

Wind Direction Transmitter compact

Instruction for use 4.3129.x0.140 ... 173



General

The wind direction transmitter detects the horizontal wind direction. The measured values are available at the output as analog voltage or current signal to control for instance wind power plant.

An electronically-regulated heating system has been installed for wintertime use, in order to prevent the ball -bearing and the external rotation parts from freezing.

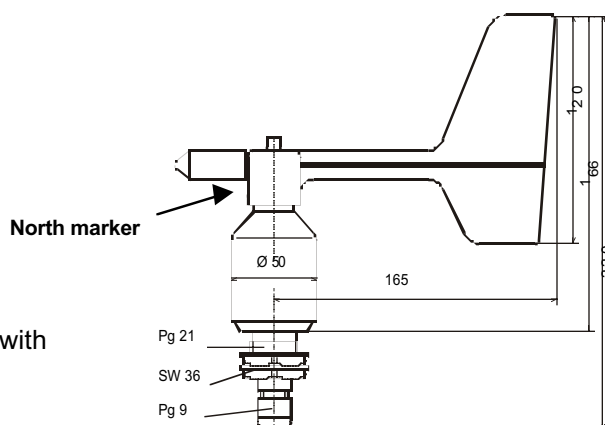
Power for the heating system could be provided for instance by our **Power Supply Unit**, Order No. **9.3388.00.000**.

When using fastening adapters (angle, traverses etc.) please notice that turbulences could possibly influence the characteristic curve.

Technical Data

Measuring range	: 0 ... 360°
Accuracy	: $\pm 5^\circ$
Resolution	: 11,25° (5 bit Gray code)
Meas. principle	: opto-electronically (code disc)
Operating voltage	: 9 - 30 V DC or 24 V AC/DC
for 0 - 10 V Output	13 - 30 V DC or 24 V AC
Heating	: 24 V AC/DC max. 20 W
Ambient temperature	: - 30 °C ... + 70 °C
Cable	: 12 m long, LiYCY 6 x 0,25 mm ²
Mounting	: for. example, onto a mast tube with boring thread Pg 21 or boring \varnothing 29 mm
Weight	: 1,10 kg

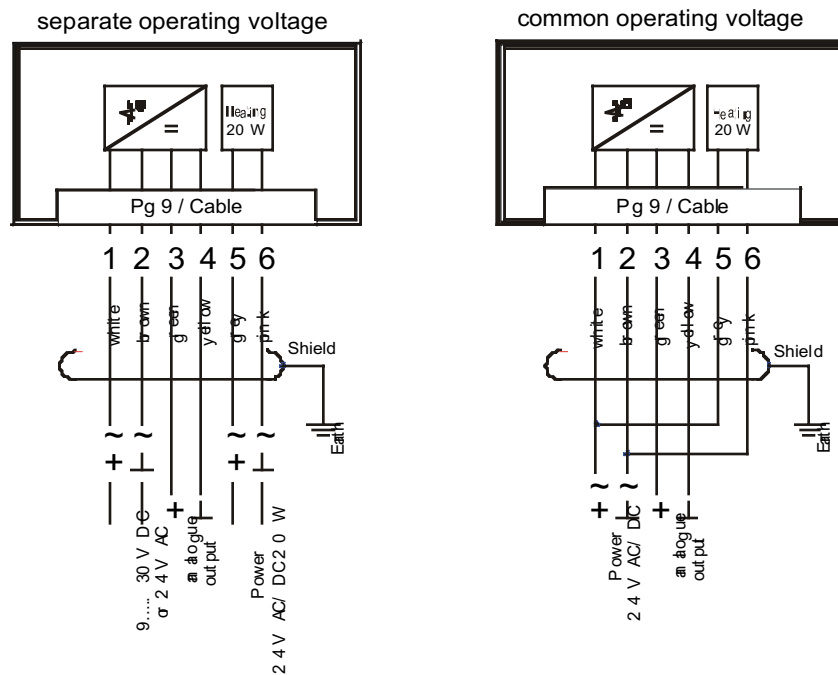
Scale drawing



Order - No.:

4.3129.00.140	Electr.	0 - 20 mA	Load max. 500 Ω (for > 13 V DC operating voltage)
.141	Output	4 - 20 mA	Load max. 500 Ω (for > 13 V DC operating voltage)
.161		0 - 10 V	Load resistance min. 1 k Ω
.167		0 - 2 V	Load resistance min. 1 k Ω
.173		0 - 5 V	Load resistance min. 1 k Ω

Connecting diagrams



Preparation for use

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 at 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 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 avoid bias in the direction (privileged directions).

Mounting

The mounting of the transmitter could be done for example at a traverse with a boring of PG 21 or on hangers with a boring of 29 mm Ø.

When using fastening adapters (angle, traverses etc.) please notice that turbulences could possibly influence the characteristic curve.

After flexible connection cable is passes through the boring, wind direction transmitter could be fixed with hexagonal nut (SW 36) after being in its right position. For electrical connection please refer to the connection 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 metal deflector and rod of the wind vane and when these coincide screw the transmitter into place.

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.

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