

ULTRASONIC WIND SPEED AND DIRECTION SENSOR SUW1AE



The ultrasonic wind sensor SUW1AE manufactured by PM Ecology has been designed for constant use in harsh weather conditions. The corrosion resistant anodized aluminum housing and no moving parts design, make the sensor ideal for long-term measurements with no maintenance required. Good performance in high winds as well as short response time to slight air movements provides accurate wind speed and direction measurements.

INSTALLATION

The sensor is fully configured and ready for on-site installation. It has been designed for constant, maintenance-free measurements with no calibration required.

Next to one of the four sensor's transducers, there is a marker indicating North. To ensure the correct readings of wind direction, the sensor must be mounted with the marker facing North.

OUTPUT SIGNAL

The ultrasonic wind sensor provides RS-485 and SDI-12 outputs and operates with every data logger compatible with this communication standards.

FEATURES

Maintenance free – no moving parts

Compact, robust and durable

Made of corrosion resistant anodized aluminum

Digital output – SDI-12 & RS-485

Accurate measurements of low wind speeds

High long-term stability

SDI-12 (Serial Digital Interface at 1200 baud) is a serial communications protocol used in environmental measurements. The operating principle is that only an SDI-compatible device with the digital addressing system will communicate with the pre-configured sensors. SDI-12 sensors have a three-wire connection where 2 wires power the sensor and the third one transmits the data.

HOUSING

The housing is made of anodized high corrosion resistant aluminum. The sensor is fully dust-tight and waterproof. The protection standard of the electronics and (ultrasonic) sensing elements complies with IP67 requirements.

HEATING

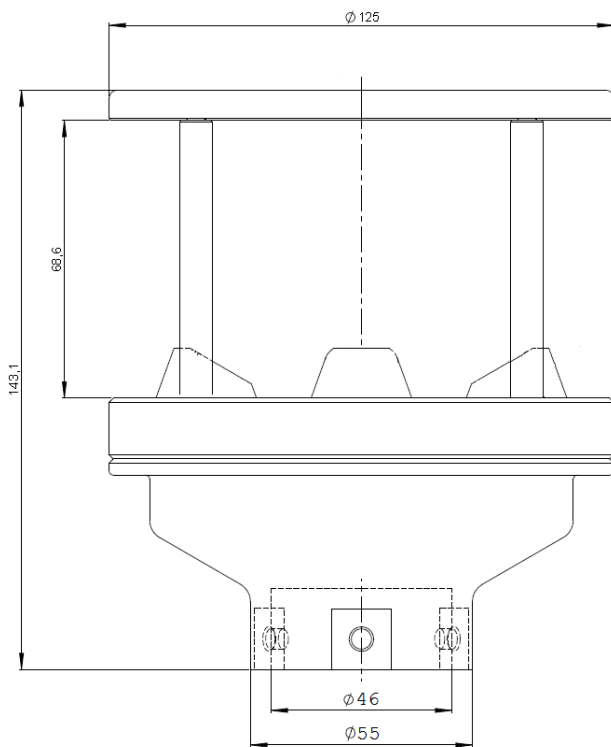
The sensor can be equipped with **optional** heating that enables constant work of the sensor in harsh weather conditions like freezing rain, sleet, snow and high humidity accompanied by low temperatures.

The heating circuit works independently of the sensor's power supply and allows the use of a different power source. Heating is switched on automatically when the temperature drops below 4°C.

MAIN APPLICATIONS

- Automatic weather stations
- Wind condition study
- Wind turbine monitoring
- Building automation
- Agro-meteorological stations
- Building cranes
- Remote site measurements
- Road & rail weather stations

DIMENSIONS (mm)



TECHNICAL SPECIFICATION

Type	SUW1A
Working temperature	-35 ... +70°C
Wind direction resolution	1°
Wind direction range	0° - 359°
Wind direction accuracy	±2% (at 12m/s)
Wind speed resolution	0,01m/s
Wind speed range	0 – 60m/s
Wind speed accuracy	±2% (at 12m/s)
Power supply	12V DC (±10%)
Output	SDI-12 and RS-485
Continuous response time	2 sec
Protection class	IP67
Housing Material	High corrosion resistant aluminum
Mounting	Mounting on pipe with 44,5mm diameter
Cable length	1m, optional extension
Weight	1kg

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Contact