

Wind Velocity Anemometer

TV-114 Wind Speed Sensor



Description

The Texas Electronics, Inc. TV-114 Wind Speed Sensor is a mechanical style anemometer that measures the horizontal velocity of wind. The sensor is intended for long-term, maintenance-free operation.

The TV-114 wind speed sensor is a freestanding device for measuring air velocity. The sensor consists of a lightweight 3-cup anemometer, which is mechanically coupled to an AC generator. As the cup mechanism rotates the AC generator produces an AC sine wave where the amplitude and frequency are proportional to wind speed.

Features & Benefits

- Non-contacting brushless AC generator for long-term maintenance free operation
- No plastic parts for extremely long life
- Precision stainless steel bearings for stability and repeatability
- Crossarm included with purchase of matching wind direction sensor
- Easy installation and maintenance
- Over 25 years in production

Specifications

Operating Range	0-100 MPH
Signal Presentation:	AC frequency
	10 RPM = 1.0 MPH = 1.33 Hz
	1000 RPM = 100.0 MPH = 133.33 Hz
Excitation:	None (self-generating)
Performance:	
Accuracy:	+/- 2.0 MPH (0.90 m/s) over entire range m/s
Distance Constant:	>21.7' (6.6 m)
Starting Threshold:	2.0 MPH (0.90 m/s)
Environmental:	
Operational Envelope:	0-135 MPH (0 to 60 m/s)
Temperature:	-40 to 160°F (-40 to 70°C)
Relative Humidity:	0-100%
Physical:	
Height:	7.5" (19.0 cm)
Cup Diameter:	4" (10 cm)
Cup Wheel Diameter:	18" (46 cm)
Finish:	Gold Anodized Aluminum
Cable:	60', 18 Gauge 2 conductor
Bearings:	APEC 3 or better
Mounting Pole:	0.75" O.D. (1.9 cm)
Warranty:	3 years

Installation & Maintenance

Installation consists of attaching the unit to a mast via the supplied mounting pole. If a crossarm is used, the entire unit can be bolted to a mast or attached via U-bolts. The sensor is dynamically calibrated at the factory and due to the nature of its operation should not require field calibration. Field maintenance should include occasional cleaning of the cup assembly and inspection of the internal mechanism to make sure it is free from insects and debris. In some applications users may need to occasionally verify and document sensor accuracy with a synchronous test motor. Possible bearing and AC generator replacement is recommended every three to five years.

Ordering Information

Model#	Description
TV-114	Wind Speed Sensor, Heavy Industrial
TV-114-A	Wind Speed Sensor, 4-20mA

**Sensor is designed to work with TF-104-5D Wind Direction Sensor*

Optional Parts/Accessories

CA-1	Crossarm, pre-wired
T-8011M	Synchronous motor for calibration
Cable	Additional Cable