WINDCAP® Ultrasonic Wind Sensor WXT532

Vaisala WINDCAP® Ultrasonic Wind Sensor WXT532 is designed for demanding applications where stable and inexpensive wind measurements are required.

**Proven Vaisala performance**
WXT532 incorporates decades of Vaisala experience in wind measurement using ultrasound to determine horizontal wind speed and direction. With no moving parts, the sensor has high sensitivity as the measurement time constant and starting threshold are virtually zero. This makes it superior to conventional mechanical wind sensors. WXT532 is designed to operate without periodic field calibration and maintenance.

**Applications**
WXT532 is ideal for use in marine applications as the housing with the mounting kit is water resistant. The sensor is also suitable for environmental monitoring, for example, for measuring wind speed and direction in automatic weather stations.

**Easy to install**
WXT532 is delivered fully assembled and configured from the factory. With Vaisala configuration software tool you can change the settings, such as averaging times, output mode, update intervals, measured variables, and message contents.
The sensor can be mounted either on top of a pole mast or on a cross arm. When using the optional mounting kit, the north alignment needs to be performed only once.

**Heating**
The optional heating available in WXT532 assists measurements in freezing or snowy weather conditions and in humid environments.

Since the heating circuit is independent of the operation power, separate power supplies can be used. Heating is switched on automatically at low temperatures, well before the freezing point.

**Low power consumption**
WXT532 has very low power consumption: in idle mode the device typically consumes about 2 ... 3 mW.

Features
- Triangular design ensures excellent data availability
- Maintenance-free with no moving parts
- Optional heating available
- Compact, durable, and robust
- Low power consumption
- IP66 housing with mounting kit
- mA output suitable for industrial applications
- Cost-effective
- Optional accredited wind calibration (MEASNET) available
- DNV GL Type Examination
Technical Data

Wind

Wind speed
- Observation range: 0 ... 60 m/s (134 mph)
- Reporting range: 0 ... 75 m/s (168 mph)

Response time: 0.25 s

Available variables: Average, maximum, and minimum

Accuracy: ±3 % at 10 m/s (22 mph)

Output resolution: 0.1 m/s (km/h, mph, knots)

Wind direction

Azimuth
- Observation range: 0 ... 360°

Response time: 0.25 s

Available variables: Average, maximum, and minimum

Accuracy: ±3.0° at 10 m/s (22 mph)

Output resolution: 1°

Wind measurement frame

Averaging time: 1 ... 3600 s, sample rate 1, 2, or 4 Hz (configurable)

Update interval: 1 ... 3600 s (= 60 min), at 1 s steps

WXT532 analog mA output options

When the analog output option is applied, digital communication is not available.

Wind speed: 0 ... 20 mA or 4 ... 20 mA

Wind direction: 0 ... 20 mA or 4 ... 20 mA

Load impedance: Max. 200 Ω

Update interval: Max. 4 Hz

Options and accessories

Vaisala configuration tool and USB service cable SP 220614

Cable USB RS-232/RS-485 1.4 m USB M12 SP 220782

Cable 2 m shielded 8-pin M12 SP 222287

Cable 10 m shielded 8-pin M12 SP 222288

Cable 10 m shielded 8-pin M12, connectors on both ends SP 215952

Cable 40 m shielded 12-pin, open end wires SP 217020

Bushing and grounding accessory kit 22109

Mounting kit 212792

Mounting accessory between mounting kit and 60 mm tube WMSFIX60

Bird kit 212793

Operating environment

Operating temperature: −52 ... +60 °C (−60 ... +140 °F)

Storage temperature: −60 ... +70 °C (−76 ... +158 °F)

Mechanical specifications

IP rating: IP65, with mounting kit: IP66

Dimensions (H × Ø): 141 × 114 mm (5.48 × 4.49 in)

Weight: 510 g (1.12 lbs)

Compliance

EMC compliance: IEC 61326-1, IEC 60945

Environmental: IEC 60068-2-1, 2, 6, 14, 30, 31, 52, 78

Maritime: DNVGL-CG-0339, IEC 60945

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