










Lufft UMB Sensor Overview

	Wind	Temperature Rel. humidity Air pressure	Temperature Rel. humidity Air pressure Precipitation	Temperature Rel. humidity Air pressure Radiance (solar radiation)
Titan				
	Ventus			WS310
Platinum				
				WS301/303
Gold				
	V200A	WS300	WS400	WS304
Professional				
	WS200		WS401	WS302



Temperature Rel. humidity Air pressure Wind speed Wind direction	Temperature Rel. humidity Air pressure Wind speed Wind direction Radiance (solar radiation)	Temperature Rel. humidity Air pressure Wind speed Wind direction Precipitation	Temperature Rel. humidity Air pressure Wind speed Wind direction Precipitation Radiation	2 Channel EXPANDER	Protocols
				ANACON	UMB MODBUS ASCII SDI12
	WS510				
				ANACON	UMB MODBUS ASCII SDI12
	WS501/503				
				ANACON	UMB MODBUS ASCII SDI12
WS500	WS504	WS600	WS700		
				ANACON	UMB MODBUS ASCII SDI12
	WS502	WS601			





A Passion for Precision

VENTUS

VENTUS ultrasonic cold weather anemometer was tested under MIL standard-810F method 521.2 proving success in ice free operation. Ventus is corrosion tested for seawater and vibration resistance. It gives the best accuracy with maintenance-free operation.

HALT test

Vibration test According to IEC 60945

*Corrosion test According to MIL-STD-810
Method 509.3*

*Ice-free test According to MIL-STD-810F
Method 521.2*

*Now UL-certified
Underwriters Laboratories Inc.*



Lufft VENTUS-UMB– Ultrasonic Wind Sensor

Metal Housing, 240W-Heater



Extremely precise and maintenance-free measurement of wind velocity and wind direction, as well as calculation of acoustic virtual temperature.

Belongs to Lufft's WS family of professional intelligent sensors with digital and analog interfaces.

The ultrasonic wind sensor is designed without mechanical parts – traditionally known as “cups and vane”.

The digital or analog output delivers instantaneous, average, min or max value with flexible measuring rate. The VENTUS is heated in case of critical ambient conditions. Made for cold climates!

Recommended for:

- Wind turbines
- Marine/ships
- Meteorology
- Building automation

The following outputs/protocols are available:

- NMEA
- UMB-ASCII
- UMB-Binary
- MODBUS (ASCII, RTU)
- SDI-12
- 4 ... 20mA, 0...10V, 0...20mA, 2...10V frequency (analog)

Lufft VENTUS-UMB Wind Sensor		Order No.
VENTUS-UMB for wind energy applications		8371.UMT
Technical data	Dimensions	Ø approx. 150mm, height approx. 170mm
	Weight	Approx. 1.62kg
Wind direction	Principle	Ultrasonic
	Measuring range	0...359.9°
	Resolution	0.1°
	Accuracy	<2° RMSE >1.0m/s
	Start-up threshold	0.1m/s
	Measuring rate	60 partial measurements/ 15 measurements per second
	Measurement output rate	1-10 seconds adjustable – default 10s
Wind speed	Principle	Ultrasonic
	Measuring range	0...90m/s
	Resolution	0.1m/s
	Accuracy	±0.2m/s or ±2% RMS of reading, whichever is greater (0...65m/s) else ±5%
	Start-up threshold	0.1m/s
	Measuring rate	60 partial measurements/ 15 measurements per second
	Measurement output rate	1-10 seconds adjustable – default 10s
Virtual temperature	Principle	Ultrasonic
	Measuring range	-50...70°C
	Resolution	0.1°C
	Accuracy	±2.0°C (without heater and without sun exposure or wind > 4m/s)
	Measuring rate	60 partial measurements/ 15 measurements per second
Air pressure	Principle	MEMS Capacitive
	Measuring range	300...1200hPa
	Accuracy	±1.5hPa
Data output digital	Interface	RS485 semi-/full duplex, isolated
	Baudrate	1200...57600
	Meas. rate instant. value	1-10s
	Measuring rate Avg (arithmetic, vector)	1-10min
	Status	Heating, sensor failure
Data output analog	Only semi-duplex mode	
	Output signal	0...20mA, 4...20mA, 0...10V, 2...10V, 2...2,000 Hz only output 1 (instantaneous, avg, min, max)
	Load	Max. 500 Ohm
	Resolution	16 Bit
General information	Operating temperature	-40...60°C (with heating) -20...60°C (without heating)
	Bus operation	Up to 32 devices
	Operating voltage electronics	12-24VDC / 1.2VA, without heating
	with heating	24VDC / 240VA (140VA + 100VA)
	Connection	8-pole plug
	Housing material	Aluminum, seawater-proof
	Protection	IP66
	Pole diameter	50mm/2"
	Factory certificate	Yes
	Accessories	Surge protection
Power supply 24V/10A		8366.USV2
UMB Interface converter ISOCON-UMB		8160.UISO
Connection cable, 15m incl. connector		8371.UK015
Connection cable, 50m incl. connector		8371.UK050
Connector		8371.UST1