



Complete Weather Sensor with No Moving Parts

Low power, compact, and simple for easy installation in remote locations

Overview

The ClimaVUE™50 is an affordable all-in-one meteorological sensor that fulfills your common weather monitoring needs with simplicity, when paired with one of the most flexible and scalable Campbell Scientific platforms. This sensor uses SDI-12 to report air temperature, relative humidity, vapor pressure, barometric pressure, wind (speed, gust, and direction), solar radiation, precipitation, and lightning strike

(count and distance). It does this with no moving parts, while consuming little power. A built-in tilt sensor assures long-term data integrity. This diverse product is great for quick deployment, for remote locations, for large networks, as part of a more complex system, or if you just need something simple.

Benefits and Features

- › All the common meteorological measurements with one simple digital (SDI-12) output
- › Less than 1 mA average power consumption, making it ideal for solar-powered sites
- › Integrated tilt sensor helps assure that the sensor stays level over time
- › Low maintenance—no moving parts significantly reduces maintenance cost and time
- › No sensor configuration required
- › Compact design for quick, low-impact installation
- › Compatible with all modern Campbell Scientific dataloggers

Specifications

Output	SDI-12
Operating Temperature Range	-40° to +50°C
Minimum Supply Voltage	3.6 Vdc continuous
Maximum Supply Voltage	15.0 Vdc continuous
Minimum Digital Input Voltage	› 2.8 V (logic high) › -0.3 V (logic low)
Typical Digital Input Voltage	› 3.0 V (logic high) › 0.0 V (logic low)

Maximum Digital Input Voltage	› 15 V (logic high) › 0.8 V (logic low)
Typical Measurement Duration	110 ms
Maximum Measurement Duration	3,000 ms
Application of Council Directive(s)	› 2011/65/EU: Restrictions of Substances Directive (RoHS2) › 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

Standards to Which Conformity Is Declared

- › EN 61326-1:2013: Electrical equipment for measurement, control and laboratory use—EMC requirements—for use in industrial locations
- › EN 50581:2012: Technical documentation for the assessment of electrical and electronic product with respect to the restriction of hazardous substances

Diameter	10 cm (4 in.) including rain gage funnel
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Height	34 cm (13.4 in.) including rain gage funnel
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Power Consumption

Quiescent	0.3 mA
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Maximum Peak Current	33 mA
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Average Using the RO! Command every 10 s	1.0 mA
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Average Using the RO! Command every 60 s (or slower)	0.4 mA
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Air Temperature

Measurement Range	-40° to +50°C
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Resolution	0.1°C
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Accuracy	±0.6°C
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Relative Humidity

Measurement Range	0 to 100%
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Resolution	0.1
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Accuracy	±3% RH typical (varies with temperature and humidity)
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Barometric Pressure

Measurement Range	500 to 1100 hPa
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Resolution	0.1 hPa
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Accuracy	±1 hPa
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Wind Speed

Measurement Range	0 to 30 m s ⁻¹
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Resolution	0.01 m s ⁻¹
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Accuracy	0.3 m s ⁻¹ or 3% (whichever is greater)
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Wind Direction

Measurement Range	0° to 359°
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Resolution	1°
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Accuracy	±5°
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Solar Radiation

Measurement Range	0 to 1750 W m ⁻²
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Resolution	1 W m ⁻²
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Accuracy	±5% of measurement (typical)
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Precipitation

Measurement Range	0 to 400 mm hr ⁻¹
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Resolution	0.017 mm
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Accuracy	±5% of measurement (from 0 to 50 mm hr ⁻¹)
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Tilt

Measurement Range	0° to 180°
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Resolution	0.1°
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Accuracy	±1°
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Lightning Strike Count

Measurement Range	0 to 65,535 strikes
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Resolution	1 strike
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Accuracy	> 25% detection at < 10 km typical (variable with distance)
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Lightning Average Distance

Measurement Range	0 to 40 km
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Resolution	3 km
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Accuracy	Variable
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For comprehensive details, visit: www.campbellsci.com.au/climavue-50 



Campbell Scientific Australia | 411 Baywater Road | Garbutt, QLD 4814 | +61 (0)7 4401 7700 | www.campbellsci.com.au
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