

Nextriv Probe Soil

Soil moisture, temperature and EC probe

NX-PR-SOIL

Nextriv Probe

A 3-in-1 soil probe measuring moisture, temperature and electrical conductivity (EC) in the root zone — precision irrigation and fertilisation control based on data, not gut feeling. The buried composite probe (IP68) with stainless-steel electrodes withstands chemically aggressive soils, while the sealed IP67 transmitter reports by radio over distances measured in kilometres. Up to 10 years on a single replaceable 19,000 mAh battery and a local buffer of approx. 1,000 readings with automatic retransmission keep the data history gap-free.



±2 %

moisture accuracy (0–50 %)

20,000 $\mu\text{S}/\text{cm}$

EC measuring range

up to 10 yrs

battery life

IP68

probe rated for burial

Key features

- Three parameters with one probe: moisture, temperature and EC — a complete picture of the root zone from a single point
- High accuracy across many soil types: $\pm 2\%$ moisture (0–50 %), $\pm 0.5\text{ }^{\circ}\text{C}$, $\pm 3\%$ EC up to 10,000 $\mu\text{S}/\text{cm}$
- EC measurement all the way to 20,000 $\mu\text{S}/\text{cm}$ — fertigation and salinity control even in heavily saline substrates
- Corrosion-resistant composite probe (epoxy resin + stainless-steel electrodes), IP68 — works buried for years
- Waterproof IP67 transmitter for pole, wall or DIN-rail mounting; 2 m probe cable
- Up to 10 years on a single replaceable 19,000 mAh battery
- Local buffer of 1,000 readings with automatic retransmission — gap-free history after connectivity outages
- Configuration over NFC from a smartphone, over USB-C from a PC or remotely from the platform (downlink)

Technical specification

Measurement — soil moisture

Measuring range	0...100 %
Accuracy	$\pm 2\%$ (0...50 %); $\pm 3\%$ (50...100 %)
Resolution	0.01 %

Measurement — soil temperature

Measuring range	-40...80 °C
Accuracy	±0.5 °C
Resolution	0.1 °C

Measurement — electrical conductivity (EC)

Measuring range	0...20,000 µS/cm
Accuracy	±3 % (0...10,000 µS/cm); ±5 % (10,000...20,000 µS/cm)
Resolution	10 µS/cm (0...10,000 µS/cm); 50 µS/cm (10,000...20,000 µS/cm)

Radio connectivity

Technology	long-range, low-power radio (LPWAN)
Radio band	EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864
Tx power	up to 16 dBm (EU868); up to 20 dBm (US915)
Receiver sensitivity	down to -137 dBm
Antenna	internal
Sensor-gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Communication	two-way — readings to the platform, remote configuration via downlink

Soil probe

Construction	composite — epoxy resin + stainless-steel electrodes; white and silver
Electrode length	50 mm (1.97 in)
Cable	2 m to the transmitter
Ingress protection	IP68 — buried installation
Module dimensions	88 × 68 × 26 mm (3.5 × 2.7 × 1.0 in)
Weight	138 g (with cable)

Device features	
Local buffer	1,000 readings; automatic retransmission after a connectivity outage and on-demand retrieval of historical data
Threshold alarms	on-device thresholds, rapid temperature-change alarm + alert rules in the Nextriv platform
Direct control	direct triggering of a companion controller (device-to-device)
Configuration	mobile app over NFC; PC software over USB-C (internal port); remotely via platform downlink
Power on / off	NFC or power/reset button (internal)
Indicators	1× status LED (internal)

Power	
Battery	1× lithium Li-SOCl ₂ ER34615, 19,000 mAh, replaceable
Battery life	up to 10 years (EU868) — 10-min reporting interval, 25 °C [1]

Enclosure and operating environment	
Operating temperature	-30...70 °C
Ambient humidity	0...100 % RH, non-condensing
Ingress protection	transmitter: IP67; soil probe: IP68
Transmitter housing	ABS + PC, grey
Transmitter dimensions	105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)
Transmitter weight	328 g (with battery and mounting bracket)
Mounting	transmitter: pole, wall or DIN rail; probe: buried in the ground

Compliance and approvals	
Approvals	CE, FCC, ISSED, ICASA, Telec
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-PR-SOIL
Kit contents	radio transmitter + soil probe on a 2 m cable
System requirement	a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)

[1] Battery life determined under laboratory conditions — indicative value; the actual time depends on the reporting interval, radio configuration and operating conditions.

Specifications are subject to change without notice. The latest document versions are available in the download centre: nextriv.com/files. Questions: nextriv.com/contact.