CAMPBELL SCIENTIFIC EUROPE
WHEN MEASUREMENTS MATTER

A100LK / A100L2 Low Power Anemometer

The A100LK and A100L2 low power anemometers are precision instruments which easily interface with Campbell Scientific dataloggers to give accurate measurements of wind run or mean wind speed. Rotation of the 3-cup rotor is electronically converted to pulse output signals proportional to wind speed.

These sensors produce a higher rate of pulses per revolution (up to 13) compared to relay based sensors. This makes them suitable for wind surveying where turbulence needs to be estimated.

The low current consumption means that the A100LK and A100L2 are well suited for use on remote sites. The rotor is tested by comparison with a rotor calibrated at the National Physical Laboratory, and a calibration figure is provided with each instrument.

The A100LK and A100L2 are similar except that the A100L2 has an optional analogue output which can be used in applications where there are no pulse counters free on the datalogger.

The anemometer is constructed from anodised aluminium alloy, stainless steels and weather resisting plastics. A stainless steel shaft runs in two precision, corrosion-resistant ball-races. The bearings are protected from the entry of moisture droplets and dust, resulting in an instrument suitable for permanent exposure to the weather. An anti-icing heater can be fitted if required.

Specifications

Threshold: 0.15ms^{-1} (starting speed 0.2ms^{-1}, stopping speed 0.1ms^{-1})

Max speed: 77.22ms^{-1} (150Kts)

Accuracy: 1% ±0.1ms^{-1} up to 50 m/s; 2% 50-77 m/s

Distance Constant: 2.3m ±20%

Pulse output: 0-5V (A100L2), 0-4V (A100 LK), 0-1500 Hz

Analogue output (A100L2): 0-2.5V full scale (subject to additional errors of ±3% relative to the pulse output)

Temperature Range: -30°C to +70°C

Size: Height 195mm, case diameter 55mm, attached cable 3m

Rotor: Standard 152mm diameter 3-cup rotor

Weight: 490g inc. cable

Supply voltage: 6.5 to 28V DC

Current consumption: 2mA max, 1.6mA typical (no output load)

Power-up time: 5s

Surge protection fitted

CSL 623 September 2009

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