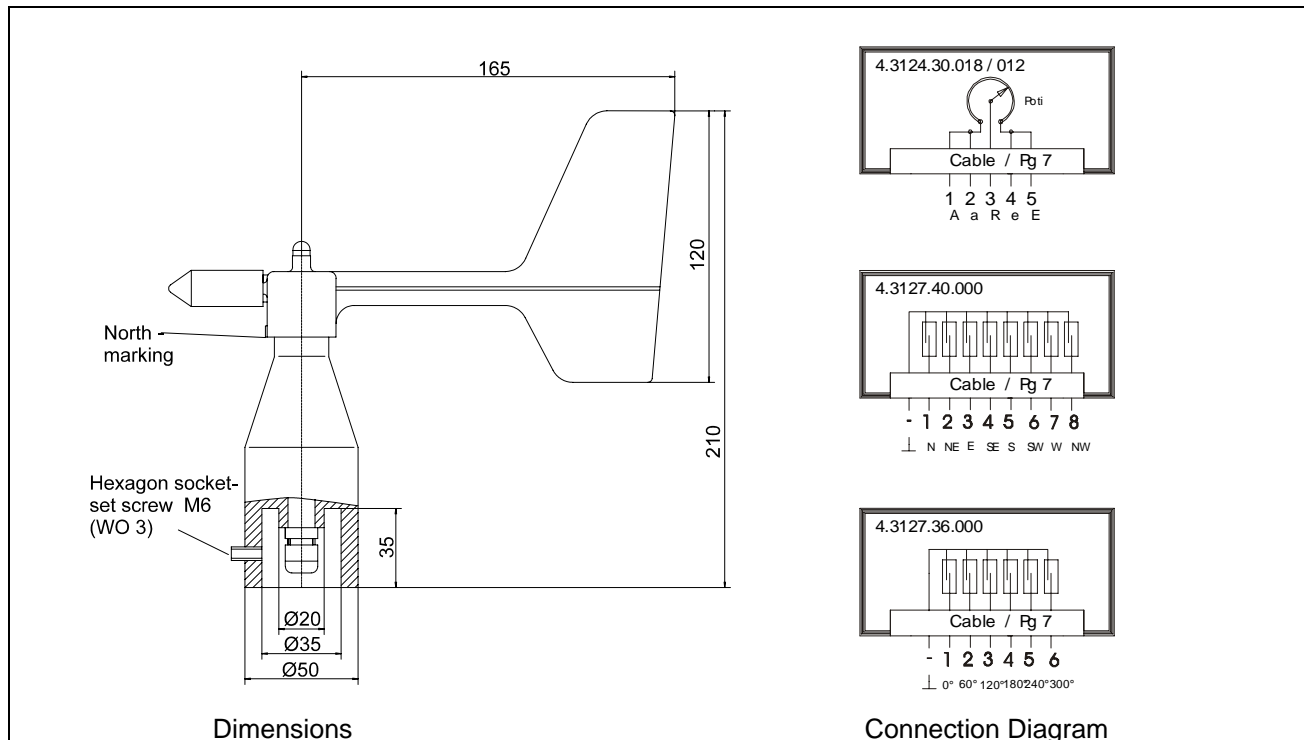


Wind Direction Transmitter

Small Model



Instruction for Use 4.3124.30.012 / .018 / 4.3127.XX.000



Range of Use

The wind direction transmitter detects the horizontal wind direction. The data are available on the output as ohmic resistance values or as signals in digital form.

The signals can be transmitted to display units, measuring transducers or to the data logger DL 15.

In areas with considerable electrical storm activity, we recommend that a lightning rod, order-no. 4.3100.99.000 be used, furthermore that the instrument be mounted to a metal mast with a grounding set.

Technical Data

Order No.	4.3124.30.012	4.3124.30.018	4.3127.40.000	4.3127.36.000
Measuring range	0 ... 360°	0 ... 358°	0 ... 360°	0 ... 360°
Resolution	0,5°	0,5°	22,5°	30°
Electr. output	0 ... 2000 Ω	0 ... 400 Ω	8 Reed contacts	6 Reed contacts
max. current	100 mA			
max. voltage	24 V		60 V DC	
max. load	2,5 W		0,5 W	
Cable	LiYY 5 x 0,25 mm ² , 20 m		LiYY 9 x 0,14 mm ² , 20 m	
Operation voltage	12 V DC, max. 2 W			

Load	: max. 60 m/s
Ambient temperature	: - 25 ... + 60 °C , ice free
Mounting	: onto a Mast Tube 1" or Traverse
Weight	: 0,55 kg

Construction and Mode of Operation

The wind direction transmitter converts wind direction into electrical signals. The signals are generated either by a potentiometer or by a reed contact which close under the influence of a magnetic field. Attached to the wind vane is a shaft which runs in ball-bearings. This is connected directly to the potentiometer axis or leads a magnetic disk past reed contacts which are arranged in a circle, thus resulting in a measurement signal which is proportional to wind direction.

The instrument is made of corrosion-resistance material (plastic) and the aluminium parts are additionally protected by an anodised coat.

Selecting a Site

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 direction transmitter and an obstacle should be a least 10 times the height of the obstacle. If it is not possible to fulfil this condition, then the wind direction 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 direction transmitter should be set up in the centre of flat roofs not on the edge to avoid bias in the direction (privileged directions).

Mounting the Wind Direction Transmitter

The instrument can be mounted to a 50 mm long tube of R 1" (Diameter 35 mm / internal-diameter 20 mm). The flexible control line LiYY must be threaded through the tube of the mast. Connect electrically as indicated in the connecting diagram.

When, for example, is used in combination with a wind transmitter, then mount the instrument on the **Traverse**, Order-No. **4.3171.20.000** and screw this to a mast with a diameter of 30...50 mm with a clamp strap.

North Alignment

Rotate the case markings on the shaft and on the vane 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.

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 wind vane 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 check-up 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.

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