

Instruction for Use

021149/08/99

Small Wind Transmitter

4.3400.30.000



ADOLF THIES GmbH & Co. KG

Hauptstraße 76 37083 Göttingen Germany
Box 3536 + 3541 37025 Göttingen
Phone +49 551 79001-0 Fax +49 551 79001-65
www.thiesclima.com info@thiesclima.com

Contents

1	Models	3
2	Application	3
3	Mode of Operation	3
4	Recommendation Site Selection / Standard Installation	3
5	Installation.....	4
5.1	Mechanical Mounting	4
5.2	Electrical Mounting.....	4
6	Maintenance	4
7	Connecting Diagram	5
8	Technical Data.....	5
9	Dimension diagram.....	6
10	Accessories	6
11	EC-Declaration of Conformity.....	7

1 Models

Order-No.	Meas. Range	Electr. Output	Connection / Cable type
4.3400.30.000	0,5...35 m/s	0...1 mA DC	20m cable LiYY 2 x 0,25 mm ²

2 Application

The Small Wind Transmitter measures and transmits the horizontal wind velocity. The measuring values are available at the output as analogue signals.

The signals can be transmitted to display instruments, or via measuring converters to recording instrument.

In areas endangered by lightning it is recommendable to install a Lightning rod, order no. 4.3100.99.000 as well as to fit the instrument on a metallic mast with the grounding set.

Remark:

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

3 Mode of Operation

The Small Wind Transmitter is designed for converting the wind velocity into an electric signal. A cup star is set into rotation by the wind. The axis of the cup star is connected to a DC generator. A certain power is output correspondingly to the wind velocity.

Cup star and upper part of the shaft consist of synthetic fibre, the lower part is made of aluminium.

4 Recommendation Site 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 area with no obstacles.. An area with no obstacles means that the distance between the wind transmitter and an obstacle should be a 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 at 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 not on the edge to avoid bias in the direction (privileged directions).

5 Installation

5.1 Mechanical Mounting

The instrument can be mounted to a 50 mm long tube of R 1" (diameter 35 mm). The internal diameters of the tube must be at least 20 mm in order to be able to hold the connecting cable with the plug connection.

Then, run the cable through the mast tube. Place the wind transmitter onto the tube and attach it to the shaft with the two fixing screws.

If the instrument is being used in combination with a wind direction transmitter (4.3124.40...,4.3127.40...), mount the small wind transmitter to the traverse, order-no. 4.3171.20.000 (see accessories), and screw this onto a mast with a diameter of 30...50 mm.

Attention:

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

5.2 Electrical Mounting

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

6 Maintenance

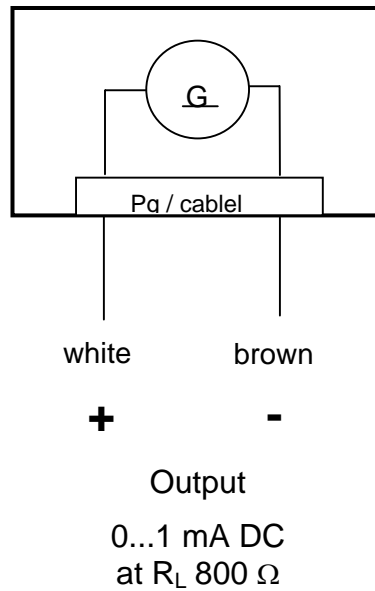
Heavy pollution can clog up the slit between the rotating and the stationary parts of the wind transmitter.

This slit must be kept clean.

After a long period of use, wear and tear may occur on the ball bearings and on the reed contact. This will manifest itself in a higher starting torque, in the fact that the cup anemometer does not start to move or in a lack of output pulses.

To avoid errors in measurement, we recommend that the instrument undergo an annual checkup and that the starting and the stopping mechanism be tested for ease of movement by blowing on it gently. Moreover we recommend that the instrument be overhauled once every two years by the manufacturer.

