

Mobile Soil Detector

Product Manual

INSTRUCTION BOOKLET





Table of Contents

WHAT YOU WILL FIND IN THIS MANUAL

01	Product Introduction	03
Overview, patented design, materials & waterproof rating		
02	Technical Specifications	04
General parameters, accuracy & measurement range of each parameter		
03	Configuration & Usage Instructions	05
Cable configuration, product upgrade, APP languages, data saving & PC support		
04	Precautions	07
Compatible systems, safe operation & probe protection		



► Isolated Soil Sensor — Dimension Drawing

Key Features at a Glance

- ◆ 7-in-1 measurement: EC · moisture · temperature · pH · N · P · K · fertility
- ◆ 304 stainless-steel probes with anti-corrosion epoxy sealing
- ◆ IP68 highest-level waterproof rating
- ◆ Works with Android phones & Windows 10+ computers
- ◆ APP with 8 languages & automatic data export to EXCEL

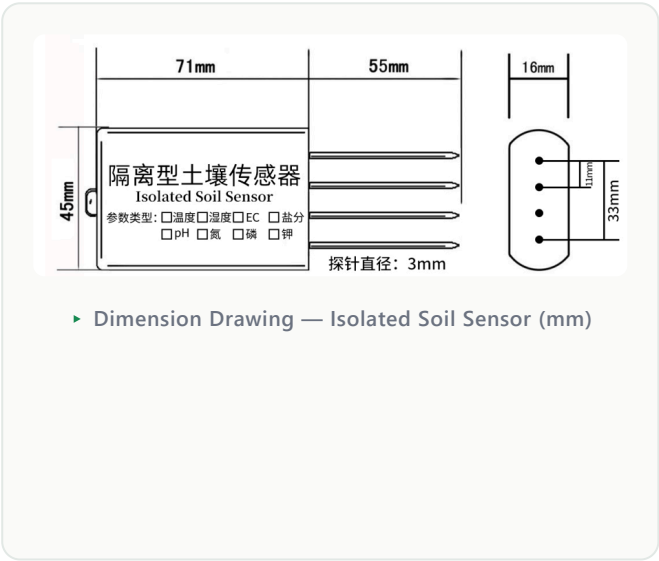
01

Product Introduction

I. PRODUCT INTRODUCTION

This mobile soil comprehensive detector is a **patented product independently developed and manufactured by SIRO**. The product uses national standard 304 stainless steel and high-quality alloy materials as the soil detector probes; the interior is poured with anti-corrosion, flame-retardant high-density epoxy resin; the waterproof rating reaches the highest level **IP68**.

With one insertion into the soil, the detector simultaneously measures electrical conductivity, soil moisture, soil temperature, soil pH, and derived nitrogen, phosphorus, potassium and fertility values, and displays the results in real time on the connected mobile phone or computer.



PROBE MATERIAL 304 Stainless Steel	SEALING Epoxy Resin Pour	WATERPROOF IP68	CABLE LENGTH 1.5 m
---------------------------------------	-----------------------------	--------------------	-----------------------

02

Technical Specifications

II. ACCURACY AND RANGE OF EACH PARAMETER

General Parameters

INTERFACE micro-USB / Type-C	SUPPORTED SYSTEM Android / HarmonyOS	MAX POWER 0.2 W	CORE CHIP 85 °C Resistance
---------------------------------	---	--------------------	-------------------------------

Measurement Parameters

PARAMETER	ITEM	RANGE / VALUE	ACCURACY / NOTE
Electrical Conductivity	Range	0 – 2000 µs/cm	Resolution 1 µs/cm · Accuracy ±3% FS
	Resolution	1 µs/cm	
	Accuracy	±3% FS	
Soil Moisture	Range	0 – 100% RH	Resolution 0.10% · Accuracy 3%
	Resolution	0.10%	
	Accuracy	3%	
Soil Temperature	Range	-20 °C ~ +80 °C	Resolution 0.1 °C · Accuracy ±0.5 °C (at 25 °C)
	Resolution	0.1 °C	
	Accuracy	±0.5 °C (at 25 °C)	
Soil pH	Range	4 – 9 pH	Resolution 0.1 · Accuracy ±0.3 pH
	Resolution	0.1	
	Accuracy	±0.3 pH	
Soil Nitrogen	Range	0 – 666 mg/kg	Values calculated via electrical conductivity serve as auxiliary reference only
Soil Phosphorus	Range	0 – 700 mg/kg	
Soil Potassium	Range	0 – 726 mg/kg	
Soil Fertility	Range	0 – 1850 mg/kg	

Note: Nitrogen, phosphorus, potassium and fertility are calculated values derived from electrical conductivity. They are intended for auxiliary reference only and are provided as a complimentary bonus function of the device.

03

Configuration & Usage Instructions

III. CONFIGURATION

1

Default Cable Configuration

This mobile soil detector comes with a default **1.5-meter USB data cable**, paired with an **Android / Type-C dual-interface adapter cable**. For other configurations, please contact the manufacturer or refer to your order.

