

AquaSpy Turf Probe

Technical Specifications

Specifications subject to change without prior notice



This subsurface 30cm long probe has been specifically designed to measure soil moisture content at multiple depths (at every 5cm) for turf and shallow rooted plants. Changes in soil moisture content show plant water use, irrigation penetration and root activity, and this information enables watering to be optimised to facilitate healthier turf and superior performance.

Soil Moisture Monitoring Device

- Uses capacitance (FDR) technology
- Digital RS-485 output facilitating multi-drop capability
- Choice of 3 protocol options:
 - RS-485 ASCII Simplified
 - RS-485 AO (for AquaSpy Telemetry only)
 - SDI-12
- Re-programmable re-addressability on 2 wire RS-485 bus
- In-situ firmware reprogrammable using boot-loader software
- Programmable averaging algorithm
- Programmable internal polling period
- O/P range/resolution 0 to 65535 (16 Bit)
- Scaled frequency output range 0-130 (ideal for heavy soils and those with high salt content).
- Measurement resolution 0.008% (Scaled Freq*100)
- 6 sensors spaced every 5cm down the length of the probe (30cm)
- Operating range -5°C to 50°C
- Temperature affects $\pm 5\%$, 0°C to 40°C (without compensation applied)
- 7.5V-16V power requirement with low consumption
- Idle current 1.1mA. Avg current 1.64mA for a 10 sensor probe reading every 900 seconds
- Peak current of 65mA for 30ms per sensor read
- High impact rigid U-PVC construction (OD 55mm), with low dielectric constant
- Standard cable 4m extendable to 250m on 2 pair twisted 'backbone cable'
- Metal insert in moulded end-cap for added protection and quick subsurface location
- Slurry installation technique recommended
- Rugged subsurface polyurethane (UV stabilised) communications cable with Switchcraft EN3C4M connector:
 - 24AWG wire
 - 4 core
 - 7 conductors (OD 0.2mm)
 - 0.3mm insulation thickness
 - 80pF/m nominal wire to wire capacitance
 - 5mm nominal outer sheath diameter
 - V-90 HT PVC insulation
 - Aluminium/polyester laminate with tinned copper drain wire screen
- Firmware parameters, inc. temperature coefficients, can be tailored using AquaSpy Field Utility software
- IP68
- One year warranty

