

WATERSCOUT[®] SM 100 Soil Moisture Sensor

OVERVIEW

Keeping track of your field's soil moisture status allows you to better schedule irrigations and evaluate the effectiveness of rain and irrigation water. Regular monitoring will give you an accurate picture of this process over time.

The SM100 combines affordability and accuracy into a sensor that is easy to install. The sensor is composed of two electrodes that function as a capacitor, with the surrounding soil serving as the dielectric. An 80 MHz oscillator drives the capacitor and a signal proportional to the soil's dielectric permittivity is converted to an output signal that is then converted to volumetric water content.

The SM100 is designed to be compatible with WatchDog[®] data loggers and weather stations. SpecWare software enables you view your data in graphical and tabular form as well as run reports customized to your application.

STANDARD INTERFACES

- WatchDog 2000 Series Weather Stations (Models 2900ET, 2800, 2700, 2550)
- WatchDog 2000 Series Mini Stations (Models 2475, 2450, 2425, 2400)
- WatchDog 1000 Series Micro Stations (Models 1650, 1525, 1450, 1425, 1400, 1250, 1225, 1200)
- FieldScout Soil Sensor Reader
- Older versions of the WatchDog 2000 Series Weather Stations with serial numbers earlier than 2310 can accommodate only two SM 100 sensors



FieldScout Soil Sensor Reader connected to a buried WaterScout SM 100 Soil Moisture Sensor.

Spectrum[®]
Technologies, Inc.

"To Measure Is To Know"

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Aurora, Illinois 60504

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Item 6460

SM 100 Soil Moisture Sensor
with 6ft. cable

Item 6460-20

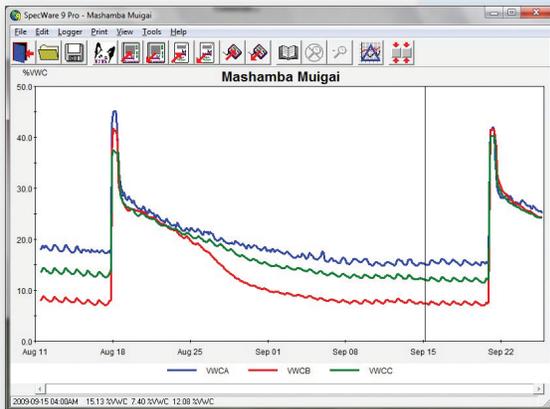
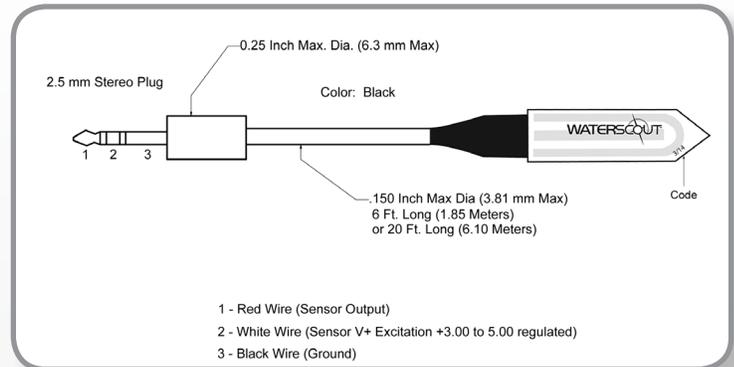
SM 100 Soil Moisture Sensor
with 20ft. cable



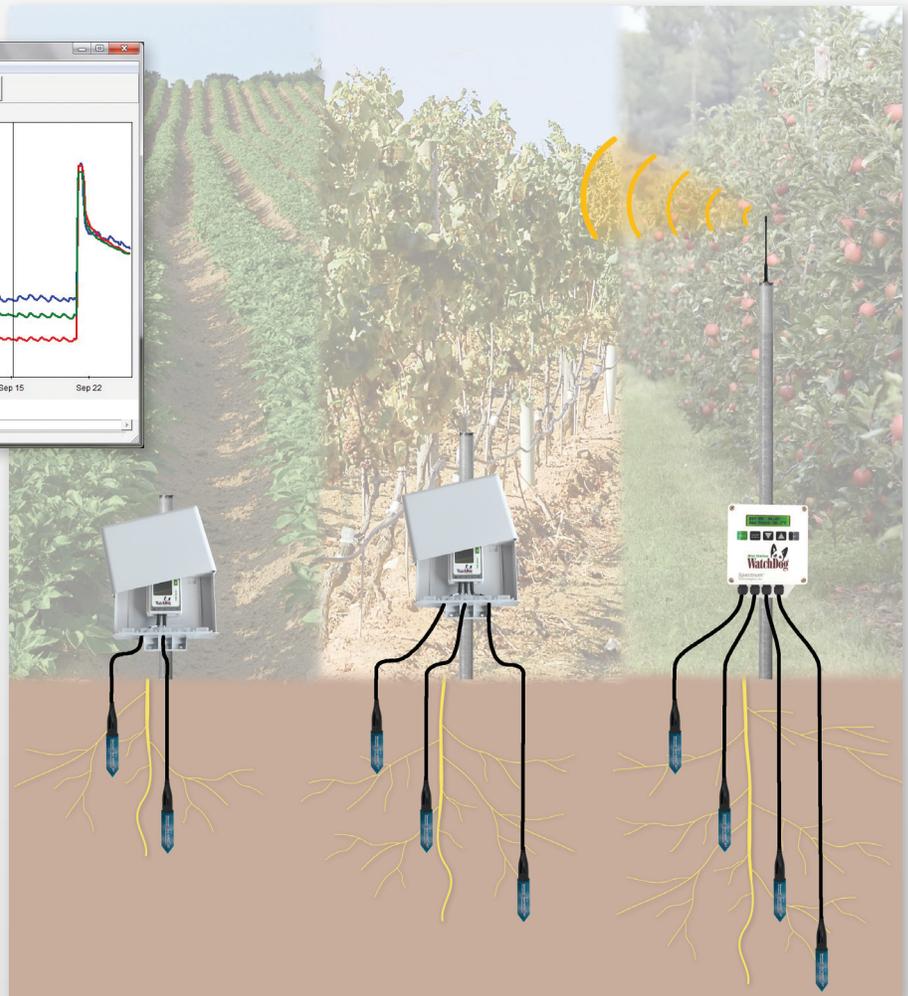
WatchDog 1000 Series Soil Moisture Micro Station shown with three WaterScout SM 100 Soil Moisture Sensors.

SPECIFICATIONS

- Cable length: 6 and 20ft. extendable up to 100ft.
- Dimensions: 2.4in (6cm) x 0.8in (2cm) x 0.1in (0.3cm)
- Accuracy: 3% VWC @ EC < 8 mS/cm
- Resolution: 0.1% VWC
- Oscillator frequency: 80 MHz
- Output: Analog voltage proportional to excitation voltage (0.5 to 1.5 V for a 3V excitation)
- Power: 3 to 5V @ 6 to 10mA
- Range: 0% VWC to saturation
- Connector: 2.5mm stereo pin
- Temperature: 33 - 175°F (0.5 - 80°C)
- Calibration: Sensors with 3/14 code can be re-calibrated using the FieldScout Soil Sensor Reader (item 6466)



You can collect data and log results when the WaterScout SM 100 Soil Moisture Sensor is connected to a WatchDog Station.



WatchDog 1000 Series Micro Station (left and center) and WatchDog 2000 Series Mini Station (right) shown with multiple WaterScout SM 100 Soil Moisture Sensors. The Mini Station may also be connected with wireless communications options, allowing for remote data collection.

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