



## Monitors the Vertical Wind Component

### Overview

The 27106T Vertical Propeller Anemometer, manufactured by R. M. Young, is a low threshold precision air velocity sensor that is especially suited for your applications where you need to monitor the vertical wind component. It connects directly to a

Campbell Scientific data logger, which measures the 27106T's 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.

### Detailed Description

The 27106T 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

*-NOTE- Threshold and distance constant values are for axial flow.*

Threshold Sensitivity	0.4 m s <sup>-1</sup> (0.8 mph)
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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

Propeller Description 4-blade helicoid propeller molded of carbon fiber thermoplastic

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)

### Range

Axial Flow 0 to 40 m s<sup>-1</sup> (0 to 90 mph)

All Angles 0 to 35 m s<sup>-1</sup> (0 to 80 mph)

For comprehensive details, visit: [www.campbellsci.com/27106t-l](http://www.campbellsci.com/27106t-l) 



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