

VENTUS-Ultrasonic wind sensor

Metal housing and 200W-heater

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

Belongs to Luffts WS family of professional intelligent sensors with digital and analog interfaces.

The ultrasonic wind sensor is designed without mechanical parts as they have been used with traditional “cups and vanes”.

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

Recommended for:

- wind turbines
- marine/ships
- meteorology
- building automation

The following outputs are available:

- NMEA data protocol
- ASCII UMB protocol
- binary UMB protocol
- 4.. 20 mA analog



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Technical Data

Technical Data	Order No.
VENTUS-UMB	8371.UM
Wind speed	
Principle	Ultrasonic
Measuring range	0...65m/s
Resolution	0,1m/s (standard)
Accuracy	± 0,2m/s RMSE (<2m/s) ± 1,5% RMSE (>=2m/s) of measurement
Response time	0,1m/s
Measuring rate	60 partial measurements/ 15 full measurements per second
Measurement output rate	1-10 seconds adjustable, default 10 s
Unit	m/s; km/h; mph; kts
Wind direction	
Principle	Ultrasonic
Measuring range	0...360°
Resolution	0,1° (standard)
Accuracy	± 1° RMSE >1,0m/s
Response time	0,1m/s
Measuring rate	1 Second
Virtual temperature	
Principle	Ultrasonic
Measuring range	-50°C...+70°C
Resolution	0,1 K
Accuracy	± 2,0K (without heater and without sun exposure)
Measuring rate	1 Second
Data output digital	
Interface	RS 485 semi-/full duplex, isolated
Baud rate	1200-57600
Measurement rate instantaneous value	1-10s
Measurement Avg (arithmetic, vector), Min, Max	1-10min
Status	Heating, sensor failure
Data output analog	
output signal	semi-duplex mode
Load	4-20 mA (instantaneous, avg, min, max)
Resolution	max. 300 Ohm
Resolution	16bit
General	
Operating temperature	-40..+60°C (with heating)
Bus operation	up to 255 devices
Operating voltage electronics	8...36 V DC or 24 V DC/1,2 VA
with heater	24 V DC, max. 200 VA
connection	8 pole plug, Thies-compatible
Housing material	Anodized aluminium, seawater-proof
Protection	IP 65
Dimensions	Ø 150 x 145 mm
Weight	approx. 2,5 kg
Pole diameter	50 mm / 2"
Measurements protocol	yes



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