

ClimaSensor

The weather station: wind, rain detection, radiation, temperature, humidity and twilight.

Wind speed

A cup star is set into rotation by the wind. A shaft, running in friction bearings, is fixed at the cup star, and leads two magnets past a reed contact. The pulses, thus arising, are edited and are available as defined measuring values.

Precipitation - Detection

The detection is carried out optically acc. to the reflection-method with modulated infrared-light. The analysis is done after a phase-sensitive filtering so that disturbances, caused by static or dynamic outside lightsources, such as sunlight or electric illumination, can definitely be avoided.

Brightness Detection

The brightness is detected by means of three independent photodiodes, which are arranged in 90°-segments. Converter transform the signals, which are then available as serial, and three independent output voltages.

Twilight

The twilight is detected by a photodiode. A converter transforms the signal which is available in serial and analogue form.

Temperature measurement

A long-term-stable resistance thermometer Pt-100 is used as temperature sensor. A current source with negative internal resistance eliminates the quadratic ratio in the Pt-100 characteristic curve, so that an excellent linearity and measurement accuracy is achieved.

Humidity measurement

The measurement is carried out through a capacitive humidity sensor, which changes its capacity in accordance with the relative air humidity. An analyzing circuit converts the capacity changes of the sensor, and compensates the non-linearity and temperature-dependency of the sensor.

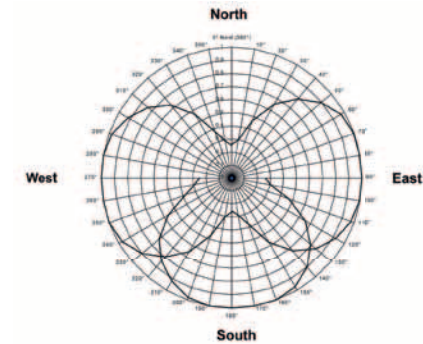
DCF77 Receiver

The receiver is able to receive the DCF77-signal, and to synchronize the internal clock. The time is aligned once a day at 03:00 h.

Condensation Protection

The instrument has an internal condensation protection. It protects the inside of the housing against condensation. It is not able to protect the housing against icing.

Horizontal direction depending of the brightness.



Interface:

- RS485/422
- Analogue output

