Lufft WS501 Smart Weather Sensor

Product #: **8375.1**

USD Price: Contact Hach

The WS501-UMB is a compact all-in-one weather sensor with measurement of temperature, relative humidity, air pressure, wind direction, wind speed and radiation. It is part of the WS product family of professional intelligent measuring sensors with a digital interface and an integrated design with ventilated radiation protection for various environmental applications. One external temperature or rain sensor is connectable.

All-in-one housing concept & easy installation
All-in-one housing concept of a compact weather sensor combining several measurement parameters in one housing with only a single cable connection.

Maintenance-free operation
Maintenance free operation as there are no moving parts that can wear out.

Flexible interfaces and telegrams
SDI-12 and RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, and XDR.

Spectrally flat Class C Pyranometer

Aspirated radiation shield

Specifications

*Parameters Measured:	Air Temperature
	Relative Humidity
	Air Pressure
	Wind Direction
	Wind Speed
	Solar Radiation
Air Pressure:	Accuracy: ±0.5 hPa (0 - +104 °F) or ±0.5 hPa (0 - +40 °C)
	Measuring range: 300 - 1200 hPa
	Measurement technology: MEMS capacitive
Air Temperature:	Accuracy: ±0.4 °F (-4 - +122 °F) or ±0.2 °C (-20 - +50 °C), otherwise ±0.9 °F (# -22 °F) or ±0.5 °C (# -30 °C)
	Measuring range: -58 - +140 °F (-50 - +60 °C)

	Measurement technology: NTC
	Resolution: 0.1 °C (-20 - +50 °C), otherwise 0.2 °C
Analog Inputs:	1
Cable Connection:	Open wires
Cable Length:	33 ft (10 m)
Communication:	SDI-12 and RS485 with supported protocols
	UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR
Dimensions:	Ø150 x 332 mm
Interface:	RS485 2 wire
	Baud rate: 1200 - 38400 bit/s (Standard: 19200) or SDI-12
IP Rating:	IP66
Material Enclosures:	Plastics (PC)
Non-linearity:	# 1.5 % (0 - 100 W/m²)
Non-stability:	# 1% (change/year)
Operating Humidity:	0 - 100 %
Operating Temperature Range:	-50 - +60 °C
Power Supply:	12 - 24 VDC
Relative Humidity:	Accuracy: ±2 % RH
	Measuring range: 0 - 100 % RH
	Measurement technology: Capacitive
Solar Radiation:	Accuracy: 5 %
	Measuring range: Maximum operational irradiance; 2000 W/m²
	Measurement technology: Kipp & Zonen CMP3
	Spectral accuracy: 300 - 2800 nm
	Response time: # 6 s (63 %), 18 s (95 %)
	Non-linearity: # 1.5 % (0 - 100 W/m²)
	Non-stability: # 1 % (change/year)
Water Level:	Accuracy: ±0.3 m/s or ±3 % (0 - 35 m/s) ±5 % (#35 m/s) RMS
	Measuring range: 0 - 75 m/s
	Measurement technology: Ultrasonic
Weight:	3.3 lb (# 1.5 kg)
Wind Direction:	Accuracy: # 3° RMSE # 1.0 m/s
	Measuring range: 0 - 359.9 °
	Measurement technology: Ultrasonic