

---

***Small Wind Transmitter***

**4.3515.5x.x61**



**ADOLF THIES GmbH & Co. KG**

Hauptstraße 76

Box 3536 + 3541

Phone ++551 79001-0

[www.thiesclima.com](http://www.thiesclima.com)

37083 Göttingen Germany

37025 Göttingen

Fax ++551 79001-65

[info@thiesclima.com](mailto:info@thiesclima.com)

# **Contents**

|     |  |   |
|-----|--|---|
| 1   | Models available .....                                     | 3 |
| 2   | Application .....  | 3 |
| 3   | Construction and Mode of Operation .....                   | 3 |
| 4   | Recommendation Side Selection/ Standard Installation ..... | 3 |
| 5   | Installation.....  | 4 |
| 5.1 | Mechanical Mounting .....                                  | 4 |
| 5.2 | Electrical Mounting .....                                  | 4 |
| 6   | Maintenance .....  | 4 |
| 7   | Connection Diagram .....                                   | 5 |
| 8   | Technical Data.....  | 5 |
| 9   | Dimension diagram.....                                     | 6 |

# 1 Models available

---

| Order-No.     | Meas. range    | Electrical Output | Heating | Connection                                | Housing-colour |
|---------------|----------------|-------------------|---------|---|----------------|
| 4.3515.50.061 | 0.8 ... 40 m/s | 0 – 10V           | yes     | 3 m cable LiYCY 6 x 0.25 mm <sup>2</sup>  | white          |
| 4.3515.50.161 | 0.8 ... 40 m/s | 0 – 10V           | yes     | 3 m cable LiYCY 6 x 0.25 mm <sup>2</sup>  | black          |
| 4.3515.51.061 | 0.8 ... 40 m/s | 0 – 10V           | no      | 3 m cable LiYCY 4 x 0.25 mm <sup>2</sup>  | white          |
| 4.3515.51.161 | 0.8 ... 40 m/s | 0 – 10V           | no      | 3 m cable LiYCY 4 x 0.25 mm <sup>2</sup>  | black          |
| 4.3515.51.361 | 0.8 ... 40 m/s | 0 – 10V           | no      | 12 m cable LiYCY 4 x 0.25 mm <sup>2</sup> | white          |
| 4.3515.51.961 | 0.8 ... 40 m/s | 0 – 10V           | no      | 10 m cable LiYCY 4 x 0.25 mm <sup>2</sup> | black          |

## 2 Application

---

The small wind transmitter is designed for the acquisition of the horizontal wind direction. The measuring value is output as electrical analogue signal. The measuring data available are ideally adapted to the supply in display instruments, recording instruments, datalogger, as well as process control systems.

For trouble-free winter operation the instrument is optionally equipped with a heating (PTC-heating element).

## 3 Construction and Mode of Operation

---

The outer parts of the instrument are made of plastic, the mounting angle is made of stainless steel. Labyrinth gaskets protect the parts inside the instrument against precipitation.

The cup star is set into rotation by the wind. An axis, running in friction bearings, is fixed at the cup star, and leads to magnets through a Reed-contact. The pulses thus produced are transformed, by means of a pulse-voltage-converter, into an output voltage which is proportional to the wind speed.

## 4 Recommendation Side Selection/ Standard Installation

---

In general wind measurement instruments should be able to detect the wind conditions of a large area. In order to obtain comparable values when determining the surface wind, measurements should be taken at a height of 10 meters over an even unobstructed area. An unobstructed area means that the distance between the wind transmitter and an obstacle should be at least 10 times the height of the obstacle ( s. VDI 3786 ). If it is not possible to fulfil this condition, then the wind transmitter should be set up a height where local obstacles do not influence the measured values to any significant extent (approx. 6-10 m above the obstacle).

The wind transmitter should be set up in the centre of flat roofs and not on the roof side in order to avoid bias in the direction (privileged directions).

