



**Compact all-in-one weather sensor for measurement of temperature, relative humidity, air pressure, wind direction and wind speed.**

- **Parameters measured**  
Temperature, relative humidity, air pressure, wind direction and wind speed
- **Measurement technology**  
Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure
- **Product highlights**  
Compact all-in-one weather sensor, low power, heater, aspirated radiation shield, maintenance-free operation, open communication protocol
- **Interfaces**  
RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR and SDI-12
- **Article number**  
8373.U01

From the WS product family of professional intelligent measurement transducers with digital interface for environmental applications. Integrated design with ventilated radiation protection for measuring: Air temperature, relative humidity, air pressure, wind direction and wind speed. One external temperature or rain sensor is connectable.

| General    |   |
|------------|---|
| Dimensions | Ø approx. 150 mm, height approx. 287 mm |
| Weight     | Approx. 1.2 kg                          |

|                            |                                |
|----------------------------|--------------------------------|
| Interface                  | RS485, 2 - wire, half - duplex |
| Power supply               | 4...32 VDC                     |
| Operating temperature      | -50...60 °C                    |
| Operating rel. humidity    | 0...100 % RH                   |
| Heating                    | 20 VA at 24 VDC                |
| Cable length               | 10 m                           |
| Protection level housing   | IP66                           |
| Mast mounting suitable for | Mast diameter 60 - 76 mm       |

| Temperature     |  |
|-----------------|--|
| Principle       | NTC  |
| Measuring range | -50 ... 60 °C                                      |
| Unit            | °C   |
| Accuracy        | ±0.2 °C (-20...50 °C), otherwise ±0.5 °C (>-30 °C) |

| Relative humidity |                |
|-------------------|----------------|
| Principle         | Capacitive     |
| Measuring range   | 0 ... 100 % RH |
| Unit              | % RH           |
| Accuracy          | ±2 % RH        |

| Air pressure    |                      |
|-----------------|----------------------|
| Principle       | MEMS capacitive      |
| Measuring range | 300 ... 1200 hPa     |
| Unit            | hPa                  |
| Accuracy        | ±0.5 hPa (0...40 °C) |

| Wind direction  |                      |
|-----------------|----------------------|
| Principle       | Ultrasonic           |
| Measuring range | 0 ... 359.9 °        |
| Unit            | °                    |
| Accuracy        | < 3 ° RMSE > 1.0 m/s |

| Wind speed      |  |
|-----------------|--|
| Principle       | Ultrasonic                                       |
| Measuring range | 0 ... 75 m/s                                     |
| Unit            | m/s  |
| Accuracy        | ±0.3 m/s or ±3 % (0...35 m/s) ±5 % (>35 m/s) RMS |
| Resolution      | 0.1 m/s  |