

Bodenfeuchtesensor

10HS Soil Moisture Sensor

(Decagon Devices)

Specifications

Range:

Apparent dielectric permittivity (ϵ_a): 1 (air) to 50

Soil volumetric water content (VWC): 0 – 0.57 m³/m³ (0 -57% VWC)

Accuracy:

(ϵ_a): ± 0.5 from ϵ_a of 2 to 10, ± 2.5 from ϵ_a of 10 to 50 (VWC):

VWC: Using standard calibration equation: ± 0.03 m³/m³ ($\pm 3\%$ VWC) typical in mineral soils that have solution electrical conductivity < 10 dS/m

Using soil specific calibration, ± 0.02 m³/m³ ($\pm 2\%$ VWC) in any soil

Resolution:

ϵ_a : 0.1 from ϵ_a of 1 to 30, 0.2 from ϵ_a of 30 to 50

VWC: 0.0008 m³/m³ (0.08% VWC) in mineral soils from 0 to 0.50 m³/m³ (0-50% VWC)

Measurement Time: 10 ms (milliseconds)

Power requirements: 3VDC @ 12mA to 15 VDC @ 15 mA

Output: 300 – 1250 mV, independent of excitation voltage

Operating Temperature: 0 – 50 °C

