



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

Parameters measured

Temperature, relative humidity, precipitation and air pressure

Measurement technology

NTC/T, Capacitive/RH, Tipping bucket/Precipitation, MEMS capacitive/Pressure

Product highlights

Compact all-in-one weather sensor, low power, aspirated radiation shield, open communication protocol

Interfaces

RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR and SDI-12

Article number

8377.1

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 and air pressure. One external temperature sensor is connectable.

В	Beschrei	bung	W	'ert

Technical data











WS401-UMB Smart Weather Sensor



Dimensions	Ø ca. 150mm, height ca. 380mm
Weight	Approx. 1.5 kg
Interface	RS485, 2-wire, half-duplex
Power supply	41132 VDC
Power supply	511 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
Protection level housing	IP66
Mast mounting suitable for	mast diameter 60 - 76mm

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 (040°C)	

Precipitation		
Resolution	0.2 mm	
Accuracy	±2 %	
Max. intensity	360 mm/h	

Precipitation with reduction ring		
Resolution	0.5 mm	
Accuracy	±2 %	
Max. intensity	144 mm/h	











