

Lufft WS600-UMB – Temperature, Relative Humidity, Precipitation, 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
- Air pressure
- Wind direction
- Wind speed

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

Precipitation is measured by a 24 GHz Doppler radar, which measures the drop speed of an individual drop of rain/snow.

Precipitation quantity and intensity are calculated from the correlation between drop size and speed.

The difference in drop speed determines the type of precipitation (rain/snow).

Maintenance-free measurement offers a major advantage over the common tipping spoon and tipping bucket processes.

Ultrasonic sensor technology is used to take wind measurements.

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

One external temperature sensor is connectable.

All in One

Aspirated temperature/humidity measurement

Maintenance-free operation

Open communication protocol:

- UMB-ASCII

- UMB-Binary

- SDI-12

- MODBUS

- Analogue outputs in combination with 8160.UDAC

Lufft WS600-UMB Smart Weather Sensor			Order No.
WS600-UMB EU, USA, Canada			8370.U01
WS600-UMB UK			8370.U02
Technical Data	Dimensions	Ø approx. 150mm, height approx. 343 mm	
	Weight	Approx. 1.5 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	
Precipitation quantity	Resolution	0.01 mm	
	Measuring range	Drop size 0.3 ... 5 mm	
	Reproducibility	typ. >90 %	
Precipitation type	Rain/snow		
Air pressure	Principle	MEMS capacitive	
	Measuring range	300 ... 1200 hPa	
	Accuracy	± 0.5 hPa (0...+40°C)	
Wind direction	Principle	Ultrasonic	
	Measuring range	0 ... 359.9°	
	Accuracy	< 3° RMSE >1.0 m/s	
Wind speed	Principle	Ultrasonic	
	Measuring range	0 ... 75 m/s	
	Accuracy	± 0.3 m/s or 3% (0 ... 35 m/s) RMS of reading, whichever is greater ± 5 % (>35 m/s) RMS	
General Information	Heating	40 VA at 24 VDC	
	Protection type housing	IP66	
	Interface	RS485, 2-wire, half-duplex	
	Op. power consumption	4...32 VDC	
	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
	Road Surface Temperature Sensor WST1		8160.WST1
	Connection cable, 20m		8370.UKAB20

