

# V200A – Ultrasonic Wind Sensor Plastic Housing, 30 W-Heater, Electronic Compass



**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 as known with traditional "cups and vanes".

The digital or analog output delivers instantaneous, average, min or max value with flexible measuring rate. The V200A is heated to remove frost and ice formation from the sensor.

#### Recommended for:

- Meteorology
- Building automation

#### The following outputs/protocols are available:

- NMEA
- ASCII
- UMB
- MODBUS (ASCII, RTU)
- SDI12
- 4 ... 20 mA, 0...10V, frequency (analog)

V200A-UMB Ultrasonic Wind Sensor			Order No.
<b>V200A-UMB</b>			<b>8371.UA01</b>
<b>Technical Data</b>	Dimensions	Ø approx. 150 mm, height approx. 200 mm	
	Weight	approx. 0.8 kg	
<b>Wind direction</b>	Principle	Ultrasonic	
	Measuring range	0 ... 359.9°	
	Resolution	0.1° (standard)	
	Accuracy	< 3° RMSE from 1.0 m/s	
	Start-up Threshold	0.3 m/s	
	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10 s	
<b>Wind speed</b>	Principle	Ultrasonic	
	Measuring range	0 ... 75 m/s	
	Resolution	0.1 m/s	
	Accuracy (0...60m/s)	±0.3 m/s or 3% (0 ... 35 m/s) of reading, whichever is greater ±5% (>35 m/s) RMSE	
	Start-up threshold	0.3 m/s	
	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10 s	
<b>Virtual temperature</b>	Unit	m/s; km/h; mph; kts	
	Principle	Ultrasonic	
	Measuring range	-50 °C ... +70 °C	
	Resolution	0.1 °K	
	Accuracy	± 2.0 K (without heater and without sun exposure)	
<b>Air pressure</b>	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10 s	
	Principle	MEMS Capacitive	
<b>Data output digital</b>	Measuring range	300 ... 1200 hPa	
	Accuracy	±1.5 hPa	
	Interface	RS485 semi-/full duplex, isolated	
	Baudrate	1200-57600	
<b>Data output analog</b>	Meas. rate instant. value	1-10 s	
	Measuring rate Avg (arithmetic, vector), Min, Max	1-10 min	
	Status	Heating, sensor failure	
	Only semi-duplex mode		
	Output signal	4 ... 20 mA, 0...10V frequency (instantaneous, avg, min, max)	
<b>General Information</b>	Load	max. 300 Ohm	
	Resolution	16 Bit	
	Operating temperature	-40 ... +60 °C (with heating)	
	Bus operation	Up to 32 devices	
	Operating voltage electronics	24 VDC ±10% or 24 VDC/1,2 VA	
	with heating	24 VDC, max. 20 VA	
	Connection	8-pole plug	
	Housing material	Plastic	
	Protection	IP65	
	Pole diameter	50 mm/2"	
<b>Accessories</b>	Factory certificate	yes	
	Surge protection		<b>8379.USP-V</b>
	Power supply 24 V/4 A		<b>8366.USV1</b>
	UMB Interface converter ISOCON		<b>8160.UISO</b>
	Connection cable, 15 m incl. connector		<b>8371.UK015</b>
	Connection cable, 50 m incl. connector		<b>8371.UK050</b>
Connector		<b>8371.UST1</b>	