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Instruction for Use

021627/08/07

Combined Wind Transmitter

4.3329.00.510

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

Safety Instructions

- Before operating with or at the device/product, read through the operating instructions.
  This manual contains instructions which should be followed on mounting, start-up, and operation.
  A non-observance might cause:
  - failure of important functions
  - Endangering of persons by electrical or mechanical effect
  - Damage to objects
- Mounting, electrical connection and wiring of the device/product must be carried out only by a qualified technician who is familiar with and observes the engineering regulations, provisions and standards applicable in each case.
- Repairs and maintenance may only be carried out by trained staff or **Adolf Thies GmbH & Co. KG**. Only components and spare parts supplied and/or recommended by **Adolf Thies GmbH & Co. KG** should be used for repairs.
- Electrical devices/products must be mounted and wired only in voltage-free state.
- **Adolf Thies GmbH & Co KG** guarantees proper functioning of the device/products provided that no modifications have been made to the mechanics, electronics or software, and that the following points are observed:
- All information, warnings and instructions for use included in these operating instructions must be taken into account and observed as this is essential to ensure trouble-free operation and a safe condition of the measuring system / device / product.
- The device / product is designed for a specific application as described in these operating instructions.
- The device / product should be operated with the accessories and consumables supplied and/or recommended by **Adolf Thies GmbH & Co KG** .
- Recommendation: As it is possible that each measuring system / device / product under certain conditions, and in rare cases, may also output erroneous measuring values, it is recommended using redundant systems with plausibility checks with **security-relevant applications**.

Environment

- As a longstanding manufacturer of sensors Adolf Thies GmbH & Co KG is committed to the objectives of environmental protection and is therefore willing to take back all supplied products governed by the provisions of "*ElektroG*" (German Electrical and Electronic Equipment Act) and to perform environmentally compatible disposal and recycling. We are prepared to take back all Thies products concerned free of charge if returned to Thies by our customers carriage-paid.
- Make sure you retain packaging for storage or transport of products. Should packaging however no longer be required, arrange for recycling as the packaging materials are designed to be recycled.

Documentation

- © Copyright **Adolf Thies GmbH & Co KG**, Göttingen / Germany
- Although this operating instruction has been drawn up with due care, **Adolf Thies GmbH & Co KG** can accept no liability whatsoever for any technical and typographical errors or omissions in this document that might remain.
- We can accept no liability whatsoever for any losses arising from the information contained in this document.
- Subject to modification in terms of content.
- The device / product should not be passed on without the/these operating instructions.

Contents

1 Models available

Order-no.	Measuring range		Electrical output
4.3329.00.510	Wind velocity	1...40 m/s	Pulse typ. 2.5 Hz / ms^{-1}
	Wind direction	10…350°	Potentiometer: 1KΩ
	Temperature	e.g. –30...+60 C°	NTC, 10KΩ

2 Application

The Combined Wind Transmitter is designed for the acquisition of the wind velocity, wind direction, and the outside temperature.The measuring data available are ideally adapted to the supply in display instruments, recording instruments, datalogger, as well as process control systems..

3 Construction and Mode of Operation

The compact construction of the wind transmitter provides for an easy instrument mounting with minimal affect on the sensors.

The outer parts of the instrument are made of plastic, anodized aluminium, and stainless steel. Labyrinth gaskets and o-rings protect the sensitive parts inside the instrument against humidity and dust.

The acquisition of the wind velocity Is carried out by means of a cup star. The cup star is set into rotation by the wind. An axle, running in friction bearings, is fixed at the cup star, and leads two magnets through a Reed-contact. The pulses thus produced are available as output signals.

With the prevailing wind the wind direction vane aligns itself in accordance with the wind direction. The wind vane is linked to a potentiometer via an axis. The respective potentiometer position is the measure for the wind direction.

An NTC resistance integrated in the wind direction part, serves for the determination of the outside temperature..

4 Installation

Attention:

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

Remark:

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

4.1 Mechanical Mounting

In order to obtain comparable values when determining the surface wind, measurements should be taken on an even unobstructed area. Mounting is carried out preferably on a mast with a centring pivot of 30 mm diameter.

North alignment

The case marking at the shaft and at the protective cap are screwed congruently one upon the other. Afterwards, a prominent point in the territory (tree, building or the like) is detected in northern direction by means of a compass. This point is located via the wind vane, and in case of conformity the transmitter is screwed in place (the north marking must indicate to the geographic North).

