



HS2P

HydroSense II Handheld Soil Moisture Sensor with Insertion Pole



Fast and Portable

Soil Water Content
Measurements

Overview

The HS2P is a combination of the Hydrosense II soil-water sensor with a strong handle and pole that make it easier to insert the probes into the soil. The lightweight pole allows soil testing without bending over. The HS2P is compact and

portable, with the layout of the buttons on the display allowing for operation with one hand. Two different probe lengths are available, for different types of soil or turf.

Benefits and Features

- › Compact and lightweight
- › Read real-time soil-water content measurements in the field

Detailed Description

Handheld Display

The display consists of a three-inch LCD and four navigation buttons that make changing settings and taking measurements as easy as possible. An integrated GPS tags each measurement with a latitude and longitude.

Zones can be created on the unit which group measurements together so that average soil moisture can be calculated for an area. The current position and zone are shown on the display so that measurements can be taken in the same zone.

Data storage has been added to allow more than 1000 measurements to be stored on the device. The data can then be downloaded to a PC via Bluetooth for viewing and archiving.

Soil Moisture Sensor

Two sensor options are offered. The CS658P has 20 cm rods and the CS659P has 12 cm rods. These sensors use an accurate measurement technique and have a rugged design allowing insertion into and removal from hard soils. Their rods are secured to their housing with ferrule nuts that provide extra stability during insertion.

Software

The PC software makes the most of the data storage capability of the display. The software connects to the display via Bluetooth to avoid the need for extra cables.

The software allows the user to:

- › View data in table and chart views
- › Edit zone positions and sizes

- › Change device settings
- › Export data to CSV to interface with third-party software
- › View zones and measurements in Google Earth

Specifications

| | |
|--------------------|--|
| Measurements Made | Volumetric water content (VWC) of porous media (such as soil) |
| Required Equipment | HS2P is a complete system. |
| Soil Suitability | Short rods are easy to install in hard soil. Suitable for soils with higher electrical conductivity. |
| Rods | Replaceable |
| Sensors | Interchangeable sensors; can swap the 12 cm and 20 cm sensors with the reader. |
| Handle Width | 29.2 cm (11.5 in.) |
| Height | › 96.5 cm (38 in.) top of display to bottom of sensor › 82.3 cm (32.4 in.) handle to bottom of sensor |
| Pole Width | 2.5 cm (1 in.) |
| Pole Depth | 2.5 cm (1 in.) |
| Weight | › 1.1 kg (2.4 lb) without display › 1.4 kg (3 lb) with display and rods |

Display

| | |
|-----------------|--|
| Display | 128 x 64 pixel graphic LCD |
| Backlight | Blue and white LED (brightness adjustable) |
| GPS Accuracy | › ±1 ms time with GPS sync › ±5 m (16.4 ft) typical |
| Bluetooth Range | ~10 m (~30 ft) |
| Data Storage | > 1000 records (ring memory) |
| Zone Storage | > 100 records |
| Power Supply | 6 Vdc, 4 AA batteries |
| Battery Life | 6 to 12 months (typical usage) |

| | |
|------------|---|
| Dimensions | 200 x 100 x 58 mm (7.9 x 3.9 x 2.3 in.) |
| Weight | 340 g (12 oz) |

Typical Power Consumption of Display

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|-------------------|-------|
| Sleep | 20 µA |
| Backlight Off | 2 mA |
| Backlight at 60% | 18 mA |
| Backlight at 100% | 30 mA |
| GPS Active | 35 mA |
| Bluetooth Active | 30 mA |

Probe Options

| | |
|-------------------------------------|--|
| -NOTE- | <i>The CS659P and CS658P cannot share rods.</i> |
| Water Content Accuracy | › 3% typical (Accuracy assumes solution EC of < 6.5 dS/m when using the CS659P 12-cm probe.) › 3% typical (Accuracy assumes solution EC of < 4 dS/m when using the CS658P 20-cm probe.) |
| Volumetric Water Content Resolution | < 0.05% |
| Volumetric Water Content Range | 0% to 50% VWC |
| Rod Diameter | 5 mm (0.14 in.) |
| Rod Length | › 120 mm (4.7 in.) for the CS659P 12-cm probe › 200 mm (7.9 in.) for the CS658P 20-cm probe |
| Body Dimensions | 100 x 92 x 40 mm (3.9 x 3.6 x 1.6 in.) |
| Weight | 450 g (15.9 oz) |

For comprehensive details, visit: www.campbellsci.com/hs2p 



Campbell Scientific, Inc. | 815 W 1800 N | Logan, UT 84321-1784 | (435) 227-9120 | www.campbellsci.com
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