



Key Features

- Continuous accuracy without calibration
- Accurate across different locations, soil types, moisture range and seasons
- 5-year warranty and fully potted components
- Compatible with any SDI-12 capable data logger - no setup required

Read out unit - 142830

The read-out unit SDI-12 gives immediate readings of current measurement conditions from HydraProbe soil moisture sensors

Looking for a rugged soil moisture sensor for long term monitoring? The HydraProbe SDI-12 soil moisture sensor can measure moisture in the range from completely dry to fully saturated, with an accuracy of accuracy +/- 0.01 WfV.

The HydraProbe is the most scientifically researched soil sensor available and is depended on by the USDA, NOAA, farmers, leading irrigation companies, and universities for over 25 years.

The temperature range is -10°C to 60°C, with a measurement accuracy of 0.3°C. The information can be read out with a data logger.

Variations

If you want to measure soil moisture and temperature, the HydraProbe standard is suitable; if you want to measure salinity as well you will need the HydraProbe Pro.

- **14.28.01** HydraProbe SDI-12 Standard, 7.5 metre cable
- **14.28.11** HydraProbe SDI-12 Pro, 7.5 metre cable
- **14.28.12** HydraProbe SDI-12 Pro, 15 metre cable

Specification Read out Unit

Output	8-digit alphanumeric character LCD display
Operating temperature	0°C to +65°C (32°F to 150°F)
Storage temperature	-20°C to 70°C (-4°F to 160°F)
Power	Battery-operated (9 V alkaline)
Dimensions	12.1 cm x 7 cm x 2.5 cm (4.75" x 2.75" x 1")
Weight	181 g (0.4 lb)



Specification		
Measurement	Accuracy	Range
Real dielectric permittivity (isolated)	± ≤1.5% or 0.2 whichever is typically greater	1 to 80 where 1 = air, 80 = distilled water
Soil moisture for inorganic & mineral soil	± 0.01 WFV for most soils ± ≤0.03 max for fine soils*	From completely dry too fully saturated
Bulk electrical conductivity	± 2.0% or 0.02 S/m	0.01 to 1.5 S/m
Temperature	± 0.3°C	-10° to +55°C
Inter-sensor variability	± 0.012 WFV (θ m3 m-3)	n/a
Electrical & Communication Spec		
Power supply	9-20 VDC	
Power consumption	<1 mA idle / 10 mA active	
Cable	3-wire: power, ground, data	
Cable length	7.5 m (24.6 ft.)	
Baud rate	1200	
Communication protocol	SDI-12 Standard v. 1.2	
Addressing	Serial; allows multiple sensors to be connected to any SDI-12 data logger via a single cable.	
Environmental Spec		
Operating temp	Temperature probe range: -10°C to +55°C	
Storage temp	-40°C to +55°C	
Water resistance	Tolerates continuous full immersion	
Cable	18 gauge (20 gauge for RS-485), UV resistant	
Vibration and shock resistance	PVC housing and 304 grade stainless steel tines	
Physical Spec		
Length	124 mm (4.9")	
Diameter	42 mm (1.6")	
Weight	200 g (7 oz.)	
Cable weight	80g/m (0.86 oz/ft)	
Sensing volume (cylindrical region)	Length: 5.7 cm (2.2") Diameter: 3.0 cm (1.2")	

* Accuracy may vary with some soil textures.

