

Soil sensor

Model ES-S225



Introduction

ES-S225 series soil sensor is a high-precision and sensitive sensor for online measuring soil humidity / temperature / conductivity(EC) / PH / NPK. This sensor is suitable for measuring soil temperature and moisture. After comparison with the original high-precision sensor from Germany and calibration by actual soil drying weighing method, it has high precision, fast response and stable output.

Its electrodes are made of specially treated alloy materials, which can withstand strong external impact and are not easily damaged. IP68 fully sealed design, acid and alkali corrosion resistance, can be buried in the soil or directly put into water for long-term dynamic detection. It is less affected by soil salt content and is suitable for various soil types. It can be buried in the soil for a long time, is resistant to long-term electrolysis, corrosion, vacuum potting, and is completely waterproof.

Main features

- High measurement accuracy, fast response speed and good interchangeability.
- It is less affected by soil salt content and can be applied to various soil types.
- The electrode is made of specially treated alloy material, which can withstand strong external impact and is not easy to be damaged.
- It is completely sealed, resistant to acid and alkali corrosion, and can be buried in the soil or directly put into water for long-term dynamic detection.

Compliance

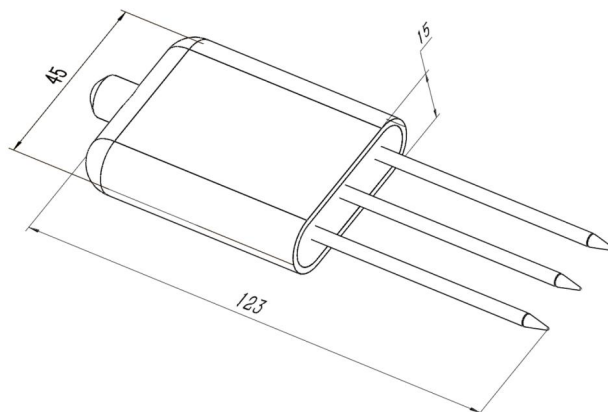
The electromagnetic compatibility in accordance with the following applicable directives:
 EMC 2014/30/EU
 Electromagnetic Compatibility
 EMC 2014/35/EU
 Electromagnetic Compatibility

Application

The sensor is widely used in scientific experiments, water-saving irrigation, greenhouses, flowers and vegetables, grasslands, soil rapid testing, plant cultivation, sewage treatment, grain storage and the measurement of moisture content and temperature of various particles.

Dimension

Unit:mm



Specification

PARAMETERS	Soil Moisture	Soil Temperature	Soil EC	Soil PH	Soil NPK
Range	0%-100%	-40°C~+80°C	0-20000us/cm	3~9PH	0~1999mg/kg
Accuracy	±2% within 0-50%, ±3% within 50-100% (Brown soil, 60%, 25°C)	±0.5°C (25°C)	±3% (0-10000us/cm); ±5% (10000-20000us/cm) (brown soil, 60%RH, 25°C)	±0.3PH (Brown soil, 60%RH, 25°C)	±2%F.S
Resolution	0.1%	0.1°C	1us/cm	0.1	1mg/kg(mg/l)
Working temperature	-20 ~+60°C				
Compensation temperature	Compensation range 0-50°C				
Power supply	5~30V DC				
Max. Power consumption	RS485: 0.5W (24V DC); Current: 0.4W (12V DC); Voltage: 0.3W (12V DC)				
Signal output	4~20mA, 0~5V, RS485, SDI-12				
Protection	IP68				
Sensor probe material	316, Anti-corrosion special electrode				
Sealing material	Black flame retardant epoxy resin				
Cable length	2 meters by default, cable length can be customized as required				
Dimension	45*15*123mm				

Order guide

ES-S225	Soil sensor		
	CODE	Function type	
	A	Soil humidity	
	B	Soil temperature	
	C	Soil conductivity (EC)	
	D	Soil PH	
	E	Soil nitrogen (N)	
	F	Soil phosphorus (P)	
	G	Soil potassium (K)	
		CODE	Signal output
		1	RS485
		2	4~20mA
		3	0~10V
		4	0~5V
ES-S225	ABCD	1	Order example