2

Comprehensively Upgraded Product

The product has been comprehensively upgraded. For details, refer to the figure below:

以上测量数据为手工测量，实际产品可能存在少许误差

防护等级	IP68		
最大功耗	0.2W		
工作温度	-20°C ~ +80°C		
探针材质	防腐特制电极		
密封材料	黑色阻燃环氧树脂		
线缆长度	1.5M		
参数	量程	分辨率	精度
温度	-20°C~+80°C	0.1°C	±0.5°C(25°C)
湿度	0-100%RH	0.10%RH	3%
PH	4~9PH	0.1	±0.3
电导率	0-2000us/cm	1us/cm	±3%
氮	0-666mg/kg		
磷	0-700mg/kg		
钾	0-726mg/kg		
肥力	0-1850mg/kg		

注：氮磷钾以及肥力是计算值，只能作为侧面参考
氮磷钾肥力是商家赠送附带功能

► Product Upgrade Details — Protection, Materials & Parameter Ranges

3 8 Languages Built into the APP

The APP comes with **8 national languages** covering most languages — Chinese, English, Korean, Japanese, German, Spanish, French, Russian. For details, refer to the figure below:



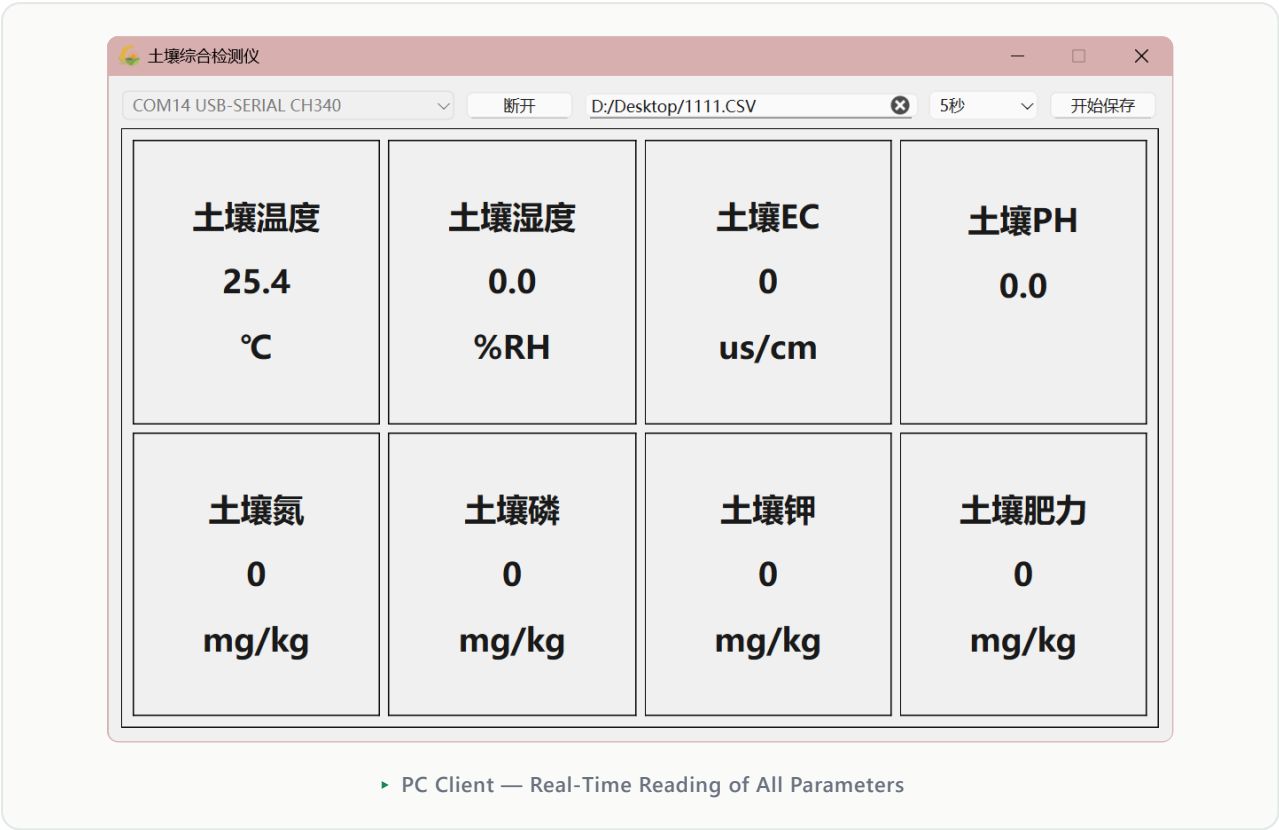
4 Automatic Data Saving & EXCEL Export

The APP has an automatic detection data saving function. Users can freely edit the automatic data upload time (**from 10 s to 180 s**) according to their needs. After detection is completed and data is saved, an **EXCEL file** can be generated and stored in the phone (the folder name can be freely edited by the user for classification and differentiation of detection scenarios). Data can be exported to a computer for specific analysis via the phone.



5 Computer Support (Windows 10 or Above)

This soil comprehensive detector supports not only mobile devices but also **computer usage** (requires Windows 10 or above system). For details, refer to the figure below:



04 Precautions

PLEASE READ BEFORE USE

- ! This device **does not support Apple phones (iOS system)**.
- ! **Pure HarmonyOS system is currently not supported either** (as shown in the figure on the right).
- ! During detection, **avoid stones** to prevent damage to the probes.



After-Sales Tip: If you have any questions during installation or use, please contact SIRO for technical support. Do not disassemble the sealed probe body by yourself.