

Wind Direction Vane

TD-104-5D Wind Direction Sensor



Description

The Texas Electronics, Inc. TD-104-5D Wind Direction Sensor is a mechanical style wind meter that measures the horizontal wind azimuth. The sensor is intended for general long-term maintenance free operation.

The TD-104-5D wind direction sensor is a freestanding device for measuring the direction of wind. The sensor consists of a vane and counterweight assembly, which is mechanically coupled to a potentiometer (variable resistor). As the vane rotates in the wind, the potentiometer changes resistance proportionally to the direction of wind.

Features & Benefits

- Superior low starting threshold
- Long life hybrid single wiper potentiometer
- No plastic parts for extremely long life
- Precision stainless steel bearings for stability and repeatability
- Crossarm included with purchase of matching wind speed sensor
- Easy installation and maintenance
- Over 25 years in production

Specifications

Operating Range	0-360° mechanical
Signal Presentation:	10000 ohm potentiometer
	0-357° electrical
	3 VDC excitation minimum
Performance:	
Accuracy:	+/- 3.0°
Potentiometer Linearity:	2.5 MPH (1.1 m/s)
Starting Threshold:	+/- 0.5% m/s)
Damping Ratio:	30.36
Damped Wavelength:	19.7' (6.0 m)
Delay Distance:	4.8' (1.15 m)
Resolution:	1°
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:	
Vane Overall Length:	33.8" (85.9 cm)
Overall Height:	13.0" (33 cm)
Turning Radius:	25.5" (65 cm)
Weight:	1.3 lbs. (0.6 kg) less cable
Bearings:	APEC 3 or better
Mounting Pole:	0.75" O.D. (1.9 cm)
Cable:	60', 22 Gauge 3 conductor
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.

Calibration is a matter of proper orientation during installation. A magnetic compass is recommended for proper orientation. Field maintenance should include occasional cleaning of the vane 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 calibration dial/vane. Possible bearing and potentiometer replacement every three to five years is recommended to maintain low starting threshold.

Ordering Information

Model#	Description
TD-104-5D	Wind Direction Sensor, Heavy Industrial
TD-104-5D-A	Wind Direction Sensor, 4-20 mA

** Sensor is designed to work with TV-114 Wind Speed Sensor*

Optional Parts/Accessories

Cable	Additional Cable
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