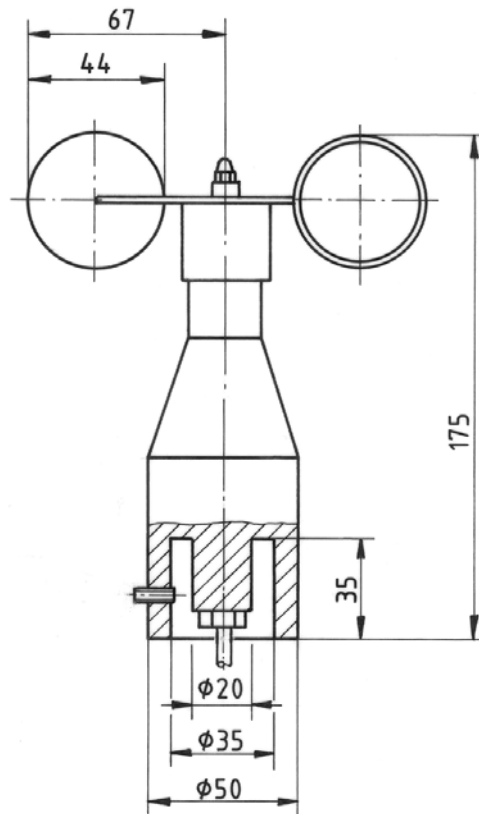
7 Connecting Diagram



8 Technical Data

Measuring range	0,5 ...35 m/s
Accuracy	± 0,5 m/s bzw. ±5 %
Load	max. 60 m/s
Electr. output	0...1 mA DC at R _L 800 Ω
Ambient temperature	- 25°C ... + 60°C, ice-free
Connection	20 m cable, LiYY 2 x 0,25 mm ²
Weight	ca. 0,3 kg
Protection	IP 54

9 Dimension diagram



10 Accessories

The following accessories are available for the wind transmitter

<p>Traverse For mounting the wind transmitter and wind direction transmitter jointly onto a mast</p>	<p>4.3171.20.000</p>	<p>Clamping range: Ø 30 ... 50 mm Sensor distance: 0,5 m Material: Aluminium</p>
<p>Lightning rod</p>	<p>4.3100.99.000</p>	<p>Height: 0,8 m Material: steel</p>

Other accessories such as masts and additional mast- or system-constructions on request.

11 EC-Declaration of Conformity

Document-No.: 000410

Month: 06 Year: 08

Manufacturer: **ADOLF THIES GmbH & Co. KG**

Hauptstr. 76
D-37083 Göttingen
Tel.: (0551) 79001-0
Fax: (0551) 79001-65
email: Info@ThiesClima.com

Description of Product: **Small Wind Transmitter, Photo Wind Transmitter**

Article No.	4.3400.30.000	4.3515.30.000	4.3515.30.000A	4.3515.30.001
	4.3515.30.002	4.3515.30.030	4.3515.30.036	4.3515.30.900
	4.3515.50.000	4.3515.50.061	4.3515.50.100	4.3515.50.161
	4.3515.51.000	4.3515.51.061	4.3515.51.100	4.3515.51.110
	4.3515.51.161	4.3515.51.361	4.3515.51.961	4.3515.61.100
	4.3517.30.000	4.3517.30.010	4.3517.30.020	4.3517.31.000
	4.3517.51.000	4.3517.60.010	4.3517.71.000	4.3711.30.000

specified technical data in the document: **020917/02/97; 020760/08/04; 020743/04/08; 021125/10/06; 021543/08/07**

The indicated products correspond to the essential requirement of the following European Directives and Regulations:

- 2004/108/EC DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC
- 2006/95/EC DIRECTIVE 2006/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits
- 552/2004/EC Regulation (EC) No 552/2004 of the European Parliament and the Council of 10 March 2004 on the interoperability of the European Air Traffic Management network (the interoperability Regulation)

The indicated products comply with the regulations of the directives. This is proved by the compliance with the following standards:

Reference number	Specification
IEC 61000-6-2: 2005	Electromagnetic compatibility Immunity for industrial environment
IEC 61000-6-3: 2006	Electromagnetic compatibility Emission standard for residential, commercial and light industrial environments
IEC 61010-1: 2001	Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements

Place: Göttingen

Date: 30.06.2008

Legally binding signature:

issuer:

.....
Wolfgang Behrens, General Manager

.....
Joachim Beinhorn, Development Manager

This declaration certifies the compliance with the mentioned directives, however does not include any warranty of characteristics. Please pay attention to the security advises of the provided instructions for use.



ADOLF THIES GmbH & Co. KG

Hauptstraße 76 37083 Göttingen Germany
P.O. Box 3536 + 3541 37025 Göttingen
Phone +49 551 79001-0 Fax +49 551 79001-65
www.thiesclima.com info@thiesclima.com



- Alterations reserved-