

Compact all-in-one weather sensor for measurement of temperature, relative humidity, air pressure and radiation.

- **Parameters measured**
  Temperature, relative humidity, air pressure, radiation

- **Measurement technology**
  NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Kipp&Zonen Pyranometer/Radiation

- **Product highlights**
  Compact all-in-one weather sensor, low power, 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**
  8374.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 and radiation. One external temperature or rain sensor is connectable.

General	
Weight	Approx. 1.3 kg

Interface	RS485, 2 - wire, half - duplex
Power supply	4...32 VDC
Power supply	5...11 VDC (electronics with limited precision of measurements)
Power supply	24 VDC +/- 10%
Power consumption	40 VA
Operating temperature	-50...60 °C
Operating rel. humidity	0...100 % RH
Dimensions	Ø approx. 150 mm, height approx. 268 mm
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)

Radiation	
Unit	W/m^2
Response time (95%)	< 18 s
Non-stability(change/year)	< 1 %
Non-linearity (0 to 1000 W/m^2)	< 1 %
Directional error (at 80° with 1000 W/m^2)	< 20 W/m^2
Temperature dependence of sensitivity	< 5 % (-10 to +40 °C)
Tilt error (at 1000 W/m^2)	< 1 %
Spectral range	300...2800 nm
Measuring range	2000 W/m^2
Altitude	0...60 ° Azimuth