

Soil Probes

Agriculture | Smart Cities

General Description

EnviroPro are fully encapsulated soil sensors for meaningful crop selection, irrigation and fertilisation decision making. The multi-function and multi-level subsurface instruments offer continuous reliable and repeatable monitoring of soil moisture, temperature and salinity (EC)*. With salinity and temperature compensated moisture readings, EnviroPro soil probes provide accurate data for better decision-making in agriculture.

All EnviroPro® soil probes are supplied with a 5-year warranty.

Identify trends

EnviroPro® soil sensors allow growers to collect data over long periods, enabling them to make informed decisions based on trends and historical events. Each sensor is factory calibrated to provide lifetime sensor to sensor and probe to probe repeatability.

Conserve water

Save on our most precious resource, water. With the ability to test soil moisture levels at root level, EnviroPro® capacitance probes will give you the power to know when to irrigate, and how much water your crops require.

Save time

Manually sampling soil for testing or lab analysis takes time and money. EnviroPro® enables quick and easy access, any time, to information about the soil while reducing the need to travel into paddocks to conduct soil testing.

Improve yields

EnviroPro® is groundbreaking technology that can facilitate better quality produce and higher yields by providing an insight into underground conditions at the root zone, and thus enabling the optimisation of fertilisers, energy, irrigation and water use.

Applications

In today's economic and environmental climates, optimisation is key. First with salinity and temperature compensated moisture readings, EnviroPro® soil probes provide accurate data for better crop selection and meaningful irrigation and fertiliser decision-making, year after year.

Applications include turf, trees, flowers, vegetables, citrus, vines, cane fields, grains and dry-land crops, and many other plantations. Other applications include mining, environmental monitoring and scientific research.

Features

- Suitable in all crop types: 40, 80, 120 and 160 cm options available, sensors at 10 cm intervals
- SDI-12 V1.3 compliant - interfaces to all SDI-12 compliant loggers
- CE, RCM, FCC EMC, ROHS, reach compliant
- Optional SDI-12 TO RS-485 converter
- Standard 5 m cable (custom lengths on request)



* EC upgradable - ALL probe models utilise salinity compensation techniques for greater accuracy, but only pro models can output salinity metrics. Standard models can be upgraded to enable salinity metrics pre or post purchase and pre or post installation with an upgrade key.

Technical Specifications

EnviroPro sensitivity (per probe) as a function of sampled volume

- EnviroPro 40 cm (15.75 inch) (4 sensors): 6.4 litres total soil volume detected
- EnviroPro 80 cm (31.5 inch) (8 sensors): 12.8 litres total soil volume detected
- EnviroPro 120 cm (47.24 inch) (12 sensors): 19.2 litres total soil volume detected
- EnviroPro 160 cm (62.99 inch) (16 sensors): 25.6 litres total soil volume detected

Measurement characteristics

Moisture resolution	0.01 %
Salinity resolution	0.001 dS/m
Temperature resolution	0.01 °C
Moisture accuracy	+/-2 % @ 0 % VWC to 50 % VWC (*with respect to dielectric)
Useable salinity range	0 to 6 dS/m* (*upper limit of non-contact capacitance sensors.)
Salinity accuracy	+/-5 % @ 0-4 dS/m at 10 % - 30 % VWC
Temperature accuracy	+/-1 °C @ 25 °C

Units of measure

- Volumetric Water Content	VWC %
- Salinity	dS/m
- Temperature	°C or °F
- Interface	SDI-12 version 1.3
Operating temperature range	-20 °C to 60 °C (-4 °F to 140 °F)

Electrical characteristics (recommended voltage range 5.6 to 16 VDC)

	EnviroPro 40 cm (4 sensors)	EnviroPro 80 cm (8 sensors)	EnviroPro 120 cm (12 sensors)	EnviroPro 160 cm (16 sensors)
Sleep current	0.45 mA max	0.90 mA max	1.35 mA max	1.80 mA max
Idle current	7 mA max	14 mA max	21 mA max	28 mA max
Active current (not sampling)	32 mA max	39 mA max	46 mA max	53 mA max
Active current (sampling)	72 mA max	79 mA max	86 mA max	93 mA max
Active time / sampling time**	380 ms	760 ms	1140 ms	1520 mA max
Diameter	33.5 mm (1.32 inch) +/-0.2 mm			
Field of influence	55 mm (2.17 inch) from wall of probe			
Cable length	5 m (196.85 inch)			

** measurement sampling time occurs within the active time period

Reseller

KISTERS Australia | sales@kisters.com.au | kisters.com.au
KISTERS Europe | hydromet.sales@kisters.eu | kisters.eu
KISTERS New Zealand | sales@kisters.co.nz | kisters.co.nz
KISTERS North America | kna@kisters.net | kisters.net

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