

The soil contains many substances such as organic acid, inorganic acid, alkali and salt, due to the different content of various substances, so the soil shows different pH value. Usually the pH in the range of 6.5-7.5 soil is called the neutral soil. RK500-02 pH sensors measure the pH value should be a good solution without professional calibration instruments, complex operation, expensive and difficult to carry, can be for continuous measurement of soil, waste water pH value, suitable for agriculture, sewage treatment plant, chemical industry, printing and dyeing, paper making, pharmacy, electroplating and environmental protection and other fields.

## FEATURES

- On-line & real-time monitoring
- Solid dielectric and PTFE liquid junction, not easy jam, maintenance free
- High accuracy
- Simple operation and high reliability
- External module is converted into a standard signal output
- Multiple output signal is optional
- Probe can be used under water
- Submerged mounting bracket is optional



## APPLICATIONS

- Environmental protection
- Agriculture
- Aquaculture
- Water conservancy
- Sewage treatment
- Industrial wastewater treatment

## TECHNICAL SPECIFICATION

Item	Technical Specification
Range	0-14PH
Supply	5VDC,12-24VDC
Accuracy	±0.3PH
Resolution	0.01PH
Response time	<10s(in water)
Stability	≤0.02PH/24h
Output Signal	4-20mA,0-5V,0-2V,RS485
Operating Temperature	0-+80℃
Ingress Protection(Probe)	IP68
Storage	10-60℃@20%-90%RH
Dimension	Probe: Φ28*160mm Transmitting Module: Φ29*100mm

## PH SCALE

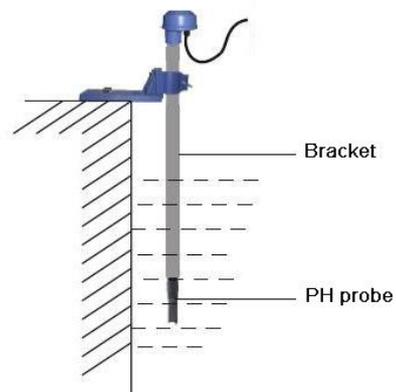
PH value	Description	PH value	Description
<4.5	Strongly acidity	7.5-8.5	Faintly alkalinity
4.5-5.5	Acidity	8.5-9.5	Alkalinity
5.5-6.5	Faintly acidity	>9.5	Strongly alkalinity
6.5-7.5	Neutral		

## INSTALLATION AND FIXED

Mounting bracket(length=1m):



Filter and protective cap:



In liquid, probe submersible installation.

## USAGE

This product can be used for online testing also be used for soil sampling test.

### ● Online measurement

1. Sensor probe position have a transparent cover, the built-in protection solution to protect the probe, when using, please remove the protective cap, will filter tank and the sensor is fixed, reoccupy attached cable tie wrap filter in the filter tank, in order to prevent damage to the probe soil and probe in direct contact. When using, please ensure that the filter tank and filter are firmly connected, not to filter tank and filter removed, insert the probe directly into soil, avoid to cause irreparable damage to the probe;
2. Insert the probe of vertical soil, the depth of the insert must be at least more than filter, normal circumstances, in the city water of pH value between 6.5 ~ 8.5;
3. Buried in the soil after good sensor, around the soil under test with a certain amount of water, wait a few minutes, the water immersion to the probe, can start testing.

### ● Soil sampling measurement

According to take 10 g dried or fresh soil sample, placed in a beaker, add 50 ml distilled water, stirring fully, placed clarifies, use a filter to filter out the upper solution, then pH sensor electrode into the solution. The following is detail:

1. The soil sample collection to science. Determine the acidity of soil field, for example, should sampling multipoint sampling, such as 5 points, 10 acres of land may take 30 acres desirable 10 points, more than 30 mu of desirable 15 ~ 20 points. After mixing, the sample of each point determination of the earth. In order to guarantee the accuracy of the determination, should repeat the test once, verified.
2. The distilled water must be in neutral water pH = 7, or with a sodium hydroxide solution or hydrochloric acid to pH adjustment to neutral.
3. The soil sample is fresh, natural wet earth. Save spare soil sample to air dry, wet soil vulnerable to the role of microorganisms and change the nature of the soil. Air drying method is: put the soil sample stand on the plastic film or paper, crushed in dry state, to remove

impurities such as residual roots, spread into a thin layer of dry, then ground up sticks. To dry and ventilated dry place, prevent the acid, alkali gas leaking. Dry grinding and sieving again after processing, and finally into the soil sample bottle or plastic bags inside, save for later use.

**PARAMETER SELECTION TABLE**

Remark	Series	Type	Supply	Output	Accessory	Cable Length	
RK							
	500						
		02					
			A				5V
			B				
			C				12-24V
			X				Other
				A			4-20mA
				B			0-5V
				C			RS485
				D			0-2V
				X			Other
					A		With filter and protective cap, soil measurement
					B		With mounting bracket, liquid measurement
					N		Without any accessory
						2000	Unit(mm)
						...	Unit(mm)

Example: RK500-02CA A2000 Supply:12-24V, Output:4-20mA, With filter and protective cap, Cable length:2m.

 Complies with applicable CE directives.

Specifications subject to change without notice. Version 3.0  
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