

Description

Wind Speed Transmitter

Wind Transmitter "First Class"

The wind transmitter is designed for the acquisition of the horizontal component of the wind speed in the field of meteorology and environmental measuring technology, evaluation of location, and measurement of capacity characteristics of wind power systems. In the plain country the wind transmitter meets all requirements of IEC 61400.121-CD for a 1. class instrument. Special characters are a defined and optimised, dynamic behaviour also at high turbulence intensity, minimal over-speeding, and a low starting value. The measuring value is available at the output as digital signal. It can be transmitted to display instruments, recording instruments, data loggers as well as to process control systems. For winter operation the instrument is equipped with an electronically regulated heating, which guarantees a smooth running of the ball bearings, and prevents the shaft and slot from icing-up

Wind Direction Transmitter

Wind Direction Transmitter "First Class"

The wind transmitter is designed for the acquisition of the horizontal component of the wind direction in the field of meteorology and environmental measuring technology, evaluation of location, and measurement of capacity characteristics of wind power systems. Special characters are a defined and optimised, dynamic behaviour. Depending on the transmitter model the measuring value is available at the output as digital or analogue signal. The output signal can be transmitted to display instruments, recording instruments, data loggers as well as to process control systems. For winter operation the instrument is equipped with an electronically regulated heating.

Order-No.

4.3350.00.000
.10.

4.3150.x0.0xx
.10.

.000

.110

Technical Data

With heating
W/o heating

Measuring range 0.3...75 m/s

Accuracy
0,3 ... 50 m/s < 3% of meas. value
or < 0.3 m/s
50 ... 75 m/s < 6% of meas. value

Linearity r > 0.999 95 (4..20m/s)

Inclined flow
...mean deviation from the cosinus line 1% (in the range ±20°)

Turbulence effect <1% (in the range up to 30% turbulence intensity)

Electr. output 1000 Hz at 50 m/s

Load max. 85 m/s

Delay distance < 3 m

Operating voltage
Electronics 3.3 ... 42 V DC
Heating 24 V AC/DC; 25 W

Ambient temp. -50 ..+ 80°C

Electr. connection 8-pole plug connection onto mast tube R 1"

Mounting

Fixing boring Ø 35 x 25 mm

Dimensions 290 x 240 mm

Protection IP 55

Weight 0.5 kg

Material
Housing alu, anodised
Cup star carbon-fibre-reinforced plastic

With heating
W/o heating

Meas. range 0...360°

Accuracy 1.5°

Electr. output digital, 9- bit Thies serial synchronous

Resolution 1°

Electr. output Potentiom.
0 ... 10 000 W

Resolution 1°

General

Operating voltage
Electronics 3,3 ... 42 V DC
Potentiometer max. 0.5 W
Heating 24 V AC/DC; 25 W

Ambient temp. -50 ..+ 80°C

Starting value 0.5 m/s at 10° (acc. to ASTM D5366-96)

Damping coefficient ≥0.4

Electr. connection 8-pole plug connection onto a mast tube R 1"

Mounting

Fixing boring Ø 35 x 25 mm

Dimensions 390 x 240 mm

Protection IP 55

Weight 0.5 kg

Material alu, anodised



Wind Indicators, Recorder, Software



Description

Wind Display

Digital indicator for the display of wind speed and wind direction.

Indicates the wind direction in a circle of 72 LED luminous bars, and the speed by 7-segment-LEDs.

In addition, the minimum and maximum wind speed values can be indicated by two other digit displays.

Display options of the **WS**:

- instantaneous value
- or
- 2 min. means value and maximum value
- or
- 10 min. mean value and maximum value

Display options of the **WD**:

- instantaneous value
- or
- 2 min. mean value and variation
- or
- 10 min. mean value and Variation

The calculation of the mean values and maximum values is carried out according to the ICAO.

A built-in RS-422-interface facilitates the connection of other wind indicators LED:

Suitable wind transmitters:

- 4.3303.22.000 / 008
- 4.3125.32.100
- 4.3336.31.000
- 4.3350.00(10).000
- 4.3800.00(20).xxx
- 4.3519.00.000
- 4.3129.00.000

Order-No.

4.3250.xx.000

.00...

.01...

Technical Data

Operating voltage	230 V / 50 Hz; 24 V AC; 12 V –35 V DC 115 V / 50 Hz; 24 V AC; 12 –35 V DC
Display range	
Wind speed	0...99.9 / 0...999 m/s / kt / km/h / Bft
Direction	0...360°
Resolution	
Wind speed	0.1 / 1
Wind direction	5°
Wind transmitter input	
WS	
WD	0...1600 Hz Thies- synchronous serial
or	
WD + WS	serial data telegram via RS 422
Interface	RS 422
Connection	Screw terminal
Ambient temp.	-10...+50°C
Model	switch panel mounting
Protection	IP 50
Dimensions	144 x144 x135 mm
Weight	1.5 kg
EMC	EN 60945 EN 61000-6-2 EN 61000-6-3

Wind Indicators, Recorder, Software



Description	Order-No.	Technical Data
<p>Wind Display LED - Ship version -</p> <p>Digital display instrument which indicates the wind speed and wind direction. Indicates the wind direction in a circle of 72 LED luminous bars, and the speed by 7-segment-LEDs.</p> <p>Ship version with direction circle divided in red and green LED's according to port side and star-board.</p> <p>Display of WS: - instantaneous value Display options of the WD: - instantaneous value or delayed or - instantaneous value and variation or - delayed and variation</p> <p>When using a suitable sensor electronics the display of the "true" wind values is possible.</p> <p>A built-in RS-422-interface facilitates the connection of other wind indicators LED</p> <p>Suitable wind transmitters: 4.3303.22.000 / 008 4.3125.32.100 4.3336.31.001 4.3350.00(10).000 4.3800.00(20).xxx</p>	<p>4.3251.xx.000 .00...</p> <p>.01...</p>	<p>Operating voltage 230 V / 50 Hz; 24 V AC; 12 V -35 V DC 115 V / 50 Hz; 24 V AC; 12 -35 V DC</p> <p>Display range Wind speed 0...99.9 / 0...999 m/s / kn / km/h / Bft Direction 0° - 180° - 0° (0...360°)</p> <p>Resolution Wind speed 0.1 / 1 Wind direction 5°</p> <p>Wind transmitter input WS 0...1600 Hz WD Thies- synchronous serial or WD + WS Serial data telegram via RS 422</p> <p>Interface Data telegram 1 x RS 422 LED-standard ultrasonic NMEA 0; NMEA 1</p> <p>Connection Ambient temp. -10...+50°C Model switch panel mounting Protection IP 50 Dimensions 144 x144 x135 mm Weight 1.5 kg EMC EN 60945 EN 61000-6-2 EN 61000-6-3</p>
<p>Wind Display LED - Ship version -</p> <p>For the display of "true" and "relative" wind values.</p> <p>True = real wind speed and wind direction Relative = seeming wind speed and wind direction</p> <p>Data from the wind transmitter and data, according to NMEA 0183, coming from a compass system (ship heading "Gyro") and the ship speed (LOG), are used to calculate the "true" wind-values via a built-in RS422 interface. The selection for displaying the "true" or "relative" wind values is done through the mode-key on the front side.</p>	<p>4.3251.xx.001</p>	<p>Interface 4 x RS 422</p> <p>Meas. value input WS 0...1600 Hz WD Thies- synchronous serial or WD + WS Serial data telegram via RS 422 and LOG + Gyro Serial data telegram acc. to NMEA 0183 (DM)</p> <p>Other techn. data see above</p>