

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...20 mA, 2...10V frequency (analog)

Lufft VENTUS-UMB Wind Sensor		Order No.
VENTUS-UMB for wind energy applications		8371.UMT
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	<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	±0.2 m/s or ± 2 % RMS of reading, (whichever is greater)
	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	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 ... 1200 hPa
	Accuracy	±1.5 hPa
Data output digital	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
	Data output analog	Only semi-duplex mode
General information	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
	Operating temperature	-40 ... 60 °C (with heating) -20 ... 60 °C (without heating)
	Bus operation	Up to 32 devices
	Operating voltage electronics	24 VDC ±10 % or 24 VDC/1.2 VA without heating 12 VDC
	with heating	24 VDC, max. 240 VA (140 W + 100 W)
	Connection	8-pole plug
	Housing material	Aluminum, seawater-proof
	Protection	IP66
Pole diameter	50 mm/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, 15 m incl. connector	8371.UK015
	Connection cable, 50 m incl. connector	8371.UK050
	Connector	8371.UST1