

Soil Moisture Data Logger Part of the NOMAD® Family

OM-CP-SMR101A



- ✓ High Accuracy Sensor
- ✓ Fast Response Time
- ✓ Simple Soil Insertion (Vertical or Horizontal)
- ✓ Weatherproof Enclosure (Included)
- ✓ No External Power Required
- ✓ Multiple Start/Stop Function
- ✓ Ultra High Speed Download
- ✓ 1 Million Reading Storage Capacity
- ✓ Memory Wrap
- ✓ Battery Life Indicator
- ✓ Optional Password Protection
- ✓ Programmable Alarm
- ✓ Field Upgradeable

The OM-CP-SMR101A is a small, battery powered, soil moisture data logger in a weatherproof enclosure. It provides accurate volumetric water content measurements over a complete range from dry to saturated.

The OM-CP-SMR101A has a 10-year battery for long-term deployments and soil studies, over multiple seasons. It also features a 4 Hz reading rate, a multiple start/stop function, ultra-high speed download capability, 1,000,000 reading storage capacity, optional memory wrap, battery life indicator, optional password protection, and more.

The OM-CP-SMR101A comes with the OM-CP-SMRPROBE, a high accuracy soil moisture probe (pictured above), with a response time of 10 ms, that can be used in all soil types.

For easy soil moisture analysis and trend information, our user friendly software provides a time and date stamped graph. This data may be viewed, printed or exported to third-party programs (Excel, etc) for more detailed analysis and irrigation management. Soil moisture data is essential in determining and



OM-CP-SMR101A-KIT shown smaller than actual size.

scheduling irrigation for proper plant growth, care and research. This data is also useful in determining the health of the soil and plant root systems.

The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged.

Specifications

DATA LOGGER

Measurement Range: ± 1200 mV

Accuracy: $\pm 0.01\%$ FSR

Input Range: 0 to 2.5 Vdc

PROBE

Measurement Range: 0 to 100% VWC saturation

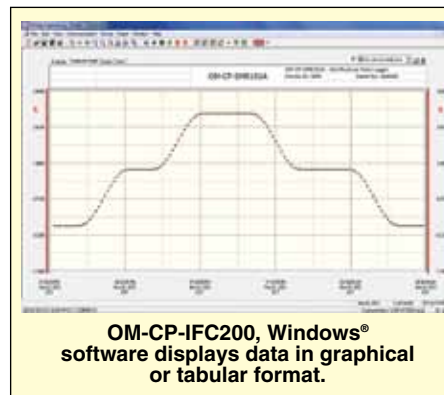
Measurement Type: VWC (Volumetric Water Content)

Measurement Accuracy: $\pm 3\%$ typical, all soils $\pm 1\%$ with soil specific calibration

Measurement Time: 10 ms

Measurement Resolution: $0.002\text{m}^3/\text{m}^3$

Life Expectancy: 3 to 5 years



GENERAL SPECIFICATIONS

Reading Rate: 4 Hz to 1 every 24 hr

Memory: 1,000,000 readings; software configurable memory wrap; 330,000 readings in multiple start/stop

Wrap Around: Yes

Start Modes:

- Immediate start
- Delay start up to 24 months
- Multiple pushbutton start/stop

Stop Modes:

- Manual through software
- Timed (specific date and time)

Multiple Start/Stop Mode: Start and stop the device multiple times without having to download data or communicate with a PC

Multiple Start/Stop Mode

Activation:

To Start the Device:

Press and hold the pushbutton for 5 seconds, the green LED will flash during this time; the device has started logging

To Stop the Device:

Press and hold the pushbutton for 5 seconds, the red LED will flash for three seconds and then the green LED will flash for two seconds; the device has stopped logging

Real Time Recording: The device may be used with PC to monitor and record data in real-time

LED Functionality:

Green LED Blinks: 10 second rate to indicate logging, 15 second rate to indicate delay start mode

Red LED Blinks: 10 second rate to indicate low battery and/or full memory

Password Protection:

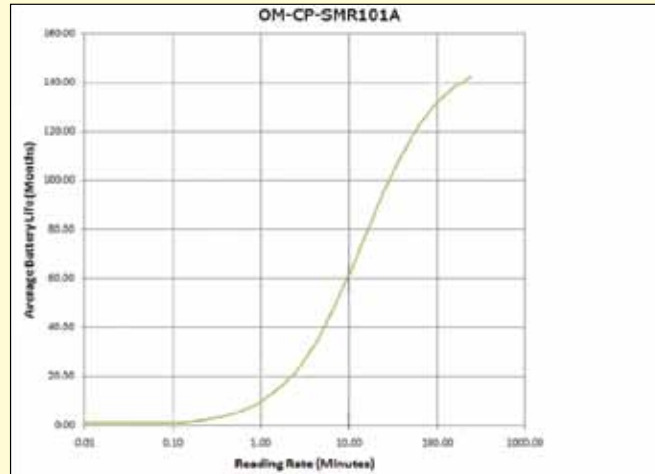
An optional password may be programmed into the device to restrict access to configuration options; data may be read out without the password

Engineering Units: Native measurement units can be scaled to display measurement units of another type.

Battery Type: 3.6V lithium battery included; user replaceable

Battery Life: 10 months typical at a 1 minute reading rate

Time Accuracy: ± 1 minute/month (at 20°C/68°F, stand alone data logging)



Average battery life vs. reading rate of OM-CP-SMR101A recording in a 25°C environment.

Computer Interface: USB (interface cable required); 115,200 baud

Software: XP SP3/Vista/7 and 8 (32- and 64-bit)

IP Rating: IP65

Operating Environment: -20 to 50°C (-4 to 122°F), 0 to 95% RH non-condensing

DIMENSIONS

Data Logger:

36 H x 64 W x 16 mm D (1.4 x 2.5 x 0.6")

Probe:

55 L x 15 W x 1.5 mm diameter (2.1 x 0.6 x 0.06")

Cable Length: 5 m (16')

Water Box:

74 H x 148 W x 39 mm D (2.9 x 5.8 x 1.5")

Weight (OM-CP-SMR101A-KIT): 198 g (7 oz)

Materials:

Data Logger: ABS plastic

Waterbox: Black Anodized Aluminum



OM-CP-SMR101A-KIT shown smaller than actual size.

To Order

Model No.	Description
OM-CP-SMR101A-KIT	Soil moisture data logger with OM-CP-SMRPROBE probe, and OM-CP-WATERBOX101A weatherproof enclosure
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-SMRPROBE	Replacement soil moisture probe (only)
OM-CP-BAT105	Replacement 3.6V battery
OM-CP-WATERBOX101A	Replacement weatherproof NEMA 4 (IP65) enclosure for data logger
OM-CP-WATERBOX101A-KIT	Maintenance kit for OM-CP-WATERBOX101A

Comes complete with 3.6V lithium battery, OM-CP-SMRPROBE, and OM-CP-WATERBOX101A. Operator's manual and USB interface cable are included with the OM-CP-IFC200 software/cable package (required for data logger operation, sold separately).

Ordering Example: OM-CP-SMR101A-KIT, soil moisture data logger with included OM-CP-SMRPROBE probe and OM-CP-WATERBOX101A weatherproof enclosure.