

## Ultraschall Anemometer 2D Compact

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)<br>0.01 m/s (special telegrams)      |
| Accuracy        | ±0.2 m/s rms ( 5 m/s )<br>±2 % rms ( 5 m/s ... 60 m/s ) |

### Wind direction

|                 |                       |
|-----------------|-----------------------|
| Measuring range | 0 ... 360 °           |
| Resolution      | 1 °<br>1 ° (standard) |

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| Accuracy                               | ±2 ° WS › 1 m/s                                        |
| <b>Virtual temp.</b>                   |                                                        |
| Measuring range                        | -50 ... +70 °C                                         |
| Resolution                             | 0.1 K                                                  |
| Accuracy                               | ±2 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<br>1 per 10 sec                    |
| Status signals                         | heating, distance error, Temperature of meas section   |
| Protocol                               | ASCII / MODBUS RTU                                     |
| <b>Data output analog</b>              |                                                        |
| Wind speed                             | 0 ... 20 mA<br>4 ... 20 mA<br>0 ... 10 V<br>2 ... 10 V |
| Stromausgang                           | max. 300                                               |
| Wind direction                         | 0 ... 20 mA<br>4 ... 20 mA<br>0 ... 10 V<br>2 ... 10 V |
| Voltage output                         | min. 3000                                              |
| Resolution                             | 16 bit                                                 |
| <b>Data input analog (alternative)</b> |                                                        |
| Chanel                                 | 3                                                      |
| Resolution                             | 16 bit                                                 |
| <b>Operating voltage</b>               |                                                        |
| Electronic                             | 8 ... 60V DC or<br>12 ... 42 V AC / 1.2 W              |
| Heating                                | 24 V AC/DC, max. 250 W                                 |
| <b>Heating</b>                         |                                                        |
| Heated components                      | bottom plate, cover plate,<br>ultrasonic transducers   |
| <b>General</b>                         |                                                        |
| Bus operation                          | up to 98 sensors                                       |
| Electr. connection                     | 8 pol. connector                                       |
| Mounting                               | e.g. Mast tube Ø 50mm                                  |
| Housing                                | AL, hard-anodized                                      |
| Protection                             | IP 68                                                  |
| 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 | 2 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 | 2 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 | 2 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 | 2 x 4 ... 20 mA |
|------|-----------------|

**Product number 4.3875.01.310**

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Data output digital

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

Data output analog

|      |                 |
|------|-----------------|
| Type | 2 x 4 ... 20 mA |
|------|-----------------|

Heating

|                 |      |
|-----------------|------|
| Heating control | HP10 |
|-----------------|------|

Product number 4.3875.00.260

Data output digital

|               |               |
|---------------|---------------|
| Baudrate      | 4800 Baud     |
| Duplex mode   | Full duplex   |
| Data telegram | NMEA telegram |

Heating

|                 |      |
|-----------------|------|
| Heating control | HP11 |
|-----------------|------|

Product number 4.3875.01.319

Data output digital

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

Data output analog

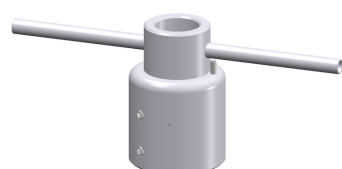
|      |                 |
|------|-----------------|
| Type | 2 x 4 ... 20 mA |
|------|-----------------|

Heating

|                 |     |
|-----------------|-----|
| Heating control | HP0 |
|-----------------|-----|

Accessories

| Product | Product name               | Brief description                                                                                                                                                                                                    |
|---------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Connecting cable<br>50775x | Suitable cable for 4.3820/30/75/80/81<br><br>• length: see versions<br><br><b>General</b><br>Cable length                      see versions<br>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<br>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> |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 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> |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

