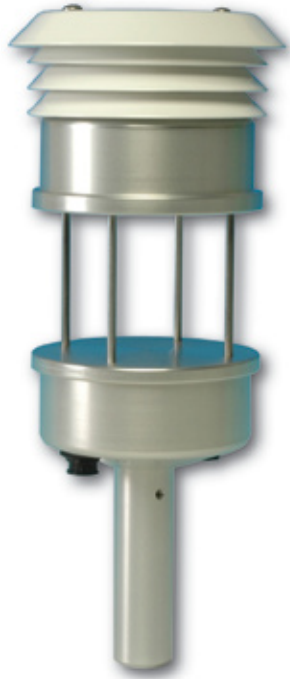


CM-100 Compact Weather Sensor



Description

The CM-100 Compact Weather Sensor is the next-generation weather instrument that measures temperature, relative humidity, wind speed, wind direction, and barometric pressure in a single compact, rugged unit.

The CM-100 Compact Weather Sensor integrates a unique folded-path, low-power sonic anemometer, the Sonimeter™, with a multi-element temperature sensor, fast-response capacitive relative humidity sensor, state-of-the-art barometric pressure sensor and an internal flux-gate compass for automatic alignment of wind direction to magnetic north for quick deployment (true/magnetic North offset is adjustable by the user through software command). The result is a professional grade Compact Weather Sensor designed for reliability, longevity, and ease of installation.

The small footprint and power efficiency of the CM-100 Compact Weather Sensor make it ideal for remote regions, urban environments, air quality networks, construction/remediation sites, and other network applications. The unit can be used in permanent (cooperative weather networks, schools, public information dissemination) or temporary (emergency response, audit, research program support) installations.

Designed for maximum portability and utility, the CM-100 Compact Weather Sensor is uniquely applicable for rapid deployment and use by one person under all conditions. The unit may be mounted on a tripod or vehicle mast.

Data output is a serial, digital message that can be interfaced to most data logging systems. Software is provided for user interface.

Features

- Five weather measurement parameters in one solid-state device
- Compact size for easy deployment
- Minimal maintenance required
- Multiple data output formats for connection to most data loggers
- Windows software for sensor configuration and data viewing

Applications

- Weather sensor networks
- Urban weather monitoring
- Construction/remediation sites
- Remote weather monitoring
- Easily add basic weather monitoring to existing environmental data monitoring locations

CM-100 Compact Weather Sensor

Technical Specifications

Corporate Headquarters

12067 NE Glenn Widing Drive
Suite 106
Portland, Oregon 97220

800.452.5272 Tel
503.445.8000
503.445.8001 Fax
info@stevenswater.com
www.stevenswater.com

Since 1911, Stevens Water Monitoring Systems, Inc. has been a leading manufacturer of:

- Water Level Sensors
- Water Quality Sensors
- Soil Moisture Sensors
- Chart Recorders
- Staff Gages
- Telemetry Systems
- Data Collection Platforms

PERFORMANCE

Wind Speed

Range: 0 to 50 m/sec (0 to 112 mph)
Accuracy: ± 0.5 m/s or 5% of reading ¹
Resolution: 0.1 m/s

Wind Direction

Range: 0° to 360°
Accuracy: $\pm 5^\circ$ @ wind speed > 2.2 m/s
Resolution: 1.0°

Temperature

Range: -50°C to +50°C (-58°F to +122°F)
Accuracy: $\pm 0.2^\circ\text{C}$ ²
Resolution: 0.1°C

Relative Humidity

Range: 0 to 100%
Accuracy: $\pm 3\%$
Resolution: 1.0%

Pressure

Range: 600 to 1100 hPa
Accuracy: ± 0.35 hPa ³
Resolution: 0.1 hPa

Compass

Accuracy: $\pm 2^\circ$
Resolution: 1°

ELECTRICAL

Measurement Rate: Output: 1 Hz
Signal Output: RS-232, RS-485, SDI-12, MODBUS
Power Requirements: 10 to 18 VDC @ 20 mA nominal, option dependent

ENVIRONMENTAL

Temperature: -50°C to +70°C (-58°F to +158°F)
Humidity: 0 to 100%

PHYSICAL

Construction: Aluminum and stainless steel
Weight: 0.91 kg (2.0 lbs)
Size: 292.1 mm (11.5 in) high by 101.6 mm (4.0 in) dia.
Mounting: Universal mounting bracket (standard) for use with horizontal or vertical 1 to 3 inch pipe
Color: Gloss white powder coat

SHIPPING

Weight: 1.82 kg (4.0 lbs)

Notes:

1. Whichever is greater
2. Sensor element
3. At constant temperature (25°C)

STANDARD FEATURES

- Universal mounting bracket
- RS-232C, RS-485, SDI-12, or MODBUS communications configuration
- RS-232C to USB adapter and RS-232C cable
- +12 VDC power supply
- User interface software (set parameter units, averaging time, log data, view current readings)

ORDERING INFORMATION

Part #	Description
51132	CM-100 Compact Weather Sensor