

## DA5000 Specification

RANGE :	2.75" (70mm) probe : 0.3 to 40 ms <sup>-1</sup> (59 to 7875 ft min <sup>-1</sup> ) 1.00" (25mm) probe : 0.3 to 35 ms <sup>-1</sup> (59 to 6891 ft min <sup>-1</sup> )
ACCURACY : (SYSTEM)	2.75" (70mm) probe : ± 0.25% F.S plus ± 0.75% of reading 1.00" (25mm) probe : ± 0.5% F.S plus ± 1.0% of reading
DISPLAY :	4-digit liquid crystal, 10mm character height
RESOLUTION :	0.01 ms <sup>-1</sup> or 1 ft min <sup>-1</sup>
OPERATING TEMPERATURE :	Indicator: 0 to +50°C (32 to 122°F) Probes : -30 to +80°C (-22 to 176°F)
POWER SOURCE :	2 x 1.5 volt alkaline LR6 (AA) cells
BATTERY LIFE :	250 hours approximately. Low battery warning after approximately 225 hours.
DIMENSIONS :	181 x 77 x 21.5 mm (indicator)
WEIGHT :	190g approx. with battery (indicator alone)
OTHER	Automatic probe type identification
FEATURES :	Automatic probe characteristic linearization Switchable 2-second or 16-second measurement period Maximum and minimum readings stored in memory

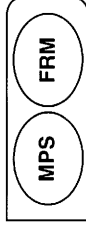
## Digital Anemometer DA5000

### Operating Instructions

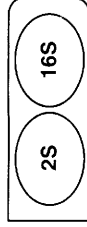
Pressing this key once switches the instrument from OFF to ON or vice versa. When switched on the DA5000 will display for one second the type of probe which is connected, i.e. 275 for the 2.75" (70mm) type or 100 for the 1" (25mm) size. If no probe is connected the instrument defaults to 275. The values stored in the MAX and MIN memories are cleared each time the instrument is switched off.



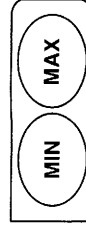
The MPS key converts the airspeed reading shown on the display to metres per second, the FPM key converts the reading to feet per minute. The measurement unit selected is shown by either MPS or FPM on the right hand side of the display.



The 2S and 16S keys are used to select the period of time over which the airspeed is measured, the default time period is two seconds. Pressing the 2S key at any time starts a new two second measurement cycle. The display will read 2S during that time, the reading will then be displayed and subsequently updated every two seconds. The 16S key sets the DA5000 to measure the average airspeed over a sixteen second period. A new sixteen second measurement is started each time the key is pressed. During that time interval the display will show 16S and the MPS, FPM, MIN and MAX keys will be disabled. At the end of the sixteen second period the averaged display reading will be updated every two seconds. The 16S mode may be cancelled by pressing the 2S key.



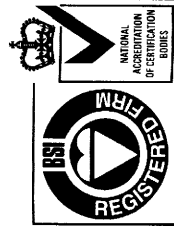
The MIN and MAX keys recall the lowest and highest airspeeds measured by the DA5000. Separate maximum and minimum values are stored for the 2 second and 16 second measurement periods. In this mode the display will alternate between the name of the memory location (e.g. L2 for the minimum value measured using the 2 second measurement period) and the numerical value stored in that location.



The airspeed continues to be measured while maximum or minimum values are being displayed. Should a new maximum or minimum value be recorded the display will be updated

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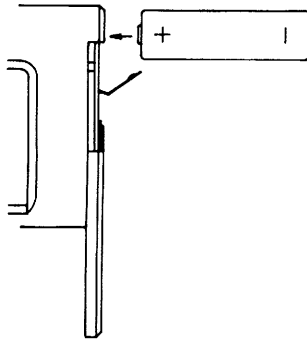
automatically. To cancel the display of the minimum or maximum values and return the instrument to standard measurement mode the MIN or MAX key should be pressed again. The maximum and minimum values are cleared by switching off the DA5000.

### Directional sensitivity

For accurate airspeed measurement the spindle of the anemometer probe should be aligned precisely with the direction of the airflow. Both probe types are substantially bi-directional but for highest accuracy it is recommended that the airflow should be in the direction of flow used during factory calibration: with the 1" (25mm) probe the arrow should point in the downstream direction (i.e. with the flow), and the cable socket of the 2.75" (70mm) type should lie on the upstream side.

### Battery replacement

The instrument is powered from 3.0 volts DC supplied by two alkaline manganese 1.5 volt cells, type LR6 (AA). These should be replaced when the battery warning symbol appears on the display. The low battery warning is given when the voltage falls to 2.0 volts (1.0 volt per cell), at which point the battery has approximately 25 hours life remaining. An internal voltage regulator circuit ensures that the instrument continues to function until the battery voltage falls to approximately 1.8 volts. To replace the battery, the compartment cover at the bottom of the housing should be slid to the left allowing the pivoted spring contact to swing clear. The battery may then be withdrawn, gently shake the instrument if necessary to loosen the cells. When fitting fresh cells, ensure that each cell is inserted positive terminal first. Refit the battery compartment cover slide.



*Note:* Rough handling of the DA5000 may interrupt the connection to the battery causing the instrument to switch off. This does not indicate a fault and the instrument may be reactivated by pressing the ON/OFF key.

### Recommendations

- Do** return the anemometer to its foam-lined carrying case for storage and transportation.
- Do not** touch the vane of the anemometer probe unless for cleaning.
- Do not** allow any object to strike the rotating vane of the probe.
- Do not** subject the anemometer probes to physical shock.
- Do not** allow the anemometer probe bearings to become contaminated.

- Do not** allow water to collect around the pick-up plate of the probe.
- Do not** strain the connecting leads.
- Do not** leave exhausted batteries in the instrument.

### Calibration

Calibration of the DA5000 anemometer is achieved by precise adjustment of the pitch angle of the balanced vane blades of the anemometer probes. The blades are precisely set to the correct pitch angle during manufacture and should not be adjusted by the user. British Rototherm offers a rapid in-house recalibration service for its airspeed measurement products, please contact the Sales Office for details.

### Cleaning

Light deposits on the blades of the vane may be wiped away using a swab moistened with methylated spirit. This must be done with care so as to avoid disturbing the blade pitch angle and calibration. In the event of heavy contamination it is recommended that the probe be returned to the factory for overhaul and recalibration. The plastic indicator case may be cleaned with a soft cloth moistened with water and mild detergent - solvents must not be used.

### Warranty

The Rototherm DA5000 Digital Anemometer is guaranteed to be free of manufacturing defects for a period of one year from the date of purchase. To obtain service under this warranty the instrument should be returned in its original packaging either to British Rototherm or its distributors. This warranty excludes the batteries and damage due to battery leakage or misuse of the instrument.

### Kit contents

Each digital anemometer kit includes:

Quantity	Item
1	DA5000 digital indicator
1	AP275 2.75" (70mm) or AP100 1.0" (25mm) diameter rotating vane probe
2	Rigid extension rods
1	Rigid extension handle
1	Flexible extension piece
1	1.5m connecting lead (AP275 probe only)
1	Foam-lined carrying case
2	1.5 volt alkaline LR6 (AA) cells (U.K. market only)
1	Operating instruction leaflet