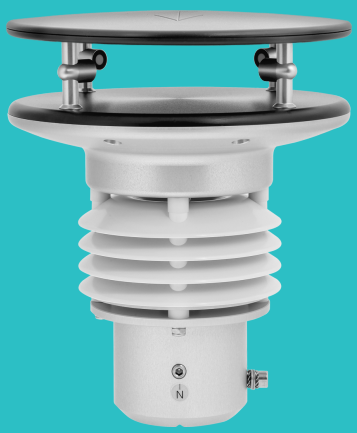
PRODUCT OVERVIEW

u[sonic]WS6 Weather sensor

POSSIBLE APPLICATIONS

- Wind turbines (onshore & offshore)
- Traffic and industrial meteorology
- Alpine applications
- Professional meteorological applications
- Building and environmental technology
- Wind warning systems & event technology



One device, six measured variables – compact and reliable

The u[sonic]WS6 provides precise wind direction and speed measurements – reliably and with low maintenance thanks to ultrasonic technology without moving parts. This saves maintenance costs, reduces downtime, and ensures stable measurement results, even under extreme conditions. In addition, the compact sensor measures temperature, relative humidity, and air pressure; the dew point is calculated from these values. An intelligent heating system automatically protects against ice formation, while the slatted protective housing enables accurate temperature and humidity measurements. Easy installation saves time and makes operation particularly efficient.

- **Precise wind measurement:** Ultrasonic technology without moving parts
- **Additional parameters:** Temperature, humidity, air pressure, calculated dew point
- **Smart heating:** Automatic adjustment to wind conditions
- **Precise measurements:** Lamella protective cover protects sensors
- **Low maintenance & efficient:** No mechanical wear, easy installation

PRODUCT OVERVIEW

u[sonic]WS6 Weather sensor

Professional Line	u[sonic]WS6
Ident-No.	00.16480.000000
Measuring range wind direction	0...359.9 °
Measuring range wind speed	0...65 m/s
Air temperature measuring range	-40...+70 °C
Measuring range rel. humidity	0...100 % RH
Air pressure measuring range	300...1100 mbar
Wind direction accuracy	< 2° (> 1 m/s) RMSE
Wind speed accuracy	± 0.2 m/s RMSE (v < 10 m/s); ± 2% RMSE (10 m/s < v < 65 m/s)
Air temperature accuracy	± 0.1 K (0...60 °C); ± 0.2 K (-40...0 °C)
Relative humidity accuracy	Typical ± 1.5% (0...80%) RH; ± 2% (>80%) RH
Air pressure accuracy	± 0.5 mbar
Wind direction resolution	0.1°
Wind speed resolution	0.1 m/s
Air temperature resolution	0.1 °C
Resolution rel. humidity	0.1 %
Air pressure resolution	0.1 mbar
Response threshold	0.1 m/s
Output	RS-485; RS-422 (optional; **please specify when ordering: Part No.: 97.16470.000422 RS-422 output configuration**)
Protocols	NMEA 0183 Modbus RTU (optional; **please specify when ordering: ID no.: 97.16470.000001 Modbus configuration**) SDI-12 (optional; **please specify when ordering: Id no.: 97.16470.000002 Configuration SDI-12**) Further protocols on request
Interface	RS-485/422; SDI-12 (optional)
Measuring rate	0.1...10 Hz
Operating conditions	-40...+70 °C (with heating: -50...+70 °C); 0...100% RH
Supply voltage	Without heating: 6...60 VDC; with heating: 24 V AC/DC ± 20%
Power consumption	Sensor: typically 50 mA at 24 VDC; with heating: max. 10 A at 24 V AC/DC
Heating data	Factory configurable: 60 W / 120 W / 240 W (standard)
Dimensions	Ø 199 mm; height 238 mm
Housing	Seawater-resistant aluminum
Protection class	IP66; IP67
Weight	Approx. 3.1 kg

Professional Line	u[sonic]WS6
Standards and norms	Low voltage standard: 72/23 EEC Protection class: DIN EN 60529 DIN EN 50121-4:2016 Salt spray: EN 60945 IEC 61724-1 Cold test Ad according to DIN EN 60068-2-1 (01/2008) Condensation test CH according to ISO 6270-2 (09/2005) and DIN EN ISO 12944-6 (07/1998), category C4 Salt spray test according to DIN EN ISO 7253 (04/2002) and DIN EN ISO 12944-6 (07/1998), category C4
EMC standards / Electrical safety	DIN EN 60945; DIN EN 61000-4-2, 3, 4, 6, 11
Options (order separately)	00.16480.000200 u[sonic]WS6 with bayonet plug 32.16420.066100 Cable 10 m; with 12-pin bayonet plug, assembled
Accessories (order separately)	32.16470.060000 Sensor cable, 15 m, 8-pin M16 plug

As of May 27, 2026