

# Vaisala Ultrasonic Wind Sensor WM80 for wind turbine applications

## Product Spotlight

Uninterrupted wind speed and direction data are crucial for wind farm operations and the Vaisala Ultrasonic Wind Sensor WM80 delivers – with unmatched durability in an innovative design. WM80 is purpose-built for wind turbine control, helping to improve the availability and cost efficiency of your wind turbines.

WM80 is accurate and reliable, even in demanding onshore and offshore conditions. Where other sensors fail, WM80 stands up to the most extreme conditions for longterm dependability.



## Key benefits

Enhance wind turbine efficiency and power output, reduce component wear and tear, lower maintenance costs and extend operational life, all with the very reasonably priced WM80.

Rely on accurate wind measurements in all weather conditions, purpose-built for demanding onshore and offshore weather conditions.

Experience unmatched durability with easy installation and alignment.

Operational under any weather conditions, including extreme icing due to a fully heated anemometer.

Easily share and integrate wind data with different turbine control systems.

Get the most out of Vaisala's trusted WINDCAP ultrasonic wind measurement technology.

## Why Vaisala?

We are innovators, scientists, and discoverers who are helping fundamentally change how the world is powered. Vaisala elevates wind and solar customers around the globe so they can meet the greatest energy challenges of our time. Our pioneering approach reflects our priorities of thoughtful evolution in a time of change and extending our legacy of leadership.

Vaisala is the only company to offer 360° of weather intelligence for smarter renewable energy, nearly anywhere on the planet. Every solution benefits from our nearly 90 years of experience, deployments in 170+ countries, and unrivaled thought leadership.

Our innovation story, like the renewable energy story, continues.

## Rugged design and exceptional accuracy

The Ultrasonic Wind Sensor WM80 is purpose-built to bring you exceptional accuracy and long-lasting durability to validate and optimize wind turbine operations through the full lifespan. WM80 has been tested beyond its limits to ensure it stands up to extreme conditions. It is crafted from corrosion-resistant, anodized marine-grade aluminum and it houses 11 controlled heaters allowing stable performance even in arctic environments.

Several innovations allow the WM80 to measure reliably in tough conditions. One of them is the patent pending reflector design that directs and focuses the ultrasonic beam. The combination of innovations results in a 10-fold increase in signal level compared to conventional ultrasonic sensors. This allows uninterrupted and accurate wind measurements even in heavy rain or high wind speeds up to 90 m/s.

## Easy installation and usability

The compact design fits in tight spaces, and installation is straightforward. WM80 uses sturdy cables and a convenient push-pull cable connector for a secure and stable connection. The alignment tool helps to achieve precise sensor orientation for accurate wind direction information. WM80 maintenance is effortless since there are no moving parts that wear or break and no need for field calibration.

Seamless integration adds to WM80's ease of use. Standardized communication protocols (NMEA and Modbus serial interface) facilitate easy sharing and integration of wind data with different turbine control systems.

## Trusted technology for long-term use

WM80 uses patented Vaisala WINDCAP® ultrasonic wind measurement technology, which is based on more than 50 years of wind measurement expertise.

