

Small Wind Measurement System Portable

Instruction for use 4.3019.20.000



1. Range of Application

The portable wind measurement system consists of a mechanical wind vane with a telescope tripod to measure wind direction and a digital anemometer to measure wind speed.

Both measurement instruments are housed in a carrying case for on-the-spot operation. One of the important applications of the instrument is in the area of environmental monitoring, for example in determining the course and speed of diffusion of poisonous gas clouds in order to be able to issue an alarm should this necessary.

2. Technical Data

Wind Direction Measurement Instrument Order-No. 4.3019.21.000

Measuring Range	: 0 ... 360 °
Graduation	: N - NW - W ... N 10°
Alignment	: with a compass
Stand	: 28 to 115 cm telescopic
Weight	: 0,6 kg

Digital Anemometer

Order-No. 4.3404.21.000

Measuring Range	: 0,3 ... 35 m/s
Measuring Accuracy	: ± 2 % from Mb
Meas. Period	: 1 h and 10 s, switchable
Display	: 3-digit LCD, 12 mm high
Operating Temp.	: 0 ... 60 °C
Power Supply	: 9 V- Battery, alkali-manganese
Period of Operation	: ca. 24 h continuous operation
Cable	: coil, 1,5 m long with a 5 pole plug connection
Dimensions	
Transmitter	: \varnothing 135 mm, 175 mm high
Display	: 67 x 150 x 30 mm
Weight	: 0,6 kg

Carrying Case

Dimensions	: 395 x 285 120 mm
Weight with Instruments	: 1,6 kg

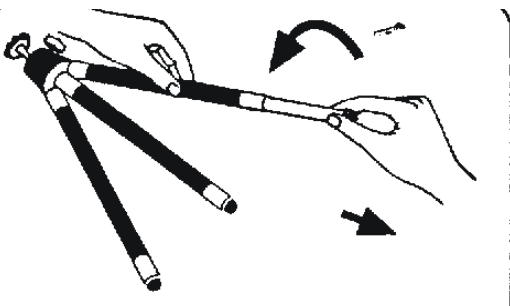
Static Charge

In order to avoid a static charge it is advisable to clean the compass from time to time with a soft cloth and the attached antistatic agent.

(In case of static charge the compass needle "sticks" at the case)

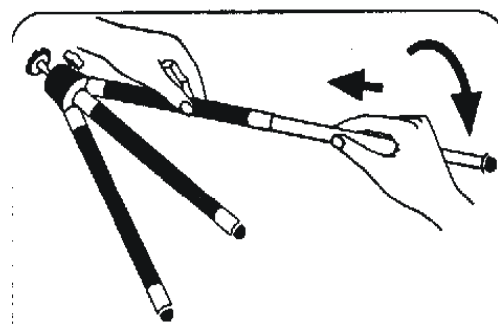
3. Set-Up of the Wind Direction Measurement Instrument

The first step is to set up the tripod.



Open:

Take ahold of the rubber caps and slowly pull out the tube (don't twist it towards the side!) Turn the upper tube hear the covered rivet click into place.



Close:

Turn the upper tube towards the right and then from the middle push it halfway in at first and then completely in. Never close the column with one jerky motion.

Release the stop screw and screw the ball end of the tripod to the base plate of the compass.

Align the compass to North and when the stand is upright, secure the axis with the stop screw to prevent it from turning. Then insert the guide column of the wind vane over the axis.

The pointer of the wind vane (marked in red) indicates current wind direction on the wind rose.



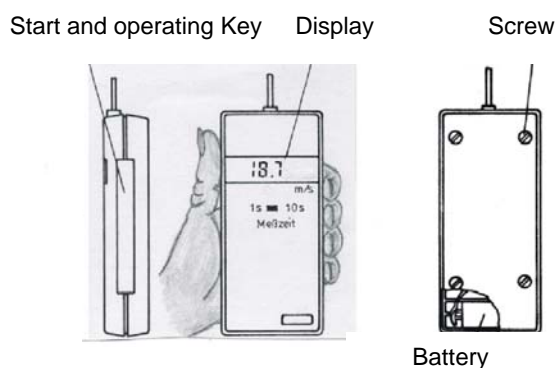
4. How the Digital Anemometer Functions and How to Operate It

The digital anemometer is used to measure the velocity of direction-independent air currents as they occur, for example in nature.

The handy display instrument is connected by means of a coiled cable and a plug to the measurement transmitter. The large, high contrast LCD digital display displays the measured value even in bright light or sunlight in an easy-to-read manner.

There is a switch below the display window with you can change the period of measurement. Either a 1 s instantaneous value or a 10 s mean value can be measured. When you hold the instrument, your fingertips will press the operating key situated on the side of the case and start operation. Operational readiness is indicated by the appearance of zeros on the display. Actual measurement starts one second after the instrument has been switched on for the measurement period chosen (the decimal value blinks). When the set measurement time is completed, the measured value is displayed and, simultaneously, a new measurement cycle begins. The value measured remains on the display until a new value has been determined. This process continues as long as the operating key is depressed. If the battery voltage drops below a pre-set value, the words "low batt." Will appear on the display i.e. you will have to change the battery. The back panel can be removed by unscrewing the four screws on the back of the case.

The measured value transmitter is equipped with a synthetic cup anemometer whose rotations are scanned opto-electronically.





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