



## Applications

Commercial PV monitoring  
Industrial PV monitoring  
Building Automation

## Compact All-in-One Weather Sensor

Measuring the most critical parameters for commercial and industrial PV monitoring

**Designed to measure:** Air temperature, wind speed, wind direction, relative humidity, and barometric pressure

**Intelligent measurement transducers with digital interface for environmental applications**

**One external temperature or rain sensor is connectable**

**Maintenance-free operation – no moving parts that can wear out**

**Modbus RTU communication protocol**

### Added confidence for energy production

PV site performance analysis is strengthened by correlating air temperature and wind speed with PV panel temperature data. The increased context of power production data offers peace of mind to ensure the solar system is meeting expectations as well as enabling more accurate alarms to be setup to detect system failures.

### Reliable Accuracy

Data you can count on – ISO/IEC compliant with a lifetime expectancy greater than 10 years.

### Hassle-free data

Focus on power generation, not sensor installation and maintenance. Five parameters combine in one housing, mount, and cable with a single digital output to any Modbus RTU-ready data acquisition system.

### Modular

Easily add a precipitation or back of module temperature sensor to the same Modbus ID

# Technical Specifications

WS50PV	
Air temperature range	-40 to 60 °C
Air temperature resolution	0.1°C (-20 °C ... +50 °C), otherwise 0.2 °C
Air temperature accuracy	± 0.5 °C
Air temperature units	°C, °F
Relative humidity range	0 ... 100 %
Relative humidity resolution	0.1 %
Relative humidity accuracy	± 3 %
Air pressure range	500 ... 1100 hPa
Air pressure resolution	0.1 hPa
Air pressure accuracy	±0.5 hPa (0 ... +40 °C)
Wind speed range	0 ... 50 m/s
Wind speed resolution	0.1 m/s
Wind speed accuracy (0 ... 35 m/s)	± 0.3 m/s or ± 3 %
Wind speed accuracy (> 35 m/s)	± 5 % RMS
Wind direction range	0 ... 359°
Wind direction resolution	1 °
Wind direction accuracy	< 5 ° RMSE (wind > 1.0 m/s)
Cable length	10 m
Fastening	Ø 60 ... 76 mm
Weight	1.2 kg
Protection type	IP66
Ambient operating conditions	-40 to 60 °C, 0 ... 100 % rH
Power supply & current consumption	12 VDC, 85 mA 24 VDC, 140 mA
Power supply & maximum power consumption with heater on to support full ambient temperature range	24 VDC ± 10 %, 20 VA
RS-485 interface	2-wire, half-duplex
Communication protocol	Modbus®
Output rate	1 min
Dimensions	Ø 150 mm, height 287 mm
Optional component: external rain gauge sensor	WTB100 (tipping bucket) with 2 % accuracy
Optional component: temperature sensor	WT1 (solar backpanel)
Measurement test certificate	Included

## Dimensions

