attached to the sensor.
 Connection to data logger **wilog303/306** 6 pin circular connector DIN 45322 (optional)
 Cable $3 \times 0.5 \text{ mm}^2$, open wires, optionally shielded

Wiring

6 pin connector	wire	function
2	white	(+) power supply
6	brown	ground
3	green	output signal
casing	yellow/green and shield	cable shield

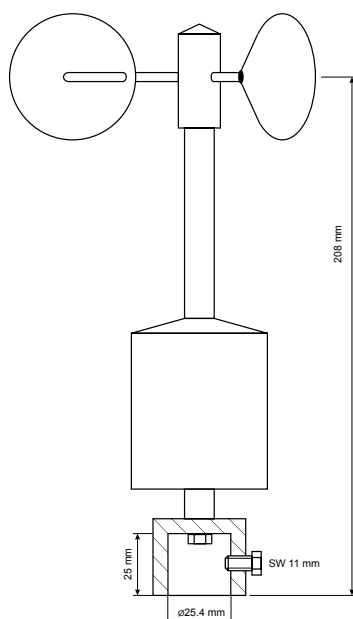


6 pin connector:
soldering side of the
male connector

Environmental Conditions

Operating temperature $-30..+70 \text{ }^{\circ}\text{C}$
 Relative humidity 0..100%
 Maximum wind speed 75 m/s

Dimensions



Hirschgraben 24
D-22089 Hamburg • Germany
phone: +49(0)40-75 66 08 98
fax: +49(0)40-75 66 08 99
eMail: info@wilmers.com
www.wilmers.com