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# PULSE OUTPUT ANEMOMETERS

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A100K  
A100M  
A100S



In these anemometers the rotor spindle turns a multi-slotted disc, interrupting the beam from a light-emitting diode. The output is obtained by amplification of the signal from an opto-electronic sensor in the path of the light beam.

All rotors are tested by comparison with a pre-calibrated rotor, traceable to the NPL standard, and individual calibration data provided.

The small size and light weight of the A100 series anemometers together with the patented gravity-sensitive fastener for the rotor facilitate use in portable applications, and although built to withstand hurricane force winds, the balanced 3-cup rotor also offers unsurpassed sensitivity and accuracy at low wind speeds.

The three versions offered provide for a range of resolutions according to type of application, two of which allow direct readout of wind speed in Knots or m/s using standard electronic counter/timers.

Construction is in anodised aluminium alloys, stainless steel and weather resisting plastics for all exposed parts, and the bearings (stainless steel shaft running in two precision corrosion-resistant ball-races) are protected from the entry of moisture droplets and dust, resulting in an instrument suitable for permanent exposure to the weather including marine environments. A touching shaft-seal can be fitted for extra protection as an alternative to the standard non-contact seal, with a small increase in threshold speed.

The wide range of operating temperatures allows use at any latitude, and an anti-icing heater can be fitted if required.

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## Performance

Windspeed range:	0 to 75 m/s
Threshold:	0.15 m/s (0.7 m/s with touching shaft seal).
Independent Linearity:	2% (0.7% up to 55 m/s)
Accuracy:	1% of reading (10 to 55 m/s)
	0.1 m/s (0.1 to 10 m/s)
Distance constant:	2.3 m

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## Electrical

Supply voltage:	10 to 30 volts D.C.
Supply current:	30 mA (typical) at 12V supply.
Output voltage:	+0.1 to +12V square wave with 12V supply.
Output resistance:	3.3 K ohms
Temperature range:	-50 to +70° C
Connections:	4-wire system (or 3-wire with short lines).

## Output

Pulse-rate and resolution:

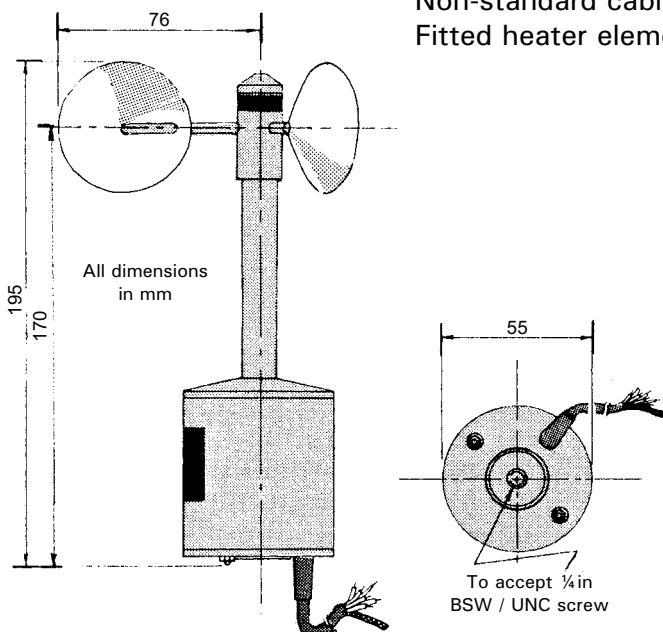
INSTRUMENT VERSION	Nominal pulse Rate ( $\pm 2\%$ )	Pulses / Wind-run	Resolution (cm)	Duty Cycle
A100K	10Hz per Knot	10 pulses Per 1.69 ft	5.15	50% $\pm$ 20%
A100M	10Hz per m/s	10 pulses Per metre	10	50% $\pm$ 10%
A100S	0.8Hz per m/s	1 pulse Per 1.25m	125	50% $\pm$ 5%

## Mechanical

Fixing:  $\frac{1}{4}$  in. UNC / BSW thread (standard tripod screw)  
 Weight: 350g. Net., including 3m cable  
 Packing details: Weight: 700g  
 (One instrument c/w rotor) Dimensions: 25 x 16 x 16 cm  
 Cable: 3m, 4 core screened as standard

## Options

K, M or S version  
 Marine version includes touching shaft seal (specify /WR)  
 Non-standard cable length  
 Fitted heater element HE-1 (12V 6W)  
 HE-2 (24V 6W)



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