Wind sensor operating manual

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AQMesh solar pack operating manual

This manual explains how to install and operate the optional wind speed and direction sensor that can be supplied with the AQMesh air quality monitoring system (AQMesh pods).

The wind sensor needs to be specified at the time of manufacture and is easily connected to the AQMesh monitor.

The Wind sensor is supplied with suitable electrical cable with military style connectors for connecting the sensor to the pod. The sensor is also supplied with a custom bracket and jubilee clips that allow it to be fixed securely to a pole or post.

Installation

The tools required for installing the solar pack are a flat blade screwdriver, an 8mm socket and the security bit from the AQMesh pod.
Designed to operate in diverse environments all over the world, the sensor requires no calibration or adjustment whatsoever. As with any sophisticated

electronics, good engineering practice should be followed to ensure correct operation.

- Always check the installation to ensure the sensor is not affected by other equipment operating locally, which may not conform to current standards, e.g. radio/radar transmitters, generators etc.

- Avoid mounting in the plane of any radar scanner – a vertical separation of at least 2m should be achieved.

- Radio transmitting antennas, the following minimum separations (all round) are suggested:-
    - VHF IMM – 1m
    - MF/HF – 5m
    - Satcom – 5m (avoid likely lines of sight)

- Use cables provided. If cables are cut and re-connected incorrectly (perhaps in a junction box) then EMC performance may be compromised if cable screen integrity is not maintained. Earth loops should not be created – wire the system in accordance with the installation guidelines.

- Avoid turbulence caused by surrounding structures that will affect the accuracy of the sensor such as trees, masts and buildings. Ideally sensors should be mounted on the prevailing wind side of the site.

STEP 1:

- Review the chosen location for installation for optimal performance from the sensor (as above).

- When installing the sensor please ensure you are following your local health & safety guidelines with regards to working at height and relevant electrical regulations

STEP 2:
- Loosely install the bracket to the pole using the jubilee clips provided. DO NOT overtighten the screws at this stage as this may damage the bracket

- Install the sensor and connect the cable, please ensure this is tight.

- Tighten the jubilee clips fully

- There are two arrows on the sensor that should be orientated North.

- Tighten the adjustment collar screws.

NORTH MARKER ARROWS
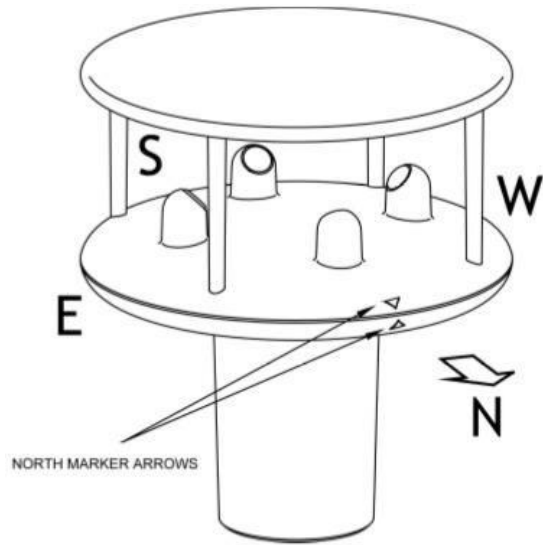
Cleaning and maintenance

The sensor will require very little maintenance but please ensure it is kept clean of any dirt, dust or other material that may gather over time to maintain optimum performance. Use warm water and soft cloth.

The unit has no customer serviceable parts and requires no calibration or maintenance. Do NOT remove black "rubber" transducer caps.

Further assistance
If further support is required for the installation, maintenance or operation of the wind speed and direction sensor please contact support@aqmesh.com

Version Control QMS ISO9001:2015						
Version	Owner	Author	Reviewer	Approver	Changes	Date
1.0	Marketing	J. Burniston	J. Downie	S. Earp	None	13/07/2023