

u[sonic] Modbus ULTRASONIC WIND SENSOR



Simplified installation with Modbus

Combined ultrasonic sensor u[sonic] Modbus for wind direction and wind speed. The Modbus RTU interface simplifies sensor installation and integration into networks. This seawater resistant ultrasonic sensor is perfectly heated and ideal for use under cold climate conditions. The connection of the u[sonic] Modbus is compatible with all meteorology sensors of the Modbus series.

- No moving measuring elements, no wear
- Two parameters measurable in one device
- Intelligent heating, depending on wind speed and direction
- Easy to install, easy to maintain

APPLICATIONS

- Professional meteorological applications
- Building automation
- Photovoltaic systems
- Industrial meteorology

Professional Line	u[sonic] Modbus
Id-No.	00.16470.100130
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)
Protocols	Modbus RTU

Continued on page 2

Professional Line	u[sonic] Modbus
Interface	RS 485
Measuring rate	0.1...10 Hz; (internal measurement 50 Hz)
Operating conditions	40...+70 °C (with heating -50...+70 °C); 0...100 % r. h.
Supply voltage	24 VDC
Current consumption	Sensor: typically 50 mA at 24 VDC and deactivated analog output; heating: max. 2.5 A at 24 V AC/DC
Measuring principle	Ultrasound
Heating data	60 W (factory configurable)
Dimensions	Ø 199 mm; height 149 mm
Housing	Seawater resistant aluminium
Protection class	IP 66
Weight	Approx. 2 kg
Standards	<p>VDE 0100 • Low voltage guide line: 72/23 EWG</p> <p>EMC/ EMI: DIN EN 60945 and DIN EN 61000-4-2, -3, -4, -5, -6, -11</p> <p>Protection class: DIN EN 60529</p> <p>MIL-STD-810G</p> <p>DIN EN 50121-4:2016</p> <p>Salt fog: EN 60945</p> <p>Cold test Ad acc. to DIN EN 60068-2-1 (01/2008)</p> <p>Condensation test CH acc. to ISO 6270-2 (09/2005) and DIN EN ISO 12944-6 (07/1998), category C4</p> <p>Salt mist test based on DIN EN ISO 7253 (04/2002) and DIN EN ISO 12944-6 (07/1998), category C4</p>
Connection technology	4-pole M12 plug connector
Accessories (order separately)	<p>32.14567.060010 sensor cable, 15 m, 4 pole, M12 plug</p> <p>32.14567.060000 sensor cable, 12 m, 4 pole, M12 plug</p>

As of: 17.03.2025