

The probe of EC sensor is made of graphite electrode that has the characteristics of stable performance, high sensitivity, wide application scope. EC sensor is of simple structure, with stable performance, easy for operation, used in the field monitoring of water & salt dynamics in soil. Therefore, it is an ideal observation instrument in the study of generation, evolution, and improvement utilization of saline soil. Also, it can be used in the anti-corrosion monitoring of underground oil, gas pipelines and other pipelines. The sensor can also be directly submerged in liquid, to measure its electrical conductivity.

Soil salinity sensor integrates graphite electrode and precision platinum resistance, to measure the soil salt through temperature compensