



## WIND METER

### WIND SPEED & DIRECTION

The IMC weather meters provide a range of high performance, compact and economical solutions to weather monitoring for outdoor environments. More general applications that require wind speed and direction are suited to the RL2000-20-434.7. Its simplicity and corrosion resistant construction make it ideal for a wide range of wind measuring applications. The rotating cup anemometer at the top of the unit provides a linear response to wind speed. The vane, which is attached to the body of the device provides a fast response to wind direction.

The shape, dimensions, and material of the cups contribute to accurate measurement. The cups are carefully tested to give linear response between the wind speed and the angular velocity of the cup wheel. The wind vane is located directly beneath the cup assembly and is made of a durable, lightweight material that ensures fast response and low inertia. A relay contact output is provided for wind speed. The wind speed can be recorded either by counting the number of pulses within a fixed time period, or by measuring the time between successive pulses. A potentiometer detects the position of the vane. The potentiometer features low starting and running torque, linear resistance and a long operation life. It has a single wiper with an open gap of less than 5 degrees. With constant voltage supplied to the potentiometer, the output voltage is directly proportional to the azimuth angle.

### Product Features

- Vaisala wind sensor WM30
- Combined wind speed and direction sensor
- Compact and light design is optimal for mobile applications
- Low power consumption
- Fast and linear response to wind

### Benefits

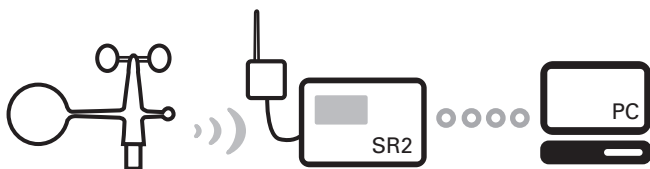
- Enables users to detect change in wind speed and direction for preventative maintenance
- Reduce potential internal damp caused by drafts and cold spots
- Eliminate costs related to external wind damage and internal air flow



### RL2000-20-434.075 - Wind speed and Direction

The RL2000-20 radio transmitter combines all the benefits of the Hanwell RL2000 wireless technology with the Vaisala wind speed and direction sensor for weather monitoring. The weather meter is compact and light for mobile applications and provides a fast and linear response to wind.

### Schematic



## SPECIFICATIONS

### Radio Transmitter Specification:

Dimensions:	110 x 100 x 57mm
Weight:	
Power supply:	240V
Case material:	Pressed steel, black powder coated

### Sensor Specification:

Dimensions:	265 x 360mm
Weight:	360 grams
Operating temperature:	-40°C to +55°C
Materials:	AIMgSi, gray anodized Cups: PA, reinforced with carbon fiber Vane: PA, reinforced with fiberglass
Sensor / transducer type:	Dual reed switch 0.5...60 m/s

### Measurement range

Starting threshold:	
Distance constant:	<0.4 m/s
Transducer output:	2 m
Accuracy:	
(Range 0.4...60 m/s)	1 Hz ~ 0.7 m/s
Wind speed up to 10 m/s	0.3 m/s
Wind speed over 10 m/s	error < 2%

### Wind direction:

Sensor / transducer type:	Potentiometer
Measurement range:	
WMS301 1-wiper potentiometer:	0...355°
WMS302 2-wiper potentiometer:	0...360°
Starting threshold:	<1.0 m/s
Delay distance:	0.6 m
Accuracy:	better than ±3°
Input:	
Operating supply voltage:	3...15 VDC
Operating temperature:	-40...+55 °C (-40...+131 °F)
Storage temperature:	-60...+65 °C (-76...+149 °F)

## RADIO TRANSMITTER FUNCTIONS

Frequency options:	A range of frequencies are available between 433-458MHz. Country specific regulations apply.
Radio power:	10mW
Radio range:	3km over open ground
Software required:	W700 – Standard Synergy Software Package W813 – Legacy RadioLog Standard Software Package for Museums W400 – Legacy RadioLog Standard Software Package for Industrial *See Synergy datasheet for further options
Hardware required:	CR2 – Controller SR2 – Smart Receiver REP – Repeater

*N.B Instrument operating range -20°C to +60°C in a non-condensing RH environment.*

### Disclaimer

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