

u[sonic] ULTRASONIC WIND SENSOR



Seawater resistant and perfectly heated

The combined ultrasonic sensor u[sonic] for wind direction and wind speed. The seawater resistant sensor is perfectly heated and ideal for use under cold climate conditions. The equipment is connected by an 8 pole screw connector. The measured values can be requested over a variety of 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 wind direction
- Easy to install, very service friendly

APPLICATIONS

- Professional meteorological application
- Wind turbines on- and offshore
- Ship weather station
- Building automation
- Traffic and industrial meteorology
- Wind warning

Professional Line	u[sonic]
Id-No.	00.16470.100000
Meas. range wind direction	0...359.9°
Meas. range wind speed	0...75 m/s
Accuracy wind direction	< 2° (> 1 m/s) RMSE
Accuracy wind speed	± 0.2 m/s or ± 2 % RMSE
Resolution wind direction	0.1°
Resolution wind speed	0.1 m/s
Trigger threshold	0.1 m/s (adjustable for wind direction)
Output	RS 485 NMEA0183 ; 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 Configuration RS 422 output )

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Professional Line	u[sonic]
Protocols	NMEA 0183 Modbus RTU (optional; please specify when ordering: Id-No.: 97.16470.000001 Configuration Modbus ) SDI-12 (optional; please specify when ordering: Id-No.: 97.16470.000002 Configuration SDI-12 ) Other protocols on request
Measuring rate	0.1...10 Hz; (internal measurement 50 Hz)
Operating conditions	-40...+70 °C (with heating -50...+70 °C); 0...100 % r. h.
Strongest wind impact velocity	100 m/s
Supply voltage	6...60 VDC; 24 V AC/DC
Current consumption	Sensor: typically 45 mA at 24 VDC and deactivated analog output Heating: factory configurable: 60 W; 120 W; 240 W (standard)
Measuring principle	Ultrasound
Heating data	Configurable (factory-setting) 60 W; 120 W; 240 W (standard)
Dimensions	Ø 199 mm; height 149 mm
Housing	Seawater resistant aluminium
Protection class	IP 66; IP 67
Weight	Approx. 2 kg
Standards	VDE 0100; Low voltage guide line: 72/23 EWG 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 fog: EN 60945 Cold test Ad acc. to DIN EN 60068-2-1 (01/2008) Condensation test CH acc. to ISO 6270-2 (09/2005) and DIN EN ISO 12944-6 (07/1998), category C4 Salt mist test based on 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-pole M16

As of: 17.03.2025