Extremely precise and maintenance-free measurement of wind speed and wind direction

- **Parameters measured**
  Wind speed, wind direction, virtual temperature, barometric pressure

- **Measurement technology**
  Ultrasonic

- **Product highlights**
  Wind detection with birdproof construction, maintenance-free measurement, suitable for extreme ambient conditions, ice-free operation, compatible interfaces

- **Interfaces**
  SDI-12, RS-485, various RS-485-protocols, analogue output

- **Article number**
  8371.UA01

Extremely precise and maintenance-free measurement of wind velocity and wind direction as well as calculation of acoustic virtual temperature. 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 V200A-UMB is heated in case reaching critical ambient conditions. Recommended for: meteorology or building automation. The following outputs/protocols are available: NMEA, ASCII, UMB and 4.. 20 mA analog.

General

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Lufft

Technical data

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Dimensions	Ø approx. 150 mm, height approx. 170 mm
Weight	Approx. 0.8kg
Permissible ambient temperature	-40...60°C (with heating)
	-20...60°C (without heating)
Supply voltage with heating / without heating	24 VDC, max. 20 VA / 12 V
Bus operation	Up to 32 devices
Operating voltage electronics	24 VDC ±10 % or 24 VDC/1.2 VA
	without heating 12 VDC
Electrical connection	8 pole plug
Housing material	Plastic
Protection type	IP66
Pole diameter	50mm / 2"
Factory certificate	Yes

Data output digital

Data output digital	
Interface	RS485 semi-/full duplex, isolated
Baud rate	1200 ... 57600
Measurement rate instantaneous value	250 ms; 1-10 s
Measurement rate avg (arithmetic, vector), Min, Max	1...10 min
Status	Heating, sensor failure

Data output analog

Data output analog	
Data output analog	Only semi-duplex mode
Output signal	0...20 mA, 4...20 mA, 0...10V, 2...10V,
	2...2,000 frequency (instantaneous, avg, min, max)
Load	Max. 300 Ohm
Resolution	16 bit
Maximum operating height	3500m

Air pressure

Air pressure	
Principle	MEMS capacitive
Measuring range	300 ... 1200 hPa
Unit	hPa
Accuracy	±1.5 hPa (0...40°C)

Wind direction

Wind direction	
Principle	Ultrasonic
Measuring range	0 ... 359.9 °
Unit	°
Accuracy	< 3° (> 1m/s) RMSE
Resolution	0.1 °

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Wind speed	
Principle	Ultrasonic
Measuring range	0 ... 90 m/s
Unit	m/s
Accuracy	±0.3 m/s or ±3% (0 ... 35m/s) RMS (the greater value counts); ±5% (> 35m/s) RMS
Resolution	0.1 m/s

Virtual temperature	
Principle	Ultrasonic
Measuring range	-50 ... 70 °C
Unit	°C
Accuracy	± 2.0°C (without heater and without sun exposure or wind > 4m/s)
Resolution	0.1 °K

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Technical modifications and errors excepted - Created 20/12/2023
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