

Compact Weather Sensor for Temperature, RH, Barometric Pressure, Wind, and Precipitation with Compass



Measures 6 Common Meteorological Parameters

Overview

The MetSENS600 compact weather sensor measures wind speed and direction via an ultrasonic sensor, as well as air temperature, relative humidity, and barometric pressure, in a single, combined instrument mounted inside three double-louvered, naturally aspirated radiation shields with no moving parts. An optical precipitation sensing element senses fine amounts of water. An integrated electronic compass allows the MetSENS500 to provide accurate, relative wind direction measurements without being oriented in a particular way,

making installation easier. WMO average wind speed and direction and gust, temperature, relative humidity, barometric pressure, absolute humidity, air density, wet bulb temperature, rainfall total, and rainfall intensity data are provided. The MetSENS600 is compatible and easily integrated with the MeteoPV Solar Resource Platform and any Campbell Scientific data logger using SDI-12, RS-485, ModbusRS-485, or NMEA RS-232.

Benefits and Features

- **)** Quality measurements
- > Fast and simple to install

- Compact, integrated design
- > Lightweight and robust

Specifications

Measurements Made	Air temperature, barometric pressure, precipitation, relative humidity, wind direction, and wind speed.
Sampling Rate	1 Hz
Digital Communication Modes	Serial RS-232, RS-485, SDI-12, NMEA, Modbus, ASCII
IP Rating	66
Compliance	CE, RoHS

	Operating Temperature Range	-40° to +70°C
	Operating Voltage	5 to 30 Vdc
	Typical Current Drain @ 12 Vdc	0.7 mA (eco-power mode; 1 hour polled)25 mA (continuous high mode)
	Weight	0.8 kg (1.8 lb)



Air Temperature Measurement		
Measurement Range	-40° to +70°C	
Resolution	0.1°C	
Accuracy	±0.3°C (@ 20°C)	

Relative Humidity Measurement	
Measurement Range	0 to 100%
Resolution	0.1
Accuracy	±2% @ 20℃ (10 to 90% RH)

Barometric Pressure Measurement	
Measurement Range	300 to 1100 hPa
Resolution	0.1 hPa
Accuracy	±0.5 hPa (@ 25°C)

Wind Speed Measurement	
Measurement Range	0.01 to 60 m s ⁻¹
Accuracy	±3% (up to 40 m s ⁻¹) ±5% (up to 60 m s ⁻¹)

Resolution	0.01 m s^{-1}
Starting Threshold	0.01 m s ⁻¹

Wind Direction Measurement	
Measurement Range	0° to 359°
Accuracy	$\pm 3^{\circ}$ (up to 60 m s ⁻¹)
Resolution	1°

Resolution	1°
Precipitation Measurement	
Measurement Type	Optical
Measurement Range	$0 \text{ to} > 300 \text{ mm h}^{-1}$
Precipitation Resolution	0.08 mm
Repeatability	3%
Compass	
Measurement Range	0 to 359°
Resolution	1°
Units of Measure	Degrees

±3°

Accuracy