## 5 Installation

---

**Remark:**

When using fastening adapters (angle, traverses, brackets etc.) please take a possible effect by turbulences into consideration.

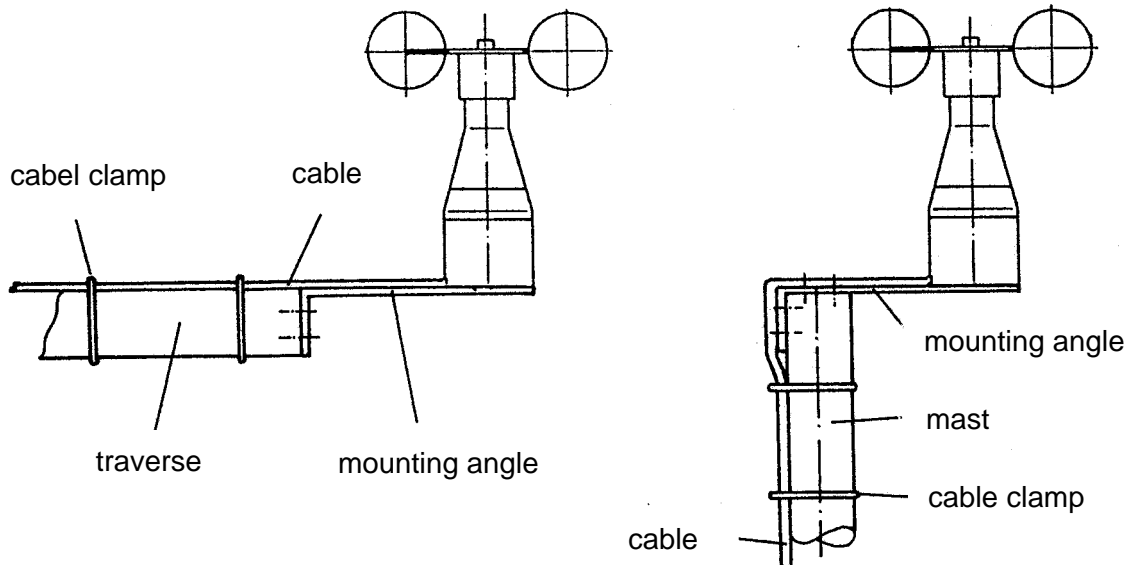
---

**Attention:**

**Storing, mounting and operation under weather conditions is permissible only in vertical position, as otherwise water can get into the instrument.**

### 5.1 Mechanical Mounting

The wind transmitter is screwed onto a traverse, a mast etc. by means of a mounting angle. The cable is fixed tightly, for ex., onto the traverse, by means of clamps, cable ties, or similar fastenings.



### 5.2 Electrical Mounting

The electrical connection is carried out acc. to the connection diagram (chapter 7).

## 6 Maintenance

---

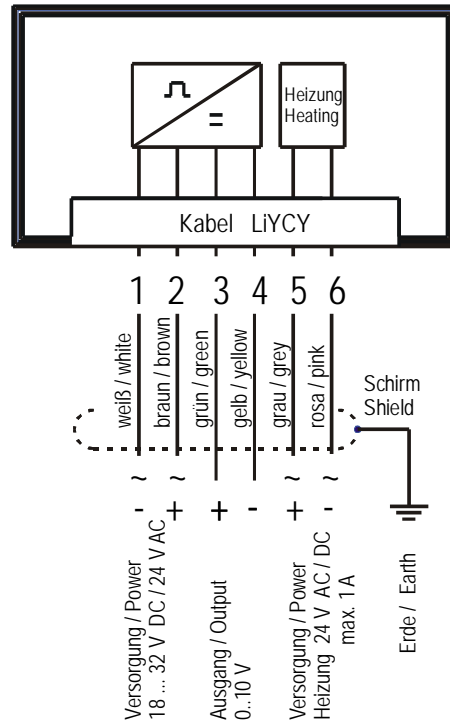
After proper mounting the instruments works maintenance-free.

