

Lufft VENTUS-X-UMB - Ultrasonic Wind Sensor Metal Housing, 240 W-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...20 mA, 2...10V frequency (analog)

Lufft VENTUS-UMB Wind Sensor		Order No.
VENTUS-UMB for wind energy applications		8371.UMTX
Technical data	Dimensions	Ø approx. 150 mm, height approx. 170 mm
	Weight	Approx. 1.62 kg
Wind direction	Principle	Ultrasonic
	Measuring range	0 ... 359.9°
	Resolution	0.1°
	Accuracy (0...75m/s)	<2° RMSE >1.0 m/s
	Start-up threshold	0.1 m/s
	Measuring rate	60 partial measurements/ 15 measurements per second
	Measurement output rate	1-10 seconds adjustable – default 10 s
Wind speed	Principle	Ultrasonic
	Measuring range	0 ... 90m/s
	Resolution	0.1 m/s
	Accuracy (0...75m/s)	± 0.2 m/s or ± 2% RMS of reading, whichever is greater (0...65m/s) else ± 5%
	Start-up threshold	0.1 m/s
	Measuring rate	60 partial measurements/ 15 measurements per second
	Measurement output rate	1-10 seconds adjustable – default 10 s
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 10 s
Data output digital	Principle	MEMS Capacitive
	Measuring range	300 ... 1200 hPa
	Accuracy	± 1.5 hPa
Data output analog	Interface	RS485 semi-/full duplex, isolated
	Baudrate	1200-57600
	Meas. rate instant. value	1-10 s
	Measuring rate Avg (arithmetic, vector)	1-10 min
	Status	Heating, sensor failure
General information	Only semi-duplex mode	
	Output signal	0 ... 20 mA, 4 ... 20 mA, 0 ... 10V, 2 ... 10V, 2 ... 2,000 Hz only output 1 (instantaneous, avg, min, max)
	Load	max. 500 Ohm
	Resolution	16 Bit
Accessories	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	IP68
	Pole diameter	50 mm/2"
	Factory certificate	yes
	Surge protection	8379.USP-V
Power supply 24V/10A	8366.USV2	
UMB Interface converter ISOCON-UMB	8160.UISO	
Connection cable, 15 m incl. connector	8371.UK015	
Connection cable, 50 m incl. connector	8371.UK050	
Connector	8371.UST1	