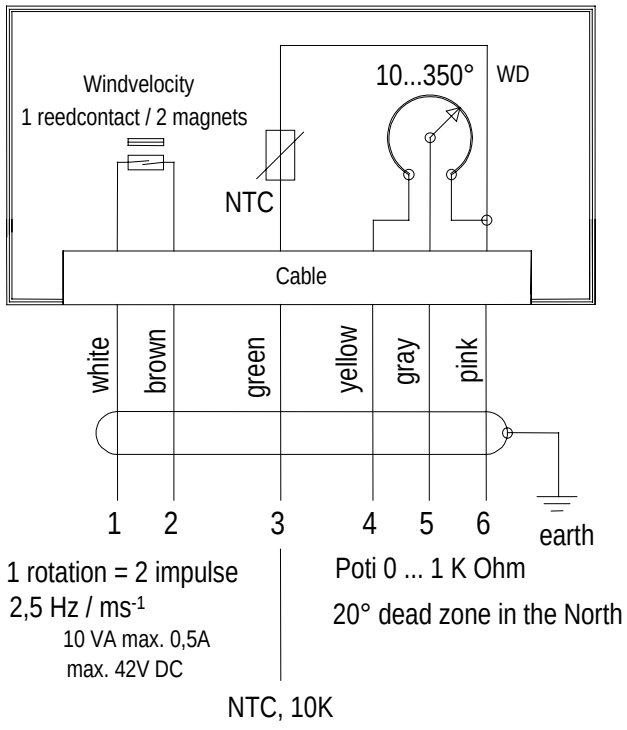
4.2 Electrical Mounting

The electrical connection is carried out acc. to the connection diagram (chapter 6).

5 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.

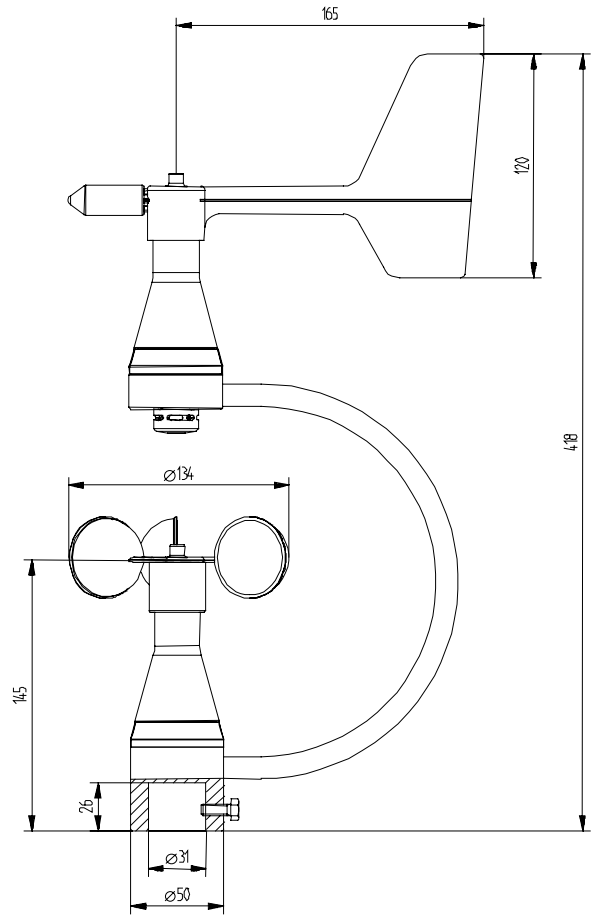
6 Connection Diagram

Order-No. 4.3329.00.510	

7 Technical Data

Comb. Windtransmitt.		
Wind velocity	Measuring range	1...40 m/s
	Measuring system	1 Reed contact / 2 magnets
	Output signal	Potential-free contact, typ. 2.5 Hz / ms^{-1}
	Resolution	0.4 m wind run
Wind direction	Measuring range	10...350° (20° dead zone in the north)
	Measuring system	Potentiometer
	Output	0…1 KΩ
	Potentiometer power rating	0.3 W
Temperature	Measuring range	z. B. - 30...+ 60 °C
	Sensor	NTC 10 kΩ
General	Operating temperature	-25...+60 °C (ice-free)
	Connection	Fixed cable 15 m
	Dimension	See dimensional diagram
	Weight	ca. 1 Kg
	Mounting	Onto pipe socket with Ø 30mm and a minimum length of 30 mm
	Protection	IP 54

8 Dimensional Diagram



9 EC-Declaration of Conformity

Document-No.: **000690** Month: 06 Year: 08

Manufacturer: **A D O L F T H I E S G m b H & C o. K G**

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

Description of Product: **MeteoComp**

Article No. **4.3329.00.000** **4.3329.00.510** **9.3229.00.000**

specified technical data in the document: **020892/08/07; 021544/08/07**

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: 27.06.2008

Legally binding signature: issuer:

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Wolfgang Behrens, General Manager

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Joachim Beinhorn, Development Manager

This declaration certificates 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.

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