

## A100LK/A100LM Low-Power Anemometers (pulse/frequency output)

This [anemometer](#) is a variant of the A100L2 which itself was originally developed from the **proven A100 Porton™ instrument and R30 rotor design**. This variant is offered to satisfy those low-power applications requiring an anemometer offering a pulse/frequency output while consuming little supply current and operating from a supply as low as 5v.

The **low power consumption**, wide power supply range and pulse/frequency signal make this anemometer a popular choice for use with [data loggers](#) for applications such as **general meteorology** and [wind-power site surveying](#) as this instrument has [first class](#) performance.

A slotted disk interrupting a light beam is used in this instrument to detect the motion of the calibrated R30 series 3-cup rotor and hence determine the wind speed.



The electronics in the A100LK and A100LM are essentially the same as in the A100L2, however the supply is regulated at 4V internally (instead of 5V, hence the 4V pulse output level) and the circuit to generate an analog output is not fitted. The 4V pulses are generally adequate for most data logger inputs and the reduced lower end of the supply range enables the anemometer to be powered from loggers which do not have power other than 5v DC available.

Construction is from anodised aluminium alloys, stainless steels and weather resisting plastics for exposed parts. Precision corrosion resistant ball-races and a stainless steel shaft enable the R30 rotor response to produce a **highly sensitive yet robust instrument** suitable for continuous exposure to the weather.

Options for this anemometer include:

- [/PC3 Anti-Surge protection](#)
- [/HE-4 Internal Anti-Icing Heater](#)
- [/HE-1 & /HE-2 External/Retrofit Anti-Icing Heaters](#)
- [/WR Marine Version](#)

*Note: /WR, /HE-1 and /HE-2 are not recommended for high precision applications.*

The recommended mounting adaptors for use with this instrument are our type [405 and 405-1 series](#).

Vector Instruments A100LK and A100LM Anemometers are among the very few available having [Class 1 performance \("First Class"\)](#) according to the requirements of [IEC and MEASNET standards](#).

### Specification Highlights:

● Threshold:	0.15m/s (0.3Kt)
● Starting Speed:	0.2m/s (0.4Kt)
● Stopping Speed:	0.1m/s (0.2Kt)
● Maximum Windspeed:	over 75m/s (146Kts)
● Temperature Range:	-30 to +70 °C
● Accuracy:	1% of reading between 20Kts and 110Kts (up to 2% above 110Kts, 0.2Kts below 20Kts)
● Non-Linearity:	0.4% full-range output frequency (correction curve supplied)
● Distance Constant:	2.3m +/-10% (R30 rotor)
● Supply Voltage:	4.75..28V DC (max 1.3mA, average is typically less than 1mA)
● Pulse Output Signal:	0V / 4V levels, A100LK: 10Hz per Knot (i.e. 0..1500Hz = 0..150Kts), A100LM: 10Hz per m/s (0..750Hz=0..75m/s)
● Resolution:	A100LK: 5.15cm, A100LM: 10cm
● <a href="#">Rotor</a> :	3-cup R30K (A100LK) or R30M (A100LM) as standard.
● Dimensions:	This instrument is constructed using our standard rotor and anemometer body design and <a href="#">dimensions</a> .
● Wiring/Connections (Cable colours):	For wiring details click <a href="#">HERE</a>
● Cable:	3m (9ft10in) permanently attached 6-conductor* cable with braided shield/screen as standard. Longer lengths are available to order (up to 115m). Spec: Def Stan 61-12 part 4, 0.22mm <sup>2</sup> (~24AWG). *Note: 8-conductor used for /HE4 models.
● <b>MEASNET/IEC Calibration Certificate</b> (optional extra):	The <b>A100LK and A100LM Anemometers</b> are available with an <a href="#">IEC/MEASNET Calibration Certificate</a> (for an additional charge)