



Lufft WS3000-UMB Reference Weather Sensor with redundant pressure module

Product #: 8390.U02
USD Price: Contact Hach

The WS3000-UMB Weather Sensor with redundant pressure sensor is a Climate Reference Sensors in a high quality aluminum housing fulfilling WMO and aviation standards. It is typically used by meteorology services, in AWOS applications and as reference for calibration verification of Air Temperature, Relative Humidity, and Air Pressure.

Relative humidity is measured by means of a heated capacitive sensor element; a precision PT100 measuring element is used to measure air temperature. A resonant pressure transducer is employed for precise pressure measurement.

The sensor is delivered with a DAKKS (ISO/IEC 1702) calibration sheet. All technical parameters are given for the full operating range.

The robust and high precise Climate Reference Sensor WS3000 is designed for professional meteorological applications in all climate zones. It delivers highly reliable data, even in extreme ambient conditions.

The weather sensor is designed to replace single sensors in a meteorological weather station.

Examples of use:

- Weather stations from meteorological services

- Calibration / Verification of Air Temperature, Relative Humidity, Air Pressure

- Aviation weather (AWOS Systems) - redundant pressure measurement included

- Climate meteorological weather station

- Hydro-meteorological reference station

Excellent survivability under extreme conditions

Full-metal (high quality aluminium) construction with ventilated air temperature / humidity measurements

Traceable accuracy

Detailed calibration certificates, performed by an accredited laboratory for every sensor and drift-free sensing technologies

Modular architecture

Easy maintenance and calibration possibilities for every single sensor

Fully compliant to WMO guidelines

Technical over full temperature, pressure and humidity operating range

- Temperature better than $\pm 0.1^{\circ}\text{C}$

- Relative Humidity better than $\pm 2\%$

- 2x Air Pressure, each better than +/- 0.1 hPa

Specifications

*Parameters Measured:	Temperature
	Relative Humidity
	Air Pressure
Accuracy:	Temperature: ± 0.2 °F (-40 - +140 °F) or ± 0.1 °C (-40 - +60 °C)
	Relative humidity: ± 2 % RH (0 - 100 %)
	Air pressure: ± 0.1 hPa (500 -100 hPa)
Dimensions:	approx. Ø 10 in (250 mm) x 18.5 in (470 mm)
Interface:	RS485, 2 - wire, half - duplex/WiFi
IP Rating:	IP66
Measurement technology:	Temperature: PT100
	Relative humidity: Capacitive
	2 x Air pressure: MEMS Resonant Pressure transducer
Measuring Range:	Temperature: -112 - +176 °F (-80 - +80 °C)
	Relative humidity: 0 - 100 % RH
	Air pressure: 300 - 1100 hPa
Power Consumption:	24 VDC / typical 4W
Principles:	Temperature: PT100
	Relative humidity: Capacitive
	Air pressure: Redundant Pressure & MEMS Resonant Pressure transducer
Relative Humidity:	0 - 100 % RH
Resolution:	Temperature: 0.02 °F (0.01 °C)
	Relative humidity: 0.1 % RH
	Air pressure: 0.01 hPa
Spectral Accuracy:	N.A.
Temperature Range:	-40 - +60 °C (with optional test expendable to -60 - +60 °C)
Temperature Sensivity Dependence:	N.A.
Units:	Global radiation -
	Temperature °C
	Relative humidity % RH
	Air pressure hPa
Weight:	Approx. 11 lb (5 kg)
Zero offset A:	N.A.
Zero offset B:	N.A.