

# u[sonic]WS6 WEATHER SENSOR



For 6 weather parameters

The u[sonic]WS is the newest, most compact and system-capable addition to the Lambrecht meteo weather sensor series. The sensor has no moving measuring elements and is therefore low-maintenance. The intelligent heating system works in relation to the wind speed and direction and keeps the sensor ice-free even under extreme weather conditions. The u[sonic]WS6 easily meets the special challenges of alpine and maritime applications. A wide variety of interfaces and protocols are available. There are no limits for the u[sonic]WS6 when it comes to its applications.

- without moving measuring elements
- 6 weather parameters: wind direction and speed, air temperature, rel. humidity, barometric pressure, dew point
- intelligent heating depending on wind speed and wind direction
- lamella shelter for accurate measurements of the temperature-humidity sensor
- easy installation, easy to maintain

## APPLICATIONS

- professional meteorological application
- wind turbines on- and off-shore
- ship weather station
- building automation and environmental engineering
- traffic and industrial meteorology
- wind warning and event engineering
- photovoltaic large-scale plants
- alpine applications

| Professional Line               | u[sonic]WS6  |
|---------------------------------|--|
| Id-No.                          | 00.16480.000000  |
| Meas. range wind direction      | 0...359.9°   |
| Meas. range wind speed          | 0...65 m/s   |
| Meas. range air temperature     | -40...+70 °C   |
| Meas. range rel. humidity       | 0...100 %  |
| Meas. range barometric pressure | 300...1100 mbar  |
| 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) |

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| Professional Line                 | u[sonic]WS6   |
|-----------------------------------|---|
| Accuracy air temperature          | ± 0.1K (0...60 °C) • ± 0.2K (-40...0 °C)  |
| Accuracy rel. humidity            | typ. ± 1.5 % (0...80 %) r.h. • ± 2 % (80...100 %) r.h.  |
| Accuracy barometric pressure      | ± 0.5 mbar  |
| Resolution wind direction         | 0.1°  |
| Resolution wind speed             | 0.1 m/s   |
| Resolution air temperature        | 0.1 °C  |
| Resolution rel. humidity          | 0.1 %   |
| Resolution barometric pressure    | 0.1 mbar  |
| Trigger threshold                 | 0.1 m/s   |
| Output                            | RS 485 · RS 422 (optional · <b>please specify when ordering: Id-No.: 97.16470.000422 Configuration RS 422 output</b> )  |
| Protocols                         | NMEA 0183<br>Modbus RTU (optional · <b>please specify when ordering: Id-No.: 97.16470.000001 Configuration Modbus</b> )<br>SDI-12 (optional · <b>please specify when ordering: Id-No.: 97.16470.000002 Configuration SDI-12</b> )<br>other protocols on request   |
| Interface                         | RS485 / 422 • SDI-12 (optional)   |
| Measuring rate                    | 0.1...10 Hz   |
| Operating conditions              | -40...+70 °C (with heating: -50...+70 °C) • 0...100 % r. h.   |
| Supply voltage                    | without heating: 6...60 VDC • with heating: 24 V AC/DC ± 20 %   |
| Current consumption               | sensor: typ. 50 mA at 24 VDC • with heating: max. 10 A at 24 V AC/DC  |
| Heating data                      | factory configurable: 60 W / 120 W / 240 W (standard)   |
| Dimensions                        | Ø 199 mm • height 238 mm  |
| Housing                           | seawater resistant aluminium  |
| Protection class                  | IP 66 • IP 67   |
| Weight                            | approx. 3.1 kg  |
| Standards                         | Low voltage guide line: 72/23 EWG<br>Protection class: DIN EN 60529<br>MIL-STD-810G<br>DIN EN 50121-4:2016<br>Salt fog: EN 60945<br>Cold test Ad acc. to DIN EN 60068-2-1 (01/2008)<br>Condensation test CH acc. to ISO 6270-2 (09/2005) and DIN EN ISO 12944-6 (07/1998), category C4<br>Salt mist test based on DIN EN ISO 7253 (04/2002) and DIN EN ISO 12944-6 (07/1998), category C4 |
| EMC standards / Electrical safety | DIN EN 60945 • DIN EN 61000-4-2, 3, 4, 6, 11  |
| Options (order separately)        | 00.16480.000200 u[sonic]WS6 with bayonet plug<br>32.16420.066100 Cable 10 m • 12-pole bayonet plug • ready-for-use  |
| Accessories (order separately)    | 32.16470.060000 sensor cable, 15 m, 8-pol. M16-plug   |