

EnviroPro®

BY APCOS



PRECISION
SUB SURFACE
SOIL PROBES

The world's first multi sensor sub surface soil probe with salinity error compensation

The EnviroPro® measures moisture, temperature and salinity in all soil types providing accurate and repeatable data year after year.

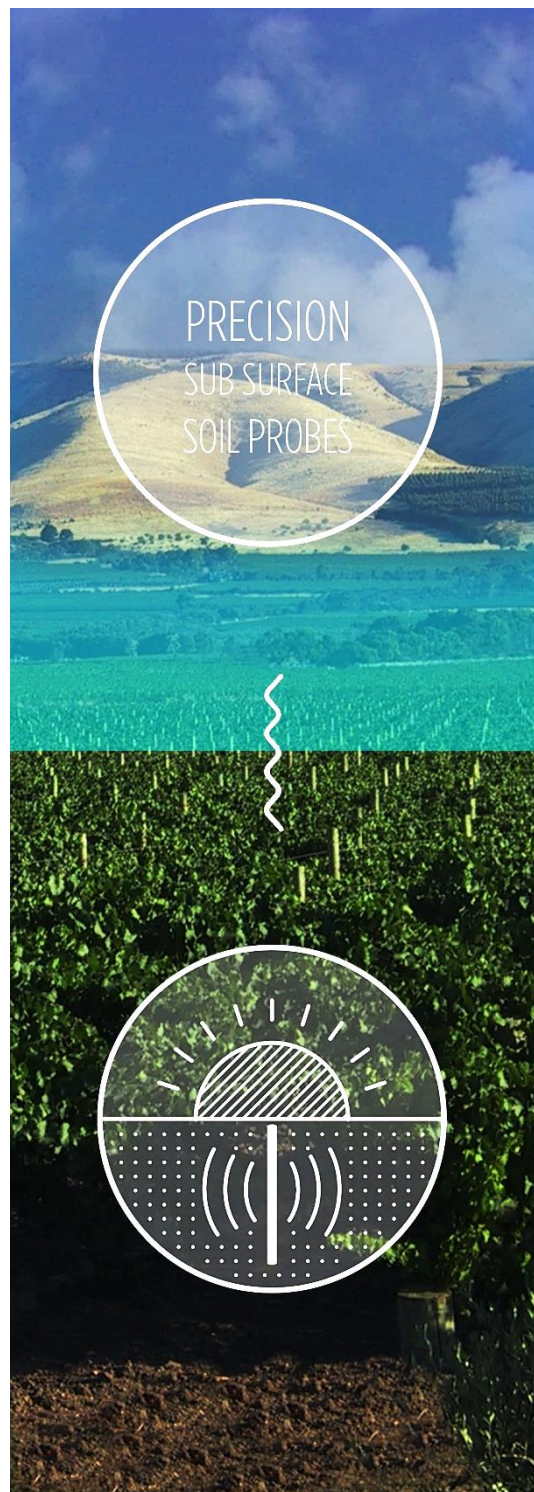
EnviroPro® probes are available in lengths of 40cm, 80cm, 120cm and 160cm. With sensors at every 10cm a complete picture of the soil profile is possible. EnviroPro® accurately monitors and reports the movement of water throughout the root zone saving irrigation and water costs whilst maximising crop yields. EnviroPro® also monitors the movement of nutrients by tracking the changes in salinity and the build-up of salinity in the root zone. EnviroPro® allows users to apply leaching irrigation only when required saving time, water and money.

All EnviroPro® sensors are factory calibrated eliminating the need to be re-calibrated in the field.

EnviroPro® is maintenance free. Our probes are fully encapsulated and environmentally sealed against all moisture and chemicals. Our industry leading 5 year replacement warranty further protects your investment.

EnviroPro® The world's best sub surface multi sensor soil probe on the market today.

Available from



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Specifications

Moisture resolution: 0.01%

Salinity resolution: 0.001 dS/m

Temperature resolution: 0.01 °C

Moisture accuracy: +/- 2% @ 0% VWC to 50% VWC

Useable salinity range: 0 to 6 dS/m*

**Upper limit of non-contact capacitance sensors*

Salinity accuracy: +/- 5% @ 0 to 4 dS/m

+/- 5% @ 10% to 30% VWC

Temperature accuracy: +/- 1 °C @ 25 °C

Units of Measure

Moisture: Volumetric Water Content %

Salinity: dS/m ECe

Temperature: °C or °F

Interface: SDI-12

Wiring: Red +6 to +15VDC

Black 0V

Blue Data

Yellow Not connected (reserved for future use)

Power Supply: +6 to +15 VDC

Reverse voltage and lightning protected

Operating temperature: -20 to +60 °C

Power Consumption:

Sleep 0.1mA per sensor (0.4mA for 4 sensor probe)

Active current 1mA per sensor (4mA for 4 sensor probe)

Measurement current 64mA @150ms per sensor

Compliance: FCC; CE; C-Tick



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Example SDI-12 commands

Command to probe

Response from probe (*4 sensor probe)

?! ; query sensor address

0 ; probe's reply

0! ; request probe ID

012EP100F-04 01120416232533 ; probe's reply

0A3! ; change probe address from 0 to 3

3 ; probe's reply with new address

0C! ; measure moisture with salinity compensation

000104 ; 001 second required, 04 values will be available

0D0! ; read data zero

0+033.40+038.37+041.85+041.57 ; four moisture values as percentage of VWC

0C1! ; measure salinity

000104 ; 001 second required, 04 values will be available

0D0! ; read data zero

0+00.047+00.090+00.102+00.143 ; four salinity values as Ece, dS/m

0C2! ; measure temperature in °C

000104 ; 001 second required, 04 values will be available

0D0! ; read data zero

0+012.37+012.19+012.68+012.56 ; four temperature values in °C

0C3! ; measure moisture without salinity compensation

000104 ; 001 second required, 04 values will be available

0D0! ; read data zero

0+033.41+038.38+041.87+041.68 ; four moisture values as percentage of VWC

0C4! ; reserved (factory use only)

0C5! ; measure temperature in °F

000104 ; 001 second required, 04 values will be available

0D0! ; read data zero

0+053.95+053.69+054.56+054.34 ; four temperature values in °F

* M commands also supported. C6 to C9 commands reserved for future features.

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