PRODUCT OVERVIEW

u[sonic] Modbus ultrasonic wind sensor

POSSIBLE APPLICATIONS

- Professional meteorological applications
- Building automation
- Solar power systems
- Industrial meteorology

Precise wind data - easy to integrate, reliable in use

The combined ultrasonic sensor u[sonic] Modbus accurately measures wind direction and wind speed and, thanks to its integrated Modbus RTU interface, is particularly easy to install and integrate into existing networks. The seawater-resistant sensor is ideal for use in cold climate regions and features an intelligent heating system that automatically adapts to wind conditions. With two measurement parameters in one device, no moving parts, and therefore no wear and tear, the u[sonic] Modbus offers a low-maintenance and service-friendly solution.

- **Reliable operation in all weather conditions** – thanks to intelligent, automatic heating
- **Maintenance-free and durable** – no moving parts, no wear and tear
- **Time-saving installation** – simple assembly, low maintenance requirements
- **Flexible integration** – compatible with all Modbus meteorological sensors

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u[sonic] Modbus ultrasonic wind sensor

Professional Line	u[sonic] Modbus
Ident-No.	00.16470.100130
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 RMSE (v < 10 m/s); 2% RMSE (10 m/s < v < 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)
Protocols	Modbus RTU
Interface	RS-485
Measuring rate	0.1...10 Hz; (internal measurement rate 50 Hz)
Operating conditions	40...+70 °C (with heating -50...+70 °C); 0...100 % RH
Supply voltage	24 VDC
Power consumption	Sensor: typically 50 mA at 24 VDC and analog output disabled; Heating: max. 2.5 A at 24 V AC/DC
Measuring principle	Ultrasonic transit time measurement
Heating data	60 W (factory configurable)
Dimensions	Ø 199 mm; height 149 mm
Housing	Seawater-resistant aluminum
Protection class	IP66
Weight	Approx. 2 kg
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
Connection technology	4-pin M12 plug connector
Accessories (order separately)	32.14567.060010 Sensor cable, 15 m, 4-pin, M12 plug 32.14567.060000 Sensor cable, 12 m, 4-pin, M12 plug

As of November 15, 2026