Heavy pollution can clog up the slit between the rotating and the stationary parts of the wind transmitter. This slit must be kept clean

## 7 Connection Diagram

Order – No.

4.3515.50.061  
 4.3515.50.161  
 4.3515.51.061\*  
 4.3515.51.161\*  
 4.3515.51.361\*  
 4.3515.51.961\*

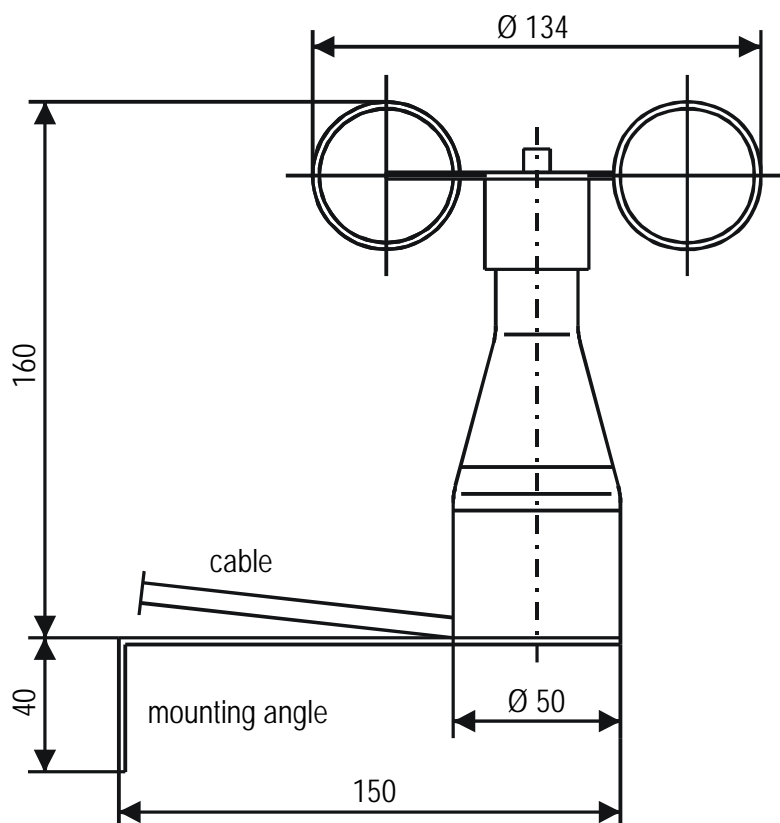


\* the small wind transmitter w/o heating is dispensed with 5 + 6

## 8 Technical Data

|                     |   |
|---------------------|---|
| Measuring range     | 0.8 ... 40 m/s                                |
| Electrical output   | 0 ... 10 V (= 0 ... 40 m/s)                   |
| Supply voltage      | 18 ... 32 V DC / 24 V AC                      |
| Current consumption | 6 ... 12 mA                                   |
| Max. output current | 8 mA  |
| Residual ripple     | 0,6 % of accumulated output value             |
| Response time       | 1.1 s   |
| Measuring system    | Reed contact, magnet                          |
| Load                | max. 60 m/s for a short time                  |
| Heating             | 24 V AC / DC (80 °C)                          |
| Switch-on current   | max. 1 A                                      |
| Ambient temperature | - 25 °C ... + 60 °C (with ice-free condition) |
| Material            | Plastic ABS                                   |
| Connection          | See models available                          |
| Dimensions          | See dimension diagram                         |
| Weight              | approx. 0.3 – 0.7 kg                          |

## 9 Dimension diagram



### ADOLF THIES GmbH & Co. KG

Hauptstraße 76 37083 Göttingen Germany  
P.O. Box 3536 + 3541 37025 Göttingen  
Phone ++551 79001-0 Fax ++551 79001-65  
www.thiesclima.com info@thiesclima.com



- Alterations reserved -