

# Lufft WS601-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
- 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 tipping spoon and tipping bucket processes. The flexible tipping bucket allows a 0.2mm or a 0.5mm resolution of the rainfall.

Optionally, the WS601-UMB can be equipped with a leaf wetness sensor in addition.

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.**

Lufft WS601-UMB Smart Weather Sensor			Order No.
<b>WS601-UMB</b>			<b>8376.U01</b>
<b>Technical Data</b>	Dimensions	Ø approx. 164 mm, height approx. 445 mm	
	Weight	Approx. 1.7 kg	
<b>Temperature</b>	Principle	NTC	
	Measuring range	-50 ... 60 °C	
	Accuracy	± 0.2 °C (-20 °C ... +50 °C), otherwise ± 0.5 °C (> -30 °C)	
<b>Relative humidity</b>	Principle	Capacitive	
	Measuring range	0 ... 100 % RH	
	Accuracy	± 2 % RH	
<b>Precipitation</b>	Resolution	0.2mm / 0.5mm	
	Accuracy	± 2 %	
<b>Air pressure</b>	Principle	MEMS capacitive	
	Measuring range	300 ... 1200 hPa	
	Accuracy	± 0.5 hPa (0...+40°C)	
<b>Wind direction</b>	Principle	Ultrasonic	
	Measuring range	0 ... 359.9°	
	Accuracy	< 3° RMSE > 1.0 m/s	
<b>Wind speed</b>	Principle	Ultrasonic	
	Measuring range	0 ... 30 m/s	
	Accuracy	± 0.3 m/s or 3 % RMS	
<b>General Information</b>	Heating	20 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	
<b>Accessories</b>	Surge protection		<b>8379.USP</b>
	Power supply 24V/4A		<b>8366.USV1</b>
	UMB Interface converter ISOCON-UMB		<b>8160.UISO</b>
	Digital-analog-converter DACON8-UMB		<b>8160.UDAC</b>
	Leaf wetness sensor WLW100		<b>8358.10</b>
	Temperature Sensor WT1		<b>8160.WT1</b>
	Road Surface Temperature Sensor WST1		<b>8160.WST1</b>
	Connection cable, 20m		<b>8370.UKAB20</b>



All in One

Aspirated temperature/humidity measurement

Open communication protocol:

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