



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

#### Parameters measured

Temperature, relative humidity, radiation and air pressure

### Measurement technology

NTC/T, Capacitive/RH, Tiltable Pyranometer Lufft/Radiation, MEMS capacitive/Pressure

## 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.U12

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, radiation and air pressure. One external temperature or rain sensor is connectable.

IMPORTANT: WS304-UMB Smart Weather Sensor is discontinued















General	
Dimensions	Ø approx. 150 mm, Height approx. 377 mm
Weight	Approx. 1.5 kg
Interface	RS485, 2 - wire, half - duplex
Power supply	432 VDC
Power supply	511 VDC (electronics with limited precision of measurements)
Power supply	24 VDC +/- 10% (heater)
Power consumption	40 VA (heater)
Operating temperature	-5060 °C (with heater)
Operating rel. humidity	0100 % RH
Cable length	10 m
Protection level housing	IP66
Mast mounting suitable for	Mast diameter 60 - 76 mm

Radiation	
Unit	W/m <sup>2</sup>
Accuracy	5 %
Response time (95%)	<1s
Non-stability(change/year)	±1 %
Non-linearity (0 to 1000 W/m²)	±1 %
Directional error (at 80° with 1000	±20 W/m <sup>2</sup>
W/m <sup>2</sup> )	
Temperature dependence of	±5 % (-10 to +40 °C)
sensitivity	
Tilt error (at 1000 W/m²)	±1 %
Spectral range	3001100 nm
Measuring range	1400 W/m <sup>2</sup>

Temperature	
Principle	NTC
Measuring range	-50 60 °C
Unit	°C
Accuracy	±0.2 °C (-2050 °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 (040 °C)









