

# AquaSpy™ Sensor

## Technical Specifications

Specifications subject to change without prior notice



This is a single sensor version of the advanced AquaSpy Probe, allowing you to save water and enhance water use efficiency. Its unique design makes it very easy to install and increases the volume of soil in contact with the sensor, providing more accurate measurements. The sensor can be connected to AquaSpy's range of Telemetry solutions providing a cost effective soil moisture monitoring solution.

### Soil Moisture Monitoring Sensor

- Uses capacitance (FDR) technology
- Digital RS-485 output facilitating multi-drop capability
- Choice of 3 protocol options:
  - ASCII Simplified
  - 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
- Baud 1200, n, 8, 1
- Programmable averaging algorithm
- Programmable internal polling period
- O/P range/resolution 0 to 65535 (16 Bit)
- Scaled frequency output range 0-130 (suitable for soils ranging from dry to saturated)
- Measurement resolution 0.008% (Scaled Freq\*100)
- Operating range 23°F to 122°F
- Temperature affects  $\pm 5\%$ , 32°F to 104°F (without compensation applied)
- 7.5V-16V power requirement with low consumption
- Idle current 1.1mA
- Peak current of 65mA for 30ms per sensor read
- UV-stabilised PVC construction
- Rugged subsurface polyurethane (blue UV stabilised) communications cable supplied with a 4-pin Switchcraft EN3C4M connector:
  - 24AWG wire
  - 4 core
  - 7 conductors (OD 0.008")
  - 0.012" insulation thickness
  - 80pF/m nominal wire to wire capacitance
  - 0.2" nominal outer sheath diameter
  - V-90 HT PVC insulation
  - Aluminium/polyester laminate with tinned copper drain wire screen
- Standard cable 16ft extendable to 820ft on 2 pair twisted 'backbone cable'
- Aluminium/polyester laminate with tinned copper drain wire screen
- Firmware parameters, inc. temperature offset, can be tailored using AquaSpy Field Utility software
- The sensor is fully dust and waterproof - IP68
- AquaSpy Sensor 7.09" x 0.59" x 2.76"
- One year warranty

