









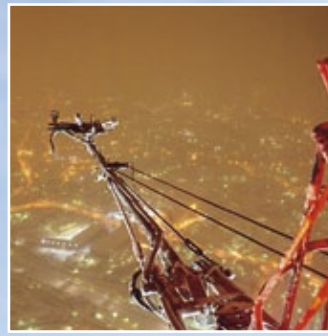
Lufft UMB Sensor Overview

	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	Unit	m/s; km/h; mph; kts	
	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)	
Air pressure	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10s	
	Principle	MEMS Capacitive	
Data output digital	Measuring range	300...1200hPa	
	Accuracy	±1.5hPa	
	Interface	RS485 semi-/full duplex, isolated	
Data output analog	Baudrate	1200...57600	
	Meas. rate instant. value	1-10s	
	Measuring rate Avg (arithmetic, vector)	1-10min	
	Status	Heating, sensor failure	
	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	8379.USP-V
		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	