Ultrasonic Anemometer 1D

Different measuring values are

available, among others:

• Flow vector

• Scalar flow velocity

• Acoustic-virtual temperature

• Standard deviation of the wind velocity

• Standard deviation of the scalar air flow

• Standard deviation of the acoustic-virtual temperature

• Flow velocity of the gust

The instrument is especially suited for the use

• In the traffic engineering

• Indoor flow measurement

• In tunnels

• In tubes

The measurement principle allows, compared to the classic anemometers, an inertia-free measurement of running variable dimensions with highest precision and accuracy. It is especially suited for the measurement of gust- and peak values. The measuring values can be output digitally and/or in analogue form. The serial or analogue output of the data is carried out alternatively as instantaneous value or as gliding mean value with selectable time frame.
If necessary, the sensor arms are automatically heated with critical ambient temperatures.

Specification

Part number: 4.3865.0x.xxx

Wind speed	
Measuring range	0 ... 75 m/s
Resolution	0.1 m/s
Accuracy	±0.1 m/s rms (5 m/s) ±2 % rms (> 5 m/s)
Wind direction	
Measuring range	1 or 181 °
Virtual temp.	
Measuring range	-50 ... +80 °C

Resolution	0.1 K
Accuracy	±0.5 K
Data output digital	
Interface	RS485 / RS422
Baudrate	1200 ... 921600 Baud
Data values	instant. values, average values
Output rate	1 per 10 msec up to 1 per 60 sec
Status signals	heating, distance error
Data output analog	
Wind speed	0 ... 20 mA 4 ... 20 mA 0 ... 10 V 2 ... 10 V
Stromausgang	max. 400 ê
Voltage output	min. 4000 ê
Resolution	16 bit
Operating voltage	
Electronic	8 ... 42 V DC or 12 ... 28 V AC / 2.5 W
Heating	24 V AC/DC, typ 40 W
General	
Bus operation	up to 98 sensors
Electr. connection	5 m cable
Mounting	plate with holes
Housing	stainless stell (V4A) AiSi316Ti
Protection	IP 67
Dimension	424 mm x 287 mm
Weight	2.5 kg

Versions

As per 4.3865.0x.xxx, but:

Product number 4.3865.00.340

Data output digital

Baudrate	9600 Baud

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Duplex mode	Full duplex
Data telegram	VDT-Telegram (Telegram2)
Output rate	10 per 1 sec

Product number 4.3865.01.310

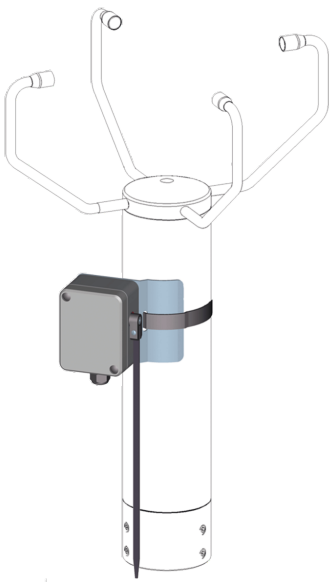
Data output digital

Baudrate	9600 Baud
Duplex mode	Half duplex
Data telegram	no independent data output

Data output analog

Type	3 x 4 ... 20 mA

Accessories

Product	Product name	Brief description
	Ultrasonic Bird deflector 4.3800.90.000	The Ultrasonic Bird Deflector protects the ultrasonic anemometer against measurement faults, which might be caused by different species of birds. **Data output digital** Switching output: max. 24 V AC/DC **Interface** Type: RS485 Data format: 8N1 Baud rate: 2400 ... 115200 Baud **General** Power supply: 12 ... 24V DC 24 V AC Electr. connection: cable gland Housing: Polycarbonate Protection: IP 65 Weight: 0.2 kg

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