



First and only compact weather sensor with integrated Kipp & Zonen CMP10 Pyranometer with secondary standard quality

Parameters measured

Temperature, relative humidity, air pressure, radiation

Measurement technology

NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Kipp&Zonen/Radiation

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

8374.5

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	
Dimensions	Ø approx. 150 mm, height approx. 332 mm
Weight	Approx. 1.5 kg









Technical Data

WS310-UMB Smart Weather Sensor



Interface	RS485, 2 - wire, half - duplex
Power supply	1132 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
Protection level housing	IP66
Mast mounting suitable for	Mast diameter 60 - 76 mm

Temperature	
Principle	NTC
Measuring range	-40 80 °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)

Radiation	
Response time	< 5 s
Zero offset A	< 7 W/m ²
Zero offset B	< 2 W/m ²
Directional error (at 1000 W/m²)	< 0.2 %
Temperature dependence of	< 1 % (-10 °C40 °C)
sensitivity	
Spectral range	285 to 2,800 nm
Measuring range	4000 W/m ²









