

Lufft WS301-UMB – Temperature, Relative Humidity, Radiation, Air Pressure

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
- Solar radiation
- Air pressure

Relative humidity is measured by means of a capacitive sensor element; a precision NTC measuring element is used to measure air temperature.

The world renowned technology of Kipp+Zonen CMP3 is integrated.

Measurement output can be accessed by the following protocols:
UMB-Binary, UMB-ASCII, SDI-12, MODBUS

Lufft WS301-UMB Compact Weather Station			Order No.
WS301-UMB			8374.U01
Technical Data	Dimensions	Ø approx. 150mm, height 268mm	
	Weight	approx. 1.3 kg	
Temperature	Principle	NTC	
	Measuring range	-50 ... 60 °C	
	Accuracy	±0.2 °C (-20 °C ... +50 °C), otherwise ±0.5 °C (> -30 °C)	
Relative humidity	Principle	Capacitive	
	Measuring range	0 ... 100 % RH	
	Accuracy	±2 % RH	
Radiation	Response time (95%)	18s	
	Non-stability (change/year)	±1 %	
	Non-linearity (0 to 1,000 W/m²)	±2.5 %	
	Directional error (at 80° with 1,000W/m²)	±20 W/m²	
	Temperature dependent of sensitivity	±5 % (-10 to +40 °C)	
	Tilt error (at 1000 W/m²)	±3 %	
	Spectral range (50% points)	300 to 2,800nm	
	Measuring range	1400 W/ m²	
Air pressure	Principle	MEMS Capacitive	
	Measuring range	300 ... 1200 hPa	
	Accuracy	±1.5 hPa	
General Information	Protection type housing	IP65	
	Interface	RS485, 2-wire, half-duplex	
	Op. power consumption	24 VDC +/-10%	
	Operating humidity range	0 ... 100 %	
	Op. temperature range	-50 ... 60 °C	
Accessories	Surge protection		8379.USP
	Power supply 24V/4A		8366.USV1
	UMB Interface converter ISOCON-UMB		8160.UISO
	Digital-analog-converter DACON8-UMB		8160.UDAC
	Temperature Sensor WT1		8160.WT1
	Surface Temperature Sensor WST1		8160.WST1
	Rain Sensor WTB100		8353.10



Aspirated temperature/humidity measurement

Open communication protocol:

- UMB-ASCII
- UMB-Binary
- SDI-12
- MODBUS
- Analogue outputs in combination with 8160.UDAC

