

## WIND

### Ultrasonic Anemometer 3D for Cold Climate

**Part number: 4.383x.4x.xxx**

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.4x.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)
<b>Virtual temp.</b>	
Measuring range	-50 ... +80 °C
Resolution	0.1 K
Accuracy	±0.5 K
<b>Data output digital</b>	
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 60 sec
Status signals	heating, Meas section error, Temperature of meas section
<b>Data output analog</b>	
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
<b>Data input analog (alternative)</b>	
Chanel	3 x 0 ... 10 V
Resolution	16bit
<b>Operating voltage</b>	
Electronic	8 ... 78 V DC or 12 ... 55 V AC / 2.5 W
Heating	48 V AC/DC, typ 360 W
<b>Heating</b>	
Heated components	sensor arms ultrasonic transducers housing
<b>General</b>	
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.4x.xxx, but:

### Product number 4.3830.40.300

#### Data output digital

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

### Product number 4.3830.40.340

#### Data output digital

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

### Product number 4.3830.41.300

#### Data output digital

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

#### Data output analog

Type	3 x 0 ... 20 mA
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## Accessories

Product	Product name	Brief description
	Connecting cable 50775x	Suitable cable for 4.3820/30/75/80/81  • length: see versions  <b>General</b> Cable length                      see versions Cable                                    PUR 4 x 0,75 +2x2x0,14 mm <sup>2</sup>





**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
Fixing boring	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	<ul style="list-style-type: none"> <li>- Values</li> <li>- Diagrams</li> <li>- Tables</li> <li>- Windrose</li> <li>- Time</li> <li>- Date</li> </ul>
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**Compatibility**

Connectable instruments	<ul style="list-style-type: none"> <li>- US-Anemometer</li> <li>- Datalogger</li> <li>- Clima Sensor</li> <li>- Weather station WSC11</li> <li>- Wind display</li> <li>- etc.</li> </ul>
System requirements	PC mit <ul style="list-style-type: none"> <li>- Prozessor &gt; 1 GHz</li> <li>- RAM &gt; 1 GB</li> </ul>
Operating system	<ul style="list-style-type: none"> <li>- Windows 2003 SP2</li> <li>- Windows Server 2008</li> <li>- Windows 7</li> <li>- Windows Server 2008 R2</li> <li>- Windows 7 SP1</li> <li>- Windows Server 2008 R2 SP1</li> <li>- Windows 8</li> <li>- Windows 10</li> </ul>

