

WINDCAP[®]

Ultrasonic Wind Sensor WMT700

VAISALA

Product Spotlight

Precise, maintenance-free wind measurement under any conditions

Accurate wind measurements are integral for safe onshore and offshore maritime operations but capturing this data can be difficult. Wind speeds are never constant from one second to the next. Snow and ice can interrupt wind measurement. Data can be thrown off by turbulence from complex terrain or airflow distortion due to surrounding structures, and even precipitation.



Key benefits

WINDCAP technology with ultrasonic wind sensors delivers accurate, reliable, and redundant wind measurement data over a broad wind speed range and in all directions.

Unique open structure design reduces turbulence and errors in downward wind when compared to closed structures.

Exceptional tilt angle response which is comparable to 3D wind sensors.

Four product models offer differing measurement ranges up to 90m/s (201 mph).

Optional thermostatically controlled heaters in the transducer heads and arms prevent freezing rain and snow buildup for cold climate operation. A model that also adds a heated body is available for the harshest and coldest environments.

Optional bird prevention kit prevents measurement disturbances in locations where birds often perch.

Why Vaisala?

Weather and environmental insights are the greatest catalysts for successful maritime operations— from sensors to systems and digital services, Vaisala provides actionable insights that empower stakeholders to confidently meet challenges and harness new opportunities.

Our globally trusted maritime weather solutions enable remarkable efficiency gains, digital transformation, the protection of people and investments while supporting sustainable and responsible operations.

We are scientists and explorers driven by passion, relentless curiosity, and the desire to create a better world. Backed by 85+ years of unmatched scientific leadership, our solutions increase maritime weather awareness and drive innovation.

Vaisala WINDCAP® Ultrasonic Wind Sensor WMT700 delivers the highest measurement accuracy in the harshest conditions such as heavy precipitation, severe icing, strong winds, heavy sand and dust and maritime offshore installations.

The WMT700 is a robust, reliable ultrasonic anemometer that provides surface wind measurement, which is WMO, CIMO, ICAO, and CAP 437 compliant, as well as DNV GL and IEC-60945 certified. It is based on ultrasonic technology and time of flight measurement principles, which provides a larger range of highly accurate wind speed and direction information when compared to phase shift principles.

The WMT700 is field-proven and has been successfully deployed by professional meteorological agencies, coastal surveillance networks, offshore oil rigs, shipping vessels, and maritime authorities in more than 120 countries. Optional heaters are available for the transducer only, the transducer plus arm, or the transducer plus arm and body to prevent the build-up of freezing rain, icing, and snow. No other wind sensor performs better and longer in maritime conditions.

Applications

- Supporting critical operations such as ship navigation systems of icebreakers.
- Detecting dangerous windshear conditions at offshore helidecks and harbor-side helipads.
- Providing real-time harbor and offshore platform wind conditions to facilitate safe passage for inbound and outbound vessels.
- Factoring wind speed and direction into ship navigation, as well as safe cargo loading and unloading protocols.
- Measuring surface winds for weather forecasts, severe weather warnings, and climatological modeling.

