

# 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.

- without moving measuring elements
- 2 parameters measurable
- intelligent heating depending on wind speed and wind direction
- easy installation, easy to maintain

## 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 RMSE (v < 10 m/s) ; ± 2 % RMSE (10 m/s < v < 65 m/s)
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 · Analog: 0...20 mA · 4...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: typ. 45 mA at 24 VDC and deactivated analog output heater 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: 25.06.2022