PRODUCT OVERVIEW

u[sonic] Ultrasonic wind sensor

POSSIBLE APPLICATIONS

- Professional meteorological applications
- Onshore and offshore wind turbines
- Marine weather stations
- Building technology
- Traffic and industrial meteorology
- Wind warning

Seawater-resistant and optimally heated

The combined ultrasonic sensor u[sonic] for wind direction and wind speed. The seawater-proof sensor is optimally heated and ideal for cold-climate locations. The device is connected via an 8-pin screw connector. Depending on the version, the measured values can be output via various interfaces.

- Meets the requirements for meteorological measurements according to WMO
- No moving measuring elements, no wear
- Two parameters measurable
- Intelligent heating, depending on wind speed and direction
- Easy installation, very service-friendly

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u[sonic] Ultrasonic wind sensor

Professional Line	u[sonic]
Ident-No.	00.16470.100000 (with heating); 00.16470.100001 (without heating)
Measuring range wind direction	0...359.9°
Measuring range wind speed	0...75 m/s
Wind direction accuracy	< 2° (> 1 m/s) RMSE
Wind speed accuracy	± 0.2 m/s or ± 2% RMSE between 0 and 65 m/s
Wind direction resolution	0.1°
Wind speed resolution	0.1 m/s
Response threshold	0.1 m/s (adjustable for wind direction)
Output	RS-485 NMEA 0183; 4...20 mA (default setting) Configurable (analog): 0...20 mA; 0...5 V; 0...10 V RS-422 (optional; **please specify when ordering: ID 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
Measuring rate	0.1...10 Hz; (internal measurement rate 50 Hz)
Operating conditions	-40...+70 °C (with heating -50...+70 °C); 0...100 % RH
Survival speed	100 m/s
Supply voltage	6...60 VDC; 24 V AC/DC
Power consumption	Sensor: typically 45 mA at 24 VDC and deactivated analog output Heating: factory-configurable: 60 W; 120 W; 240 W (standard)
Measuring principle	Ultrasonic transit time measurement
Heating data	Factory configurable 60 W; 120 W; 240 W (standard)
Dimensions	Ø 199 mm; height 149 mm
Housing	Seawater-resistant aluminum
Protection class	IP66; IP67
Weight	Approx. 2 kg

Professional Line	u[sonic]
Standards and norms	VDE 0100; low-voltage standard: 72/23 EEC EMC/ EMI: DIN EN 60945 and DIN EN 61000-4-2, -3, -4, -5, -6, -11 Protection class: DIN EN 60529 MIL-STD-810G 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
Accessories (order separately)	32.16470.060000 Sensor cable, 15 m; 8-pin M16

As of November 15, 2026