

Ultrasonic Anemometer 2D

More than 35 different measurement values are available, for ex.:

- Orthogonal wind velocity vectors (X- and Y-distance)
- Scalar wind velocity
- Wind direction
- Acoustic-virtual temperature
- Acoustic-virtual temperature of the orthogonal measurement distances (X- and Y-distance)
- Standard deviation of the vectorial wind velocity (X and Y-distance)
- Standard deviation of the scalar wind velocity
- Standard deviation of the wind direction
- Standard deviation of the acoustic-virtual temperature
- Wind velocity of the gust acc. to WMO
- Wind direction of the gust acc. to WMO

The instrument is especially suitable for the use in the fields of

- Meteorology
- Climatology
- Regenerative energy, wind energy plant
- Traffic engineering, aviation and navigation
- Pollutant dispersal
- Wind alarm devices, building construction and building safety
- Indoor flow measurement
- And in alpine field of application

The ultrasonic measurement principle allows, compared to the classic anemometers, an inertia-free measurement of running variable dimensions with highest precision and accuracy. It is especially suitable for the measurement of gust- and peak values.

The measurement values can be transmitted digitally and/or in analogue form.

The serial or analogue output of the data is carried out alternatively as instantaneous value or with selectable time frame.

If necessary, the sensor arms are automatically heated in case of critical ambient temperatures. The possibility of malfunction, caused by icing, is minimized.

Model no. 4.3820.3x.xxx, thanks to the additionally installed ultrasonic converter heating, is suitable even for the more difficult use in locations where frequently icing is to be expected

Specification

Part number: 4.3820.34.398

Data output digital

Interface	RS485 / RS422
Baudrate	1200 ... 921600 Baud
Data values	instant. values, average values, standard deviation

Output range 1 per 10 msec up to
1 per 60sec

Status signals heating, Meas section error, Temperature of meas section

Data output analog

Wind speed 0 ... 20 mA
4 ... 20 mA
0 ... 10 V
2 ... 10 V

Stromausgang max. 400 ê

Wind direction 0 ... 20 mA
4 ... 20 mA
0 ... 10 V
2 ... 10 V

Voltage output min. 4000 ê

Resolution 16 bit

Data input analog (alternative)

Chanel 3

Resolution 16bit

Operating voltage

Electronic 8 ... 60V DC or
12 ... 42 V AC / 2.5 W

Heating 24 V AC/DC, typ 240 W

General

Bus operation up to 98 sensors

Electr. connection 8 pol. connector

Mounting on a mast tube 1,5''

Housing stainless steel (V4A) AiSi316Ti

Protection IP 65

Dimension Ø 424 mm x 287 mm

Weight 2.5 kg

Versions

As per 4.3820.34.398, but:

Product number 4.3820.00.300

Data output digital

Baudrate 9600 Baud

Duplex mode Full duplex

Data telegram no independent telegram output

Product number 4.3820.00.340

Data output digital

Baudrate 9600 Baud

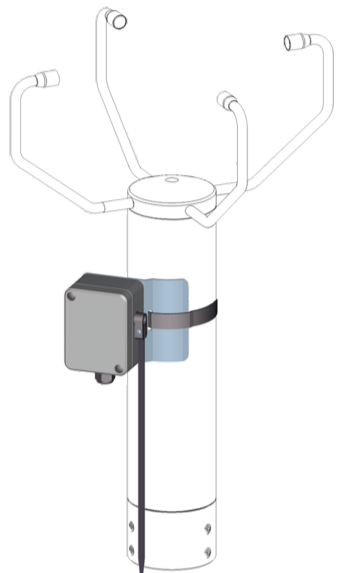
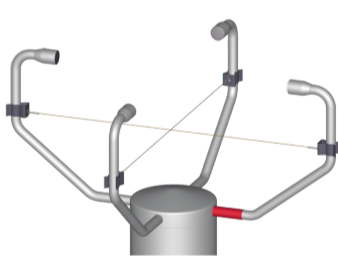
Duplex mode Full duplex

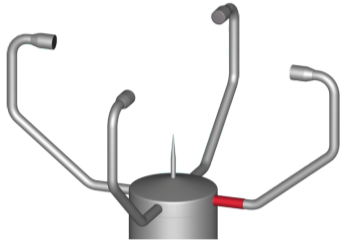

Data telegram VDT-Telegram (Telegram2)

Output range

10 per 1 sec

Accessories

Product	Product name	Brief description
	Ultrasonic Bird deflector 4.3800.90.000	<p>The Ultrasonic Bird Deflector protects the ultrasonic anemometer against measurement faults, which might be caused by different species of birds.</p> <p>Data output digital</p> <p>Switching output max. 24 V AC/DC</p> <p>Interface</p> <p>Type RS485</p> <p>Data format 8N1</p> <p>Baud rate 2400 ... 115200 Baud</p> <p>General</p> <p>Power supply 12 ... 24V DC 24 V AC</p> <p>Electr. connection cable gland</p> <p>Housing Polycarbonate</p> <p>Protection IP 65</p> <p>Weight 0.2 kg</p>
	Device to refuse birds 507245	<p>The device to refuse birds shall prevent smaller birds in the distance of the US transformer from sitting on the instrument, thus providing for an undisturbed operation.</p>
	Connecting cable 20 m 507752	<p>Model with</p> <ul style="list-style-type: none"> length 20 m <p>General</p> <p>Cable length 20 m</p>
	Connecting cable 25 m 507753	<p>Model with</p> <ul style="list-style-type: none"> length 25 m <p>General</p> <p>Cable length 25 m</p>

	Connecting cable 50775x	Suitable cable for 4.3820/30/75/80/81 • length: see versions General Cable length see versions Cable PUR 4 x 0,75 +2x2x0,14 mm ²
	Bird spike 508396	The bird spike prevents bigger birds from resting in the measurement path between the ultrasonic transducers, providing an undisturbed operation. General Material V4A (AiSi 316L)
	Meteo-Online 9.1700.98.x01	Meteo-Online is a software for detecting, filing, and displaying data of meteorological measuring instruments. The display of the data is carried out graphically as diagram and/or as text The user has the possibility to place the display-elements free on the screen, and to save them. Data display Monitor - display - Values - Diagrams - Tables - Windrose - Time - Date Compatibility Connectable instruments - US-Anemometer - Datalogger - Clima Sensor - Weather station WSC11 - Wind display - etc. System requirements PC mit - Prozessor > 1 GHz - RAM > 1 GB Operating system - Windows 2003 SP2 - Windows Server 2008 - Windows 7 - Windows Server 2008 R2 - Windows 7 SP1 - Windows Server 2008 R2 SP1 - Windows 8 - Windows 10

