

Wind Speed Indicating System

Model 2-200



Description

The Model 2-200 Wind Speed Indicating System is an extremely accurate, low cost wind measuring system. This system consists of a Model TV-114 anemometer and a dial indicator. No external power source is required, as the system generates its own power. This feature makes the Model 2-200 ideal for mobile applications where access to a power source is limited or non-existent. The TV-114 Wind Speed Sensor is a rugged sensor consisting of a lightweight, 3-cup anemometer mechanically coupled to a brush-less precision AC generator located within a gold-anodized aluminum housing. The exterior of the sensor helps prevent corrosion even in extreme conditions of heat, cold and saltwater environments. The sensor is designed to be as sensitive as possible to light winds, yet strong enough to withstand hurricane force winds. The indicator utilizes a 0-1 mA DC meter movement contained in a cast aluminum housing with universal mounting brackets. The brackets simplify meter mounting in marine or mobile installations as they allow for top, back, or bottom mounting. The indicator can be ordered for any one of two ranges as follows: 0-100 MPH and 0-50 m/s

Features & Benefits

- Self-generating system requires no external power source
- Provides for safe operation of wind-affected equipment
- Rugged instruments can withstand extreme conditions
- Extremely accurate readings at economical price
- Mounts easily in a variety of configurations
- Available in a variety of ranges
- Over 30 years in production

Specifications

Indicator Size:	4.5"Wx3.5"Hx2"deep (11.43 cm x 8.89 cm x 5.08 cm)
Weight (complete system):	8 lbs. (3.62 kg) with standard 60' cable)
Cable:	60', 18 Gauge 2 conductor
Power:	self-generating, no power source necessary
Operating Temperature:	-20° to 125°F (-29° to 50°C)
Storage Temperature:	-40° to 160°F (-40° to 70°C)
Humidity Limits:	0 to 100%
Finish:	Sensor - Gold anodized aluminum Indicator - black numerals on white dial Indicator Box - powder-coat black box; clear alodine aluminum mounting bracket
Warranty:	3 Years

Installation & Maintenance

Before attaching the anemometer or wind speed sensor in place, the three anemometer cup/cup arm assemblies must be attached to the rotor head of the sensor. The cup arms are inserted all the way into the holes in the side of the rotor top plate with the flat side facing up, and they are secured with allen screws inserted through the top of the rotor plate. Screws and allen wrenches are shipped in a small plastic packet accompanying the cup/cup arm assemblies. The sensor head is equipped with a 12” straight tube through which cable is run to connect to the indicator. This tube is the mounting feature and can be attached with the supplied hose clamps to the top of a crane boom, or in other appropriate location where wind speed must be monitored. The sensor should be located in such a way as to avoid any obstruction within at least 100 feet if possible, and up or down currents, eddy currents or jet flow effects are also to be avoided. After the anemometer is fastened in place, the cable must be properly secured to the point where it will be attached to the indicator box. The indicator is then firmly bolted inside crane cab or wherever it is needed in order to keep equipment operator informed of the current wind speed. If necessary, the cable may be cut down in length, or more cable can be added with negligible effect on the anemometer’s calibration. Additional cable length may be specified when ordering, and cable can be obtained from Texas Electronics if needed. If changing cable length by more than several hundred feet, contact the factory to determine the severity of the effect on calibration. Rotating elements are carefully balanced to eliminate any possible vibration and assure sensitivity to the lightest wind. In some applications users may wish to occasionally verify and document sensor accuracy with a synchronous test motor. Under average climate conditions, AC generator and/or bearings replacement is recommended at 3 to 5-year intervals.



Wind Speed Sensor (Model TV-114)

A three-cup anemometer directly connected to a precision alternating current brushless generator measures wind speed. The anemometer and generator shaft rotate in sealed ball bearings.

Starting Threshold:	2.2 to 3.0 MPH (1.1 to 1.3m/s)
Distance Constant:	21.7 ft. (6.6m)
Accuracy:	+/- 2.0 MPH (0.9 m/s)
Excitation Requirement:	None, self-generating
Operational Envelope:	0 to 120 MPH (0 to 53.7 m/s)
Cup Wheel Diameter:	18” (45.7 cm)
Overall Height:	7.5” (19.1 cm)
Turning Radius:	9.0” (22.9 cm)

Ordering Information

Model#	Description
2-200	Wind Speed Indicating System (Please specify if other than 0-100 MPH)
Optional Parts/Accessories	
Cable	Additional Cable