SEI 201
Wireless Windspeed Indicator for Mobile Cranes
Installation & Operator’s Manual
NOTICE

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1) MOUNT SENSOR

Sensor mounts to a one half (1/2) inch round bar or tube. It is secured with a setscrew and cotter pin. Provide a 1/8-inch hole on the diameter of the stub at 3/8 inch from the end of the stub to accommodate the cotter pin. Sensor must be vertical at all time to correctly measure the wind speed. **When viewed from the location of the base unit the sensor antenna should be facing to either the left or right**, not facing directly at or away from the base unit.

The allowable distance between the base unit and sensor depends upon the antenna option purchased:

Omni directional stub antenna - 200 feet  
Omni directional stub antenna and pre-amplifier – 300 feet  
Hi gain directional (Yagi) antenna – 300 feet  
Hi gain directional (Yagi) antenna and pre-amplifier 500 feet

Allowable distance means line-of-sight, with no obstacles. Contact us if you need more than 500 feet between sensor(s) and base unit.
2) INSTALL BASE UNIT

If you purchased the wall transformer option, it operates on standard US household current, 117 VAC, 60 Hz. If you purchased the pigtail cable, the base unit accepts 9 to 28 VDC, 100 milliamps maximum.

Connect the pigtail cable to a source of 9 to 28 VDC, center positive connection; the cable will be clearly tagged for proper polarity. Extend antenna cable and route from exterior through opening in wall. Base unit is NOT suitable for external exposure. Mount omni antenna so that stub is horizontal and NOT pointing at the sensor, but to the side, the same as the sensor’s antenna. If you have the Yagi antenna option, mount with elements horizontal but aimed directly at the sensor.
3) OPERATION

a) On power-up the display scrolls *Etesian Technologies*.

b) Searching for signal or wind below 5 MPH

c) Corrupt packet. Data should resume shortly

d) Normal operation
TECHNICAL SPECIFICATIONS:

OVERALL SENSOR

Weight: 11 oz.
Mounting: 13 mm (0.5 in) diameter mast with cotter pin and mast set screw.
Overall height – 18.4 cm (7.25 in)
Main housing diameter – 6.1 cm (2.39 in)
Power Requirements: None, self powered

SPEED

Conical cups measure 51 mm (2 inches) in diameter
Rotor diameter is 190 mm (7.5 inches)
Standard AC output, frequency proportional to cup rotational speed
Fully hardened beryllium-copper shaft running in self-lubricating modified Teflon bearings
Rated bearing PV (pressure-velocity) factor is 20,000 – At 15 mph PV is approx. 500. – At 100 mph PV is approx. 2,000.
Distance constant = 10 feet (3.0 meters)
Accuracy: within 0.1 m/s (0.2 mph) for the range 5 m/s to 25 m/s (11 mph to 55 mph)

RECEIVER/LOGGER

Dimensions: 4.7 x 3.5 x 2.4 inch
Housing material: polycarbonate, clear cover
Local Display: Backlight LCD display 0.22 inch character height
Operating Frequency: ISM band, 916.5 MHz
Power Requirements: 9 – 14 VDC, 20 mA
Antenna Connector: SMA female
Input Connector: barrier terminal block, 0.375 pitch, accommodates 12 to 24 AWG wire
Digital Output: RS-232, 9600 baud
Wired Analog Inputs:
  Direction: Potentiometer based wind vanes (10K Ohms typical)
  Speed: AC generator or reed switch compatible
Alarm/Control: High and low set points programmable. Averaging interval programmable
  Normally open relay contacts rated 24 VDC 0.5 amp.
File Structure: Text CSV day files saved to USB flash drive – files compatible with most spreadsheet programs. Logging interval from 1 minute to 24 hours. Mean, Standard Deviation, Maximum and Minimum logged for each interval.