AquaLINK SOLAR
Technical Brief

The AquaLINK Solar is the latest in technology and ergonomic design. The rugged housing and built in solar panel allows the end-user to monitor and measure Soil Moisture in the harshest and most remote of environments.
The AquaLINK Solar also comes standard with SDI-12 interface which communicates seamlessly with the AquaCheck Soil Moisture Probe.
With a built in solar panel, the unit requires no external power supply. This makes it the perfect renewable energy device for measuring soil moisture.

Features

Powered by the sun: With the built in solar panel and internal battery

A rugged, weather-proof housing: protects the AquaLINK against the harshest of environments. This allows the device to be installed in the field without additional protection.

High sensitivity GPS with internal patch antenna: The device uses assisted GPS technology to acquire faster position fixes & performs low signal positioning.

External port: Measure AquaCheck Soil Moisture Probes effortlessly, just connect the probe.

Internal battery: The AquaLINK has an internal battery which is used to power the unit and is recharged through the solar panel when exposed to sunlight. Battery life in cloud covered conditions

is about 8 hours at full use or many months standby depending on frequency of GPS updates and connection intervals.

Simple installation: GSM and GPS antennas are internal to the unit. External power cables are not required.

Power supply monitoring: The device monitors and reports on the battery voltage, this enables early detection of battery faults.

Flash Memory: An internal flash memory records large amounts of AquaCheck Soil Moisture data.

Cloud Management

The AquaLINK is managed by a cloud interface that allows for firmware, parameters, network settings & GPS aiding data to be updated Over The Air (OTA). The data from the device is then displayed on the AquaCheckWEB software.

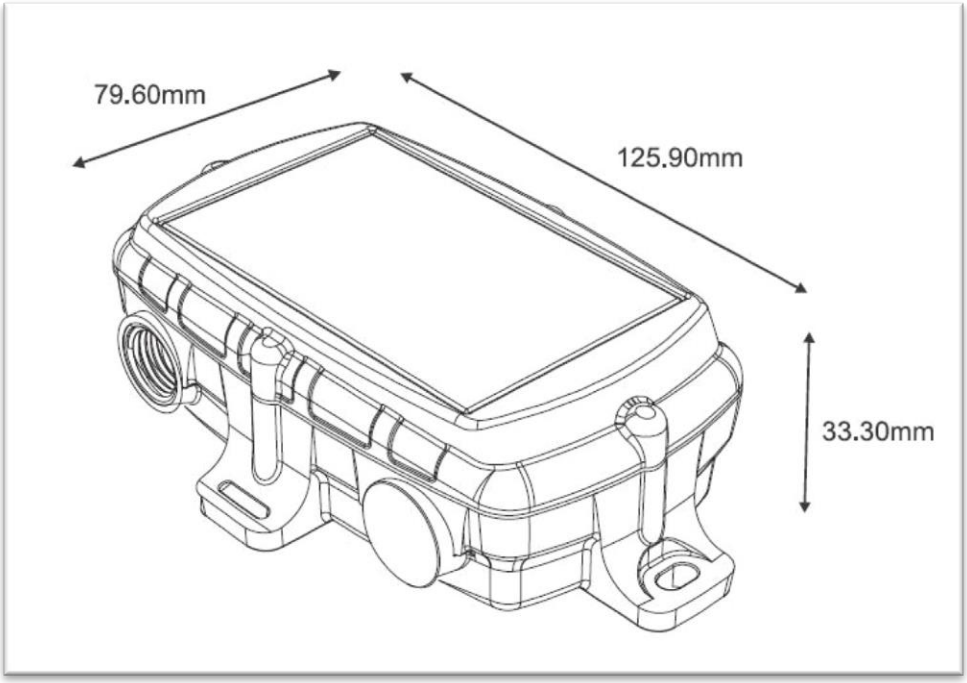
Communication Options

The AquaLINK Solar comes in both GPRS and 3G communication options. If the unit operates outside a coverage area the data is stored in the flash memory on the unit & uploaded once the unit returns within GSM coverage.

Option 1: 3G compatible with 3G networks including NextG in Australia, and US markets

Option 2: 2G/GPRS compatible with GPRS networks

Dimensions



Power

The AquaLINK contains a 1050mAH LiPo battery. The battery is charged by the solar panel built into the AquaLINK and can also be charged by external power through the 9 pin connecter. It is important that the AquaLINK is installed in a position where it will get the maximum amount of direct sunlight, although the unit will still charge and operate from ambient sunlight.

The AquaLINK' operating behavior is determined by parameter settings and the actual battery level measured by the circuitry. The firmware in the AquaLINK has been designed to intelligently alter the behavior of the device depending on the battery level and the amount of sunlight (charge) available.

Battery Level	Measurement Frequency
Full	15 min
> 90%	30 min
> 70%	1 hour
> 30%	3 hours
<= 30 %	12 hours

Technical summary

Mechanical Features	
Housing	Nylon Glass Composite, IP67 rated
Connectors	9-way, IP67
Operating Temperature range	-22 to +70 °C
Power	
Input range	9V to 24V DC
Output range	5V 125mA
Backup	Lithium Polymer (1050mAH)
Solar Panel	0.5W
Connectivity	
GSM	GPRS / 3G HSDPA
SIM	Single
GSM Antenna	Internal
SDI-12 Interface	Yes
Pulse input	Yes