



Monitors the Vertical Wind Component

Overview

The 27106T Vertical Propeller Anemometer is a low threshold precision air velocity sensor that is especially suited for monitoring the vertical wind component. It

connects directly to a Campbell Scientific datalogger, which measures the 27106T signal and converts the signal to engineering units (mph, m/s, knots).

Benefits and Features

- › Compatible with most Campbell Scientific data loggers
- › Especially suited for monitoring vertical wind, but can be mounted to monitor the wind in whatever direction is desired
- › Carbon-fiber thermoplastic (CFT) propeller provides greater range and durability than other propeller anemometers offered by R. M. Young.

Technical Description

The 27106T, manufactured by R. M. Young, measures air velocity using a fast-response, four-blade helicoid propeller that drives a high quality tech-generator transducer. The transducer converts the propeller's rotation to a DC voltage that is linearly proportional to air velocity.

The 27106T should be oriented with the propeller facing the predominant flow of air being measured. Its propeller responds only to the component of the air flow, which is parallel to the axis of its rotation. Off-axis response closely approximates a cosine curve with appropriate polarity. With perpendicular air flow, the propeller does not rotate.

Specifications

Sensor	Helicoid-shaped, 4-blade propeller
Measurement Description	Vertical wind speed
Signal Type/Output	Analog voltage
-NOTE-	<i>Threshold and distance constant values are for axial flow.</i>
Threshold Sensitivity	0.4 m s ⁻¹ (0.8 mph)

Distance Constant	< 2.1 m (6.9 ft)
Pitch	30.0 cm (11.8 in.) air passage per revolution
Output	Analog dc voltage proportional to axial wind component. Polarity reverses with reverse rotation.

	1800 rpm (500 mV) = 9.0 m/s (20.1 mph)
Operating Temperature Range	-50° to +50°C
Range	<ul style="list-style-type: none"> › 0 to 40 m s⁻¹ (0 to 90 mph) for axial flow › 0 to 35 m s⁻¹ (0 to 80 mph) for all angles

Propeller Description	4-blade helicoid propeller molded of carbon fiber thermoplastic
Compliance with Standards	<ul style="list-style-type: none"> › 2011/65/EU RoHS Directive › 2015/863/EU RoHS Phthalates Amendment
Propeller Diameter	20 cm (8 in.)
Housing Diameter	2.5 cm (1 in.)
Length	43 cm (17 in.)
Weight	0.5 kg (1.2 lb)

For comprehensive details, visit: www.campbellsci.eu/27106t 



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