LAMBRECHT
METEOROLOGICAL INSTRUMENTS GERMANY

Function

The sensor 1457 S2 has a special small design. The case is manufactured of seawater-resistant aluminium, the surface is anodized additionally.

As measuring element of the sensor 1457 S2 a 3 armed cup rotor type R30 with an coupled dc-generator is used.

The cup rotor rotates by the wind. The number of rotations is proportional to the wind speed. The coupled generator changes the cup rotations to an analog voltage, which can be transmitted to further devices.

The axis of the cup rotor rotates in rustless ball bearings. The collector and carbon brush of the dc-generator are made of absolutely corrosion resistance gold alloy.

The cup rotor is made of macrolon, a very tenacious plastic. It is seawater resistant and usable in a width temperature range of -30 to +120 °C.

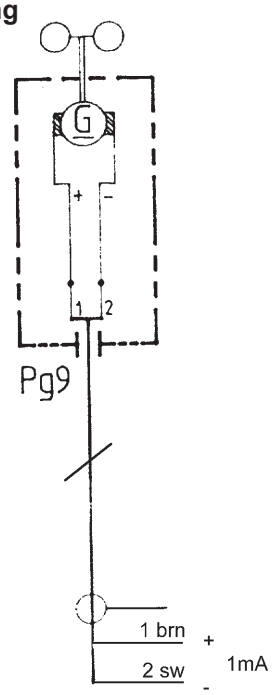
Electrical Connection

The sensor has a fix connection cable. This cable has open cable ends, which can easily connected to further devices (e.g. terminal box of the data logging system).

Have a look to the electrical wiring.

Cable specification: 2 x AWG 20 CUL sw

Electrical wiring



Choice of the installation place

For representative wind measuring the sensor should not installed unter the lee of large obstacles. The distance between obstacle and sensor should be at least 10 times the height of the obstacle. Furthermore the sensor should at least 5 meter higher than the height of the obstacle.

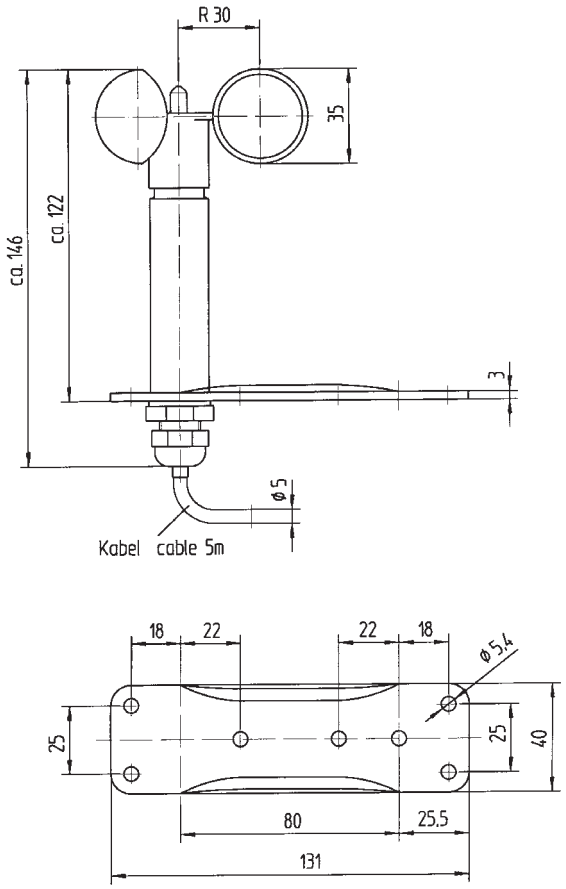
Installation

The sensor has a mounting plate at the bottom of the sensor shaft. This mounting plate offers a lot of mounting possiblities.

Technical Data

Measuring range:	0...35 m/s
Starting value:	approx. 1 m/s
Wind speed range:	0...60 m/s
Output:	0...1mA = 0...35 m/s
	R_a = 2000 Ω
Operating temp. range:	under favorable circumstances (no ice rain, no hoarfrost, no sensor icing)
	-30...+70 °C
Error limits:	± 2 % of the measuring range
Dimensions...	
Height:	inc.. Pg-socket 146 mm
Cup rotor-Ø:	96 mm (R30)
Weight:	approx. 0,7 kg (without cable)

Dimensional Drawing



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