



WS600-UMB
with precipitation sensor



WS502-UMB
with solar radiation sensor



Future Inside

Lightning Detection

WS800 the first smart weather sensor from the Lufft WS product family, that comes with a combined measurement of precipitation, solar radiation and lightning detection.

Lufft WS800-UMB – Temperature, Relative Humidity, Precipitation, Solar Radiation, Air Pressure, Wind, Electronic Compass

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 intensity
- Precipitation type
- Precipitation quantity
- Solar radiation
- Lightning detection
- Air pressure
- Wind direction
- Wind speed

One external temperature or rain sensor is connectable.

WS800-UMB includes lightning detection by an integrated sensor analysing the radio wave emission of lightnings. It delivers a count of recognized lightnings. The sensor analyses spectrum and wave form of the received signal to suppress the detection of man made electrical discharges.



All in One

Aspirated temperature/humidity measurement

Open communication protocol:

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

Lufft WS800-UMB Smart Weather Sensor			Order No.
WS800-UMB			8381.U01
Technical Data	Dimensions	Ø approx. 150mm, height 317mm	
	Weight	Approx. 1.5kg	
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	
Precipitation intensity	Resolution	0.1mm/h	
Precipitation quantity	Resolution	0.01mm	
	Measuring range	Drop size 0.3 ... 5mm	
	Reproducibility	Typ. > 90%	
Precipitation type	Rain/snow		
Radiation	Response time (95%)	< 1s	
	Spectral range	300 to 1100nm	
	Measuring range	1400 W/m ²	
	Accuracy	5%	
Lightning detection	Number of lightning events		
Air pressure	Principle	MEMS capacitive	
	Measuring range	300 ... 1200hPa	
	Accuracy	± 0.5 hPa (0...+40°C)	
Wind direction	Principle	Ultrasonic	
	Measuring range	0 ... 359.9°	
	Accuracy	< 3° RMSE > 1.0m/s	
Wind speed	Principle	Ultrasonic	
	Measuring range	0 ... 75m/s	
	Accuracy	±0.3m/s or ±3% (0...35m/s) ±5% (>35m/s) RMS	
General Information	Heating	40VA at 24VDC	
	Protection type housing	IP66	
	Interface	RS485, 2-wire, half-duplex	
	Operating voltage	4...32VDC	
	Operating humidity range	0 ... 100%	
	Operating temperature range	-50 ... 60 °C	

