Ultrasonic Anemometer 3D

More than 70 different measurement values are available, for ex.:

- Wind velocity in X/Y/Z-direction
- Total wind velocity
- Wind velocity azimuth
- Wind direction azimuth
- Wind velocity elevation
- Wind direction elevation
- Acoustic-virtual temperature
- Standard deviation of the wind velocity in X/Y/Z-direction
- Standard deviation of the total wind velocity
- Standard deviation of the wind velocity azimuth
- Standard deviation of the wind direction azimuth
- Standard deviation of the wind direction elevation
- Standard deviation of the acoustic-virtual temperature
- Statistic functions such as variance, co-variance, turbulence intensity
- Wind velocity X/Y/Z of the gust acc. to WMO
- Wind direction of the gust (elevation) acc. to WMO

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

- Meteorology
- Climatology
- Traffic engineering, aviation and navigation
- 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.

Specification

Part number: 4.383x.2x.xxx

Wind speed

Measuring range	0 ... 85 m/s
Resolution	0.1 m/s (standard) 0.01 m/s (user defined)
Accuracy	±(0.1 m/s +1 %) rms (0 ... 35 m/s) ±2 % rms (35 ... 65 m/s) ±3 % rms (65 ... 85 m/s)

Wind direction

Measuring range	0 ... 360 ° / 540 ° / 720 °
Resolution	1 ° (standard) 1 ° (user defined)
Accuracy	±1 ° (1 ... 35 m/s) ±2 ° (35 ... 65 m/s) ±4 ° (65 ... 85 m/s)

Virtual temp.	
Measuring range	-50 ... +80 °C
Resolution	0.1 K
Accuracy	±0.5 K
Data output digital	
Interface	RS485 / RS422
Baudrate	1200 Baud ... 921600 Baud
Data values	instant. values, average values, standard deviation
Output range	1 per 10 msec up to 1 per 60 sec
Status signals	heating, Meas section error, Temperature of meas section
Data output analog	
Measured values	WS - Vectors VxVyVz WS - Azimut, WD - Azimut, WS Elevation
Wind speed	0 ... 20 mA; 4 ... 20 mA; 0 ... 10 V; 2 ... 10 V;
Stromausgang	max. 400
Wind direction	0 ... 20 mA; 4 ... 20 mA; 0 ... 10 V; 2 ... 10 V;
Voltage output	min. 4000
Resolution	16 bit
Data input analog (alternative)	
Chanels	3 x 0 ... 10 V
Resolution	16 bit
Operating voltage	
Electronic	8 ... 78 V DC or 12 ... 55 V AC / 2.5 W
Heating	24 V AC/DC, typ 150 W
General	
Bus operation	up to 98 sensors
Electr. connection	8 pol. connector
Mounting	on mast tube 1,5``
Housing	stainless steel (V4A) AiSi316Ti
Protection	IP 67
Dimension	600 mm x 300 mm
Weight	3.4 kg

Versions

As per 4.383x.2x.xxx, but:

Product number 4.3830.20.300

Data output digital

Baudrate	9600 Baud
Duplex mode	Full duplex
Data telegram	no independent telegram output

Product number 4.3830.20.340

Data output digital

Baudrate	9600 Baud
Duplex mode	Full duplex
Data telegram	VDT-Telegram (Telegram2)
Output range	10 per 1 sec

Product number 4.3830.21.310

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

Product number 4.3830.22.300

Data output digital

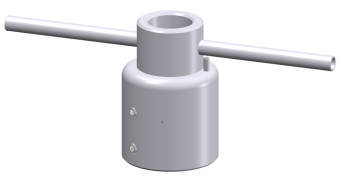
Baudrate	9600 Baud
Duplex mode	Half duplex
Data telegram	no independent data output

Data output analog

Type	3 x 0 ... 10 V; Vx, Vy, Vz

Accessories

Product	Product name	Brief description
	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 mm²



Northring for Ultrasonic anemometer 508696

The adapter is used for the north alignment of a Ultrasonic anemometer.

General

Length	90 mm
Material	Alluminum anodized (AlMgSi1)
Weight	0.4 kg
Mounting	for mast Ø 50 mm for sensor Ø 50 mm

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

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