## Compact all-in-one weather sensor for measurement of temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity and air pressure.

- **Parameters measured**
  Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity and air pressure

- **Measurement technology**
  NTC/T, Capacitive/RH, MEMS capacitive/Pressure, 24 GHz Doppler radar/Precipitation

- **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**
  8369.U01, 8369.U02

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, precipitation intensity, precipitation type, precipitation quantity and air pressure. One external temperature sensor is connectable.

| General | |
|---|---|
| Dimensions | Ø ca. 150 mm, height ca. 280 mm |
| Weight | Approx. 1.3 kg |
| Interface | RS485, 2 - wire, half - duplex |
| Power supply | 11 .... 32 VDC |
| Power supply | 5 ... 11 VDC (electronics with limited precision of measurements) |
| Power supply | 24 VDC +/- 10% (heater) |
| Power consumption | 40 VA (heater) |
| Operating temperature | -50...60 °C (with heater) |
| Operating rel. humidity | 0...100 % RH |
| 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) |

| Precipitation (liquid) | |
|---|---|
| Droplet size | 0,3 ... 5 mm |
| Detection sensitivity | 0,01 mm/h |
| Particle velocity | 0.9 ... 15.5 m/s |
| Precipitation types | rain/ snow |
| Solid precipitation | 5.1 ... ~30 mm |
| Intensity range | 0.5 ... ~30 mm/h |
| Intensity resolution | 0.01 mm/h |
| Amount resolution | 0.1 mm |
| Accuracy | 20 % under laborary conditions |
| Reproducibility | Typical >90 % under laborary conditions |