Propeller Anemometer 27106T

S17100
(P6161)

- Low threshold precision air velocity sensor
- Fast response helicoid propeller
- Vertical air measurements

Description

The Propeller Anemometer is a low threshold precision air velocity sensor employing a fast response helicoid propeller. The sensor uses a high quality tech-generator transducer which converts propeller rotation to a DC voltage that is linearly proportional to air velocity.

Airflow from any direction may be measured, however, the propeller responds only to the component of the air flow which is parallel to the axis of its rotation. With perpendicular air flow, the propeller does not rotate.

The instrument mounts to 3/4 inch standard pipe. A rugged cable connector provides both electrical and mechanical connection. A dustcap is provided to protect the connector when the instrument is removed.

Installation

Generally, the sensor should be oriented with the propeller facing the predominant flow of air being measured. ***For vertical measurements mount the sensor so the propeller faces upwards.***

The sensor measures both forward and reverse air flow. In applications measuring vertical air flow, the sensor is usually connected so downdraft produce a negative signal, updraft a positive signal (Pin B = positive).

Maintenance

Please not model 08254 with Carbon Fiber Thermoplastic (CFT) propeller is slightly less sensitive than model 08274 with Expanded Polystyrene (EPS) propeller.

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measuring wind power
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Characteristic	Description / Value
Measurement range	0 ... 40 m/s (axial flow) 0 ... 35 m/s (all angles)
Slope	18 m/s/V
Output voltage	Analog DC voltage proportional to axial wind component. Polarity reverses with reverse rotation. 1800 rpm (500mV) = 9 m/s ± 1V = ±18 m/s
Accuracy	±1% (0.0049 m/s per rpm)
Threshold sensitivity	0.4 m/s
Operating temperature	-50 ... 50°C
Propeller	20 cm diameter 4-blade helicoid propeller molded of carbon fiber thermoplastic
Manufacturer	Gill / Young

Sensor Connection

Sensor	Plug Pin No.	Ammonit Wire Colour	Meteo-40 Analog Voltage
Vertical Wind Speed Output Voltage	B	white	A
		red	
	A	blue	B
		black	

Connect the shield logger-sided to Ground (GND)

Cable LiYCY 4 x 0.25 mm²

Note:
In case of ascending air flow Pin B of the anemometer plug is the positive pole.

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