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Thies CLIMA

Instruction for Use

021433/12/04

Wind Direction Transmitter

4.3140.51.010

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Contents

1 Models

Order-No.	Elect. Output	Meas. Range
4.3140.51.010	Poti 0 ... 1 KΩ	10 ... 350 °

2 Application

The wind direction transmitter is designed to detect the horizontal wind direction. The measuring values are output as non-inductive resistance signals, for example for the control of shading devices.

Remark:

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

3 Mode of Operation

The wind direction is detected by means of a wind vane, and is transmitted to a potentiometer. The outer parts of the instrument are made of corrosion-resistant materials (plastics). Labyrinth gaskets protect the parts inside the instrument against precipitations

4 Recommendation Site Selection / Standard Installation

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 direction 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 direction 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 direction transmitter should be set up in the centre of flat roofs and not on the edge in order to avoid any preferential directions.

5 Installation

Fastening is carried out by means of the mounting angle available. Instrument can be mounted, for example, onto a mast, hanger or the like.

For electrical connection please refer to the connecting diagram.

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

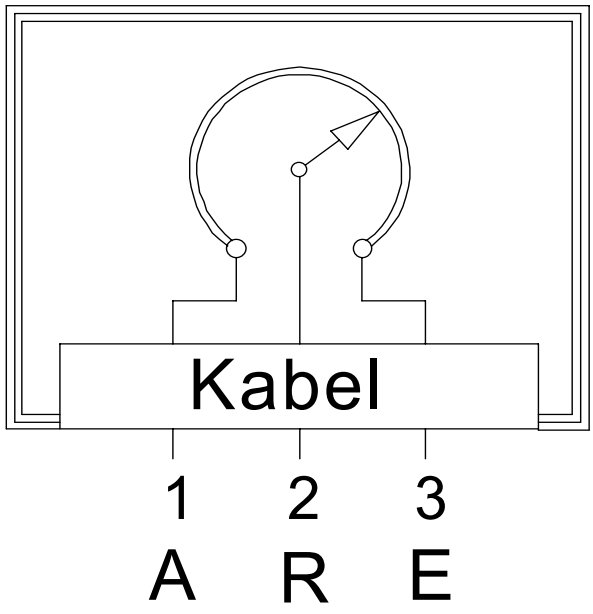
North Alignment

Rotate the case markings on the shaft and on the protective cap until they are aligned. Then select an obvious point in a northerly direction in the surroundings (a tree, a building etc.) with the aid of a compass. Take a bearing on this point over the wind vane and when these coincide screw the transmitter into place (*the north mark must indicate the geographical North*).

6 Maintenance

After proper mounting the instrument 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.

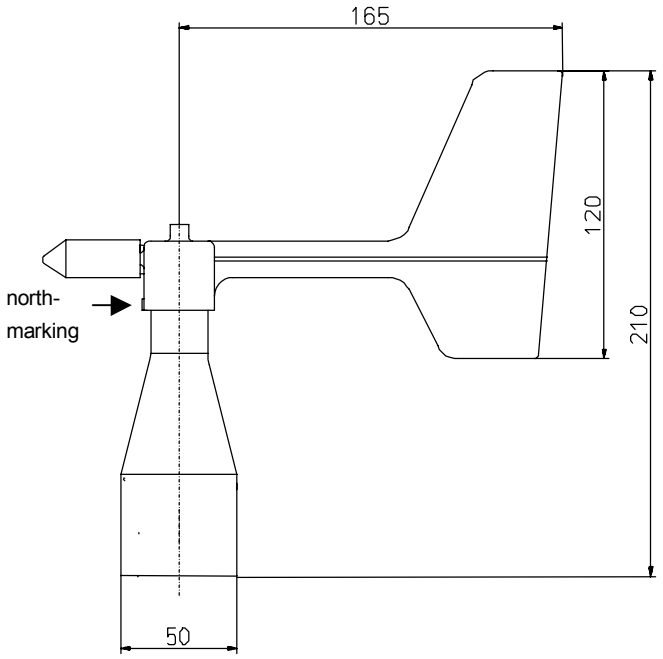
7 Connecting Diagram



8 Technical Data

Measuring range	10° ... 350° (between 350 ° and 10 ° in the north 20 ° contact-free)
Starting speed	1,0 m/s
Measuring principle	Potentiometer
Electrical output	Potentiometer 0...1 KΩ (± 3%)
Max. potentiometer load	1 W
Ambient temperature	- 25 °C ... + 60 °C , ice-free
Connection	3 m cable
Dimensions	See dimensional drawing
Protection	IP 54
Weight	0,3 kg

9 Dimensional Drawing



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