MetSpy® MP6

Technical Specifications

Specifications subject to change without prior notice

This state-of-the-art weather measuring device uses sophisticated ultrasonic (sensors have no moving parts) technology to provide the most accurate measurements. It's compact, lightweight design and included mounting brackets makes it very easy to install, and yet its quality construction and robustness means it is able to provide many years of reliable weather sensing.

Automatic Weather Station

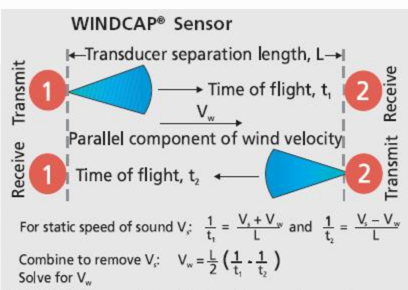
Wind

Wind speed	
Range	0...60 m/s
Response time	0.25 s
Available variables	average, maximum and minimum
Accuracy	± 0.3 m/s or ±2% whichever is greater
Output resolution	0.1 m/s (km/h, mph, knots)
Units available	m/s, km/h, mph, knots
Wind direction	
Azimuth	0...360°
Response time	250 ms
Available variables	Average, maximum and minimum
Accuracy	± 2°
Output resolution	1°
Measurement frame	
Averaging time	1…600 s (= 10 min), at one second steps on the basis of 0.25 second samples
Update interval	1…3 600 s (= 60 min), at one second steps

Liquid Precipitation

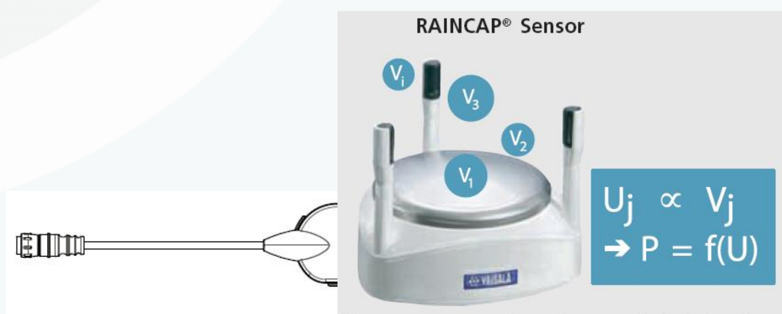
Rainfall	cumulative accumulation after latest automatic or manual reset
Collecting area	60 cm²
Output resolution	0.01 mm (0.001 in)
Accuracy	5% *
Units available	mm, in
Rain duration	counting each ten second increment whenever droplet detected
Ouput resolution	10 s
Rain intensity	one minute running average in ten second steps
Range	0...200 mm/h (broader range with reduced accuracy)
Ouput resolution	0.1 mm/h (0.01 in/h)
Units available	mm/h, in/h
Hail	cumulative amount of hits against collecting surface
Output resolution	0.1 hits/cm² (1 hits/in²)
Units avaiable	hits/cm², hits/in², hits
Hail duration	counting each ten second increment whenever hailstone detected
Output resolution	10 s
Hail intensity	one minute running average in ten second steps
Output resolution	0.1 hits/cm²h (1 hits/in²h)
Units available	hits/cm²h, hits/in²h, hits/h

* Due to the nature of the phenomenon, deviations caused by spatial variations may exist in precipitation readings, especially in short time scale. The accuracy specification does nor include possible wind induced error.



Time-of-flight for a sonic impulse from the transmit transducer to the receive transducer is determined for both directions. Simple algebra allows solving for the parallel component of wind velocity independently of the static speed of sound.

The equilateral triangle configuration of the three transducers provides three possible sets of basis vectors. The combinations yield bi-directional measurements on the paths labeled A, B and C. These measurements are used to determine the wind velocity components parallel to each of the three paths.



The precipitation sensor detects the impact of individual raindrops. The voltage signals U_j resulting from the impacts are proportional to the volume of the drops V_j and therefore, the signal of each drop can be directly converted to accumulated precipitation P.

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