

SOIL SENSOR

Battery Powered · Multi-Parameter · 10-Year Design



KEY INDICATORS



Parameters
Moisture / EC
pH / NPK



Accuracy
±3% / 0.01pH
±2% F.s



Communication
4G / NB-IoT
/ LoRa



Battery Life
>10 years
(hourly reporting)



Protection
IP68



Installation
Ear / Pole
/ Slot

OVERVIEW

The H Series soil sensor is a multi-parameter monitoring terminal for precision agriculture, integrating soil moisture, conductivity (EC), pH and NPK nutrient measurement with 4G / NB-IoT / LoRa wireless transmission. Scheduled data sync and intelligent threshold alarms give agronomists continuous, accurate insight into soil conditions, supporting data-driven irrigation and fertilization decisions across farmland, greenhouses and research applications.

FEATURES

Cloud

Supports Hitelecom public cloud and custom private cloud services.

Green

Ultra-low power consumption — battery life over 10 years under standard hourly reporting.

IP68

Fully sealed protection for long-term in-soil deployment in harsh outdoor environments.

NFC

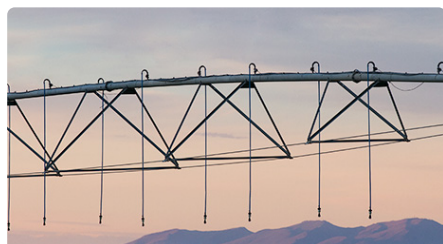
Innovative NFC technology for power on/off, device onboarding and on-site maintenance configuration.

OTA

The cloud platform enables one-click remote firmware updates, keeping every device on the latest version.

Innovation

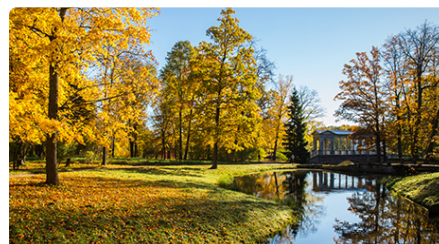
Ultra-low-power design and consistent long-term operation make it an ideal component in IoT solutions.



Farmland



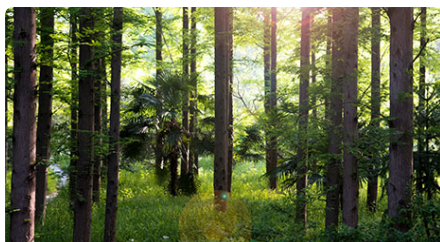
Greenhouse



Urban Parks



Soil Pollution



Forest Health



Laboratory

	Item Numbers	Description
Physical Characteristic	Product Models	H200 / H300 / H500
	Power Supply	Battery-powered, ultra-low-power design
	Battery Life	>10 years (1-hour reporting interval)
	Installation	Flexible installation options: ear mount, pole clamp, slot
Frequency Band	LTE-FDD	B1 / B3 / B5 / B8
	LTE-TDD	B34 / B38 / B39 / B40 / B41
Soil Sensor	Moisture	0%–100% (accuracy $\pm 3\%$; not suitable for permafrost layers)
	Conductivity (EC)	0–1000 us/cm (accuracy $\pm 3\%$)
	pH Range	0–14 pH (accuracy 0.01 pH)
	NPK	0–1999 mg/kg (accuracy $\pm 2\%$ F.S)

	Item Numbers	Description
	Protocol	MQTT
Communication	Wireless Options	4G Cat.1 / NB-IoT / LoRa (by model)
	Cloud Access	Hitelec Cloud Platform, remote data access anywhere
	Protection Rating	IP68
Reliability	Data Sync	Scheduled reporting with threshold-based alarms
	Firmware	OTA remote upgrades
Ordering	Product Models	H200 / H300 / H500
	Customization	Parameter combination and probe options on request

CUSTOMIZATION & SUPPORT

Hitelec provides OEM/ODM customization for the H Series, including measurement range, probe and cable options, communication variant (4G Cat.1 / NB-IoT / LoRa), reporting interval, and private-platform integration. For model selection, project pricing, or integration support, contact the Hitelec sales team at sales@hitelec.com.cn or call +86 18616602589.



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