

EnviroSCAN Probe



Reliable Performance

The award winning EnviroSCAN probe is the flagship product of Sentek. It provides the user with great flexibility for precision monitoring of water and salinity at multiple depths in a soil profile.

The EnviroSCAN probe is widely used in all forms of agriculture (irrigated and dryland), environmental applications, research and education, as well as turf, parks and gardens.

EnviroSCAN is the only commercially available product that allows for monitoring to great depths (up to 40 metres) using the same profiling probe.

EnviroSCAN Probe

Features of the probe include:

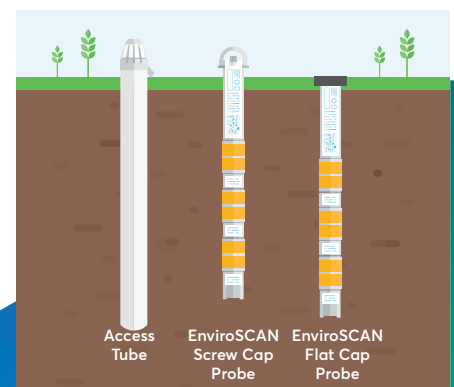
- Multiple sensors with adjustable depth placement (at 10cm increments).
- Monitoring from shallow depths (0–10cm) to deep installations (up to 40 metres).
- Flexible probe lengths, customised to suit the application (probe length adjustable in the field).
- In-built probe orientation and depth settings to enhance sensor repeatability.
- Full serviceability.
- Flexible connectivity for wide range of data retrieval options.
- Soil specific calibrations can be applied to individual sensors.

Installation

Probes are inserted into customised 56.5mm diameter access tubes to allow for:

- Improved sensor accuracy through precise wall thickness and diameter of access tube.
- Protection of sensors by avoiding direct soil contact.
- Specific sealing to ensure long-term operation.
- Full in-field serviceability without impacting on data integrity.

Installation of access tubes is carried out using specialised tools to ensure minimum soil disturbance during installation and hence measurement of an undisturbed soil profile.



Probe Sealing

The bottom of the access tube is sealed using any of:

1. A Double-ringed expandable rubber bung, providing 2 sealing points and preventing underground moisture from entering the tube, or
2. A slurry cap, which is glued in place, or
3. The solid, sealed FAST1 base with a cutting edge.



The top of the access tube is sealed with 2 different top cap designs, depending on application:

EnviroSCAN Flat Cap

- Allows for the probe to sit flush with the ground surface.
- Water-tight, 3 point sealing design.
- Provides ready access to the probe for servicing.
- Avoids potentially costly damage from machinery.

EnviroSCAN Screw Cap

- Top cap protrudes above the soil surface.
- Easy to find and readily accessible.
- Tightly sealed with a rubber O-ring.
- Simply unscrews, giving easy access to probe for servicing.

Specifications

Product	Maximum Sensors per Interface [^]	Current Consumption	Resolution	Operating Temperature	Measurement Time per Sensor
Sentek 5-wire (RT6)	16	0mA @ standby 80mA @ sampling 12V	>1:10000 Moisture	-30° to + 85° Celsius	1.1 sec
Sentek SOLO	16	1mA @ sleep 120mA @ sampling 6VDC	>1:10000 Moisture >1:6000 TriSCAN	-20° to + 75° Celsius	50mS Moisture 90mS TriSCAN
Sentek PLUS	16	500µA @ sleep 100mA @ sampling 12VDC	>1:10000 Moisture >1:6000 TriSCAN	-20° to + 75° Celsius	50mS Moisture 90mS TriSCAN
Sentek MULTI	16	500µA @ sleep 100mA @ sampling 12VDC	>1:10000 Moisture >1:6000 TriSCAN	-20° to + 75° Celsius	50mS Moisture 90mS TriSCAN
Modbus RS232 / RS485	16	500µA @ sleep 100mA @ sampling 12VDC	>1:10000 Moisture >1:6000 TriSCAN	-20° to + 75° Celsius	50mS Moisture 90mS TriSCAN
SDI-12	16	500µA @ sleep 100mA @ sampling 12VDC	>1:10000 Moisture >1:6000 TriSCAN	-20° to + 75° Celsius	50mS Moisture 90mS TriSCAN
Voltage	8*	0mA @ sleep <2mA @ standby 100mA @ sampling 4.5V – 15V DC	1:4096	0° to + 70° Celsius	50mS Moisture

[^]Note, voltage interface only supports 4 moisture outputs. *Each probe can have more than one interface due to the component connection design, allowing deep probes to be made.