RK500-23 Soil EC Sensor

Overview

The RK500-23 conductivity sensor features a nylon or PVC inner material and an external electrode made of 316L stainless steel, offering stable performance, high sensitivity, and wide applicability. With its simple structure, stable performance, and easy operation, the RK500-23 is an ideal instrument for field monitoring of soil water and salt dynamics, studying the occurrence, evolution, and improvement of saline-alkali soils.

Features

On-line & real-time measurement

316L outer electrode & Nylon or PVC lining

High accuracy

Electromagnetic isolation

Strong resistance to corrosion

Polarization resistance

Integral design without external transmitter

RS485 and 4-20mA output

Applications

Soil improvement project

Environmental protection

Ecological monitoring

Scientific research experiment

Agricultural production

Greenhouse

Technical Parameter

Item	Technical Specification
Measuring medium	Soil or soil-like
Principle	Frequency conversion method
Range①	0～1000μs/cm, 0～2000μs/cm,0～5000μs/cm,0～10000μs/cm (any range of 0-10ms/cm can be customized, 1ms/cm = 1000us/cm)
Supply	7-30VDC (power consumption<0.2W)
Accuracy	±1%FS
Response time	1s
Output signal	4-20mA & RS485 at the same time
Electrode	316L outer electrode & Nylon or PVC lining
Temperature compensation	Automatic compensation
Drift	≤0.3%FS/24h
Operating temperature	0-50℃
Probe material	316L
Probe dimension	Φ14*215mm
Ingress protection	IP68
Storage	10-60℃@20%-90%RH
Cable length	Default:5m

Dimensions & Mounting

Unit:mm

Parameter Selection Table

Remark	Series	Type	Parameter	Supply	Output	Cable Length	
RK							
	500						
		23					
			E				EC
			S				Salinity
			X				Other
				A			7-30V
				X			Other
					A		4-20mA&RS485
					B		RS485
					X		Other
						5000	Unit(mm)
						…	Unit(mm)

Example: RK500-23EAA5000 EC sensor, Supply:7-30V, Output:4-20mA&RS485, Cable length:5m.

Revision time	Reviser	Current Version	Remarks
20251013	Echo	V5. 0	