Lufft Ventus-UMB Ultrasonic Wind Sensor

Product #: **8371.UMT**

USD Price: Contact Hach

VENTUS: Very robust, precise and maintenance-free measurement of wind speed, wind gust and wind direction even in the lowest temperature. The accurate wind sensor uses the run-time differential method for determining the wind speed and wind direction. It provides output for instantaneous values, vector and scalar means, the maximum gust of wind and wind direction, the maximum/minimum values and the virtual temperature. Data output through serial or analogue interfaces provides compatibility of the Lufft Ventus for commercially available hydrometeorological dataloggers and PLC systems. An automatic heater ensures reliable operation even in the lowest temperature.

Suitable for extreme applications
Vibration and seawater resistant, integrated heater guarantees ice-free operation in extremely low temperatures until -40 °C

Versatile
Built-in data pre-processing, universal interfaces and selectable output protocols – compatible with OTT-dataloggers, commercially available HydroMet dataloggers and PLS systems.

Maintenance-free
Maintenance-free operation – no moving parts that can wear out thanks to ultrasonic measuring method; no need for re-calibration.

Specifications

*Parameters Measured:	Wind Speed
	Wind Direction
	Virtual Temperature
	Barometric Pressure
Accuracy:	Wind Direction: ±2° RMSE >1.0 m/s
	Wind Speed: ±0.2 m/s or ±2 % RMS of reading (whichever is greater) for 0 - 65 m/s - otherwise ±5 %
	Virtual Temperature: ±2.0 °C (without heater and without sun exposure or wind > 4 m/s)
	Air Pressure:±1.5 hPa
Ambient Temperature:	-40 - +176 °F (-40 - +80 °C)
Analog Output:	Yes
Analog Outputs:	4 - 20 mA or 0 - 10 V
Analogue Ouput Signal:	4 - 20 mA or 0 - 10 V or 2 - 2000 Hz
Baud Rate:	1200 - 57600

Bus Operation:	Up to 32 devices
Cable Connection:	8 pole plug
Diameter:	2 in (50 mm)
Dimensions:	Ø approx. 5.9 in (150 mm), H approx. 6.7 in (170 mm)
Factory Certificate:	Yes
Housing Material:	Aluminium, seawater - proof
Interface:	RS485 semi-/full duplex, isolated
IP Rating:	IP68
Measurement technology:	Ultrasonic
Measuring Range:	Wind Direction: 0 - 359.9 °
	Wind Speed: 0 - 295.3 ft/s (0 - 90 m/s)
	Virtual Temperature: -58 - +158 °F (-50 - +70 °C)
	Air Pressure: 300 - 1200 hPa
Operating Height:	3827 yd (Max) (3500 m)
Operating voltage:	12 - 24 VDC / 1.2 VA (without heating)
	24 VDC / 240 VA (140 VA + 100 VA) (with heating)
Product highlights:	Ice-free operation in extreme freezing conditions due to additional transducer heater
	Maintenance-free measurement
	Suitable for extreme ambient conditions
	Vibration and seawater resistant
	Compatible interfaces
Resolution:	Data output: 16 bit
	Wind Direction: 0.1 °
	Wind Speed: 0.33 ft/s
	Virtual Temperature: 0.2 °F
	Air Pressure: 0.1 hPa
Sample Rate:	Instantaneous: 1 - 10 s
	Average: 1 - 10 min
System Monitoring & Controls: Local Status Indication:	Heating, sensor failure
Testing:	Jarring 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
	Highly Accelerated Life Test
Transducer Heater:	No
Weight:	Approx. 3.6 lbs (1.6 kg)
Wind Speed:	0 - 295 ft/s (0 - 90 m/s)