

# WIND

## Ultrasonic Anemometer Compact

Part number: 4.3875.xx.xxx

The following measurement data are available:

- Orthogonal wind velocity vectors (X- and Y-distance)
- Scalar / vectorial wind velocity wind direction
- Acoustic-virtual temperature

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

- Regenerative power generation, wind power plants
- Industry automation
- Wind warning devices, building construction and building security
- Traffic engineering, aviation and navigation
- Meteorology
- Climatology

The measurement principle allows, compared to the classic anemometers, an inertia-free measurement of running variable dimensions with highest precision and accuracy.

The data can be served

- analogically\*, as standard signal or / and digitally in
- ASCII THIES- Format or
- binary as MODBUS RTU protocol

If necessary, the instrument is automatically heated at critical ambient temperatures. Thus, the risk of malfunction caused by icing is minimized.

The model no. 4 3875 2x xxx is equipped with an additional baro transmitter.

\* only in HD (half duplex) operation  
no output of virtual temperature

## Specification

Part number: 4.3875.xx.xxx

Wind speed	
Measuring range	0 ... 75 m/s
Resolution	0.1 m/s (standard) 0.01 m/s (special telegrams)
Accuracy	±0.2 m/s rms (< 5 m/s) ±2 % rms (5 m/s ... 60 m/s)
Wind direction	
Measuring range	0 ... 360 °
Resolution	1 ° 1 ° (standard)
Accuracy	±2 ° WS > 1 m/s



**Virtual temp.**

Measuring range	-50 ... +70 °C
Resolution	0.1 K
Accuracy	±2 K

**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 10 sec
Status signals	heating, distance error, Temperature of meas section
Protocol	ASCII / MODBUS RTU

**Data output analog**

Wind speed	0 ... 20 mA 4 ... 20 mA 0 ... 10 V 2 ... 10 V
Stromausgang	max. 300
Wind direction	0 ... 20 mA 4 ... 20 mA 0 ... 10 V 2 ... 10 V
Voltage output	min. 3000
Resolution	16 bit

**Data input analog (alternative)**

Chanel	3
Resolution	16 bit

**Operating voltage**

Electronic	8 ... 60V DC or 12 ... 42 V AC / 1.2 W
Heating	24 V AC/DC, max. 250 W

**Heating**

Heated components	bottom plate, cover plate, ultrasonic transducers
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**General**

Bus operation	up to 98 sensors
Electr. connection	8 pol. connector
Mounting	on a mast tube 1,5''
Housing	AL, hard-anodized
Protection	IP 67
Dimension	Ø 200 mm x 144 mm
Weight	approx. 2 kg

## Versions

As per 4.3875.xx.xxx, but:

### Product number 4.3875.00.340

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

### Product number 4.3875.01.300

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

### Product number 4.3875.01.311

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
Heating	
Heating control	HP11

### Product number 4.3875.02.300

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

### Product number 4.3875.01.381

Data output digital	
Baudrate	9600 Baud
Duplex mode	Half duplex
Data telegram	MODBUS RTU
Data output analog	
Type	3 x 4 ... 20 mA

**Product number 4.3875.01.310**
**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
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**Heating**

Heating control	HP10
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**Product number 4.3875.00.260**
**Data output digital**

Baudrate	4800 Baud
Duplex mode	Full duplex
Data telegram	NMEA telegram

**Heating**

Heating control	HP11
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## Accessories

Product	Product name	Brief description								
	Connecting cable 50775x	<p>Suitable cable for 4.3820/30/75/80/81</p> <ul style="list-style-type: none"> <li>length: see versions</li> </ul> <p><b>General</b></p> <table border="1"> <tr> <td>Cable length</td> <td>see versions</td> </tr> <tr> <td>Cable</td> <td>PUR 4 x 0,75 +2x2x0,14 mm<sup>2</sup></td> </tr> </table>	Cable length	see versions	Cable	PUR 4 x 0,75 +2x2x0,14 mm <sup>2</sup>				
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	Northring for Ultrasonic anemometer 508696	<p>The adapter is used for the north alignment of a Ultrasonic anemometer.</p> <p><b>General</b></p> <table border="1"> <tr> <td>Length</td> <td>90 mm</td> </tr> <tr> <td>Material</td> <td>Alluminum anodized (AlMgSi1)</td> </tr> <tr> <td>Weight</td> <td>0.4 kg</td> </tr> <tr> <td>Fixing boring</td> <td>for mast Ø 50 mm for sensor Ø 50 mm</td> </tr> </table>	Length	90 mm	Material	Alluminum anodized (AlMgSi1)	Weight	0.4 kg	Fixing boring	for mast Ø 50 mm for sensor Ø 50 mm
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**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.

<b>Data display</b>	
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>
<b>Compatibility</b>	
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>

