Specifications

SCIENTACT USB

Logger	
Operating Range	-20° to 50°C with alkaline batteries -40 to 70°C with lithium batteries
Smart Sensor Connectors	5
Smart Sensor Data Channels	Maximum of 15 (some smart sensors use more than one data channel)
Smart Sensor Network Cable Length	100 m maximum
Logging Interval	1 second to 18 hours
Start Modes	Immediate, at interval, push button, or delayed start
Memory Modes	Stop when full or wrap when full
Memory	512 KB nonvolatile flash data storage
Time Accuracy	0 to 2 seconds for the first data point and ±5 seconds per week at 25°C
Battery Type	Four AA 1.5 V alkaline batteries for operating conditions of -20° to 50°C ; four AA 1.5 V lithium batteries for operating conditions of -40 to 70°C
Battery Life	1 year, typical use (up to five sensors with 1 minute or greater logging interval)
Communication Type	USB 2.0 interface
Full Memory Download Time	4 minutes
Enclosure Access	Hinged door secured by one latch with eyelet for use with user-supplied padlock
Materials	Outer enclosure: Polycarbonate/PBT blend with stainless steel hinge pins; Gaskets: Silicone rubber; Cable channel: EPDM rubber
Dimensions	17.04 x 11.94 x 4.47 cm see diagrams in manual Padlock hole diameter: 0.58 cm
Weight	414g
Environmental Rating	Weatherproof enclosure, NEMA 4X and IP66

Solar Radiation

Measurement range: 0 to 1280 W/m^2
Operating temperature range: -40° to 75°C
Accuracy: ±10 W/m2 or ±5%, whichever is greater in sunlight. Additional temperature induced error ±0.38 W/m^2 /°C from 25°C
Resolution: 1.25 W/m^2
Drift: <±2% per year
Spectral range: 300 to 1100 nm
Cosine response error: ±5%, 0° to 70°; ±10%, 70° to 80° from vertical
Azimuth error: ±2% error at 45° from vertical, 360° rotation
Calibration: Factory recalibration available
Housing: anodized aluminum housing with acrylic diffuser and o-ring seal
Dimensions: 4.1 cm high x 3.2 cm diameter
Approximate weight: 120 g
Cable length: 3 m
Length of Smart Sensor Network Cable: 3 m
Measurement parameters: average over logging interval, user-defined sampling interval from 1 second

0.2 mm Rain Gauge

Measurement Range	0 to 10.2 cm (0 to 4 in.) per hour, maximum 4,000 tips per logging interval
Accuracy	±4.0%, ±1 rainfall count between 0.2 and 50.0 mm (0.01 and 2.0 in.) per hour; ±5.0%, ±1 rainfall count between 50.0 and 100.0 mm (2.0 and 4.0 in.) per hour
Resolution	0.01 in. (S-RGC-M002) or 0.2 mm (S-RGF-M002)
Operating Temperature Range	0° to 50°C (32° to 122°F), survival -40° to 75°C (-40° to 167°F)
Environmental Rating	Weatherproof
Housing	UV-stabilized ABS plastic
Mechanism	Tipping spoon with magnetic reed switch pivots on metal shaft
Dimensions	16.5 cm opening diameter (6.5 in.) x 24 cm (9.5 in.) high; 214 cm^2 (33.2 in.^{2}) collection area
Weight	1.2 kg (2.7 lbs)
Bits per Sample	12
Number of Data Channels*	1
Measurement Averaging	No
Cable Length Available	2 m (6.6 ft)
Length of Smart Sensor Network Cable*	0.5 m (1.6 ft)

Temperature/Relative Humidity

Measurement Range
Temp: -40°C to 75°C
RH: 0-100%* RH at -40° to 75°C; exposure to conditions below -20°C or above 95% RH may temporarily increase the maximum RH sensor error by an additional 1%
Accuracy
Temp: ±0.25°C from -40° to 0°C; ±0.20°C from 0° to 70°C; ±0.25°C from 70° to 75°C
RH: ±2.5% from 10% to 90% RH (typical), to a maximum of ±3.5% including hysteresis at 25°C; below 10% and above 90% ±5% typical

Resolution
Temp: 0.02°C
RH: 0.01% RH

Bits Per Sample
Temp: 16
RH: 16

Drift
Temp: < 0.01°C per year
RH: < 1% per year typical

Response Time (typical, to 90% of change)
Temp: Without solar radiation shield: 3 minutes, 45 seconds in air moving 1 m/s; With RS3-B solar radiation shield: 6 minutes, 30 seconds in air moving 1 m/s
RH: Without solar radiation shield: 15 seconds in air moving 1 m/s; With RS3-B solar radiation shield: 30 seconds in air moving 1 m/s

Operating temperature range: -40°C to 75°C
Environmental rating: Weatherproof: 0 to 100% RH intermittent condensing environments. For best results, protect the Temp/RH sensor from sunlight and direct splashing by mounting it inside a protective enclosure, such as a solar radiation shield.
Housing: PVC cable jacket with ASA styrene polymer RH sensor cap; modified hydrophobic polyethersulfone membrane
Sensor dimensions: 45.97 x 11.43 x 10.16 mm
Weight: 110 g
Number of data channels**: 2
Measurement averaging option: No
Cable lengths available: 2.5 m
Length of Smart Sensor network cable: 0.5 m

Wind Speed and Direction

	Wind Speed/Gust	Wind Speed/Gust
Measurement Range	0 to 76 m/sec (0 to 170 mph)	0 to 355 degrees
Accuracy	±1.1 m/sec (±2 mph) or ±5% of reading, whichever is greater	±7 degrees
Resolution	0.5 m/sec (1.1 mph)	1 degrees (0 to 355 degrees)
Starting Threshold	≤1 m/sec (2.2 mph) Cup revolutions are accumulated every three seconds for the duration of the logging interval	1 m/sec (2.2 mph)
Measurement Definition	**Wind speed**: Average speed for the entire logging interval **Gust speed:** The highest three-second wind recorded during the logging interval	Unit vector averaging used; vector components for each wind measurement are calculated every three seconds for duration of logging interval (see *Measurement Operation*)
Operating Temperature Range	See *Measurement Operation*. -40°C to 65°C	

Environmental Rating	Weatherproof	
Housing	Polycarbonate wind cups	UV-resistant ABS wind vane and black-anodized aluminum anemometer arm
Bearing Type	Sealed stainless steel	
Turning Radius	108 mm	Approximately 135 mm
Dimensions	470 x 191 x 121 mm	
Weight	1.332 kg	
Bits per Sample	8 for each channel, 24 total	
Number of Data Channels*	3	
Measurement Averaging Option	Automatic averaging (see *Measurement Operation*)	
Cable Length Available	3 m	
Length of Smart Sensor Network Cable*	0.5 m	