



Description

The wind speed sensor type FT4021 serves for transmission of electrically measured values of the wind speed. It is designed for a wide range of application in meteorology and environmental protection, e.g. automatic weather stations, airports, on research vessels, industrial sites, mobile measuring systems etc.

Electrical design and principle of operation

The DC-generator is driven by the rotating cup assembly, supplying a voltage proportional to the occurring wind speed. The output current ranges 0...1 mA, corresponding a measuring range 0...41 m/s, at a load resistance $R_i = 4 \text{ k}\Omega$.

This enables connection of up to four display meters or recorders joined in series, each having an internal resistance $R_i = 1 \text{ k}\Omega$.

For interfacing or subsequent data processing of measured values (averaging etc.) a number of electronic converters are available.

Technical Data

Measuring range	0...41 m/s = 0...80 kn
Starting threshold	approx. 0.8 m/s
Response length at $v = 3 \text{ m/s}$	approx. 5 m
Max. load	60 m/s
Accuracy	+/- 0.3 m/s, at $v > 15 \text{ m/s}$: +/- 2 % of range
Output	0...1 mA at $4 \text{ k}\Omega$
Heating	Thermostat controlled, max. 6 W
Admissible ambient temperature	-35...+80°C
Housing material	Polycarbonate, dark grey, RAL 7016
Dimensions length	approx. 327 mm

FT4021 Wind Speed Sensor

Cup assembly \emptyset	approx. 224 mm
Housing \emptyset	80 mm
Pivot	\emptyset 34 x 40 mm
Connection	Plug and socket water- and dustproof acc. to IP 67
Weight	approx. 0.9 kg

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