

## Bodenfeuchtesensor

### 10HS Soil Moisture Sensor

(Decagon Devices)

#### Specifications

##### Range:

Apparent dielectric permittivity ( $\epsilon_a$ ): 1 (air) to 50

Soil volumetric water content (VWC): 0 – 0.57 m<sup>3</sup>/m<sup>3</sup> (0 -57% VWC)

##### Accuracy:

( $\epsilon_a$ ):  $\pm 0.5$  from  $\epsilon_a$  of 2 to 10,  $\pm 2.5$  from  $\epsilon_a$  of 10 to 50 (VWC):

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

Using soil specific calibration,  $\pm 0.02$  m<sup>3</sup>/m<sup>3</sup> ( $\pm 2\%$  VWC) in any soil

##### Resolution:

$\epsilon_a$ : 0.1 from  $\epsilon_a$  of 1 to 30, 0.2 from  $\epsilon_a$  of 30 to 50

VWC: 0.0008 m<sup>3</sup>/m<sup>3</sup> (0.08% VWC) in mineral soils from 0 to 0.50 m<sup>3</sup>/m<sup>3</sup> (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

