

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

Product number 4.3865.01.310

Data output digital

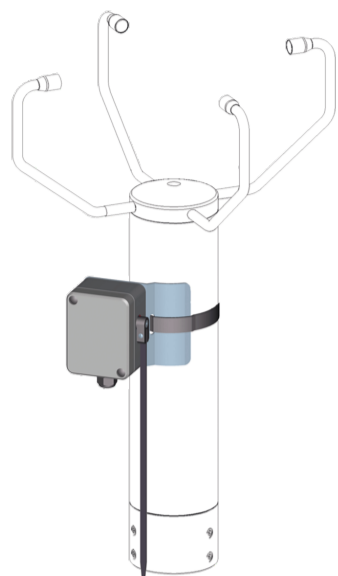
Baudrate 9600 Baud
Duplex mode Half duplex
Data telegram no independent data output

Data output analog

Type 3 x 4 ... 20 mA

Accessories

Product	Product name	Brief description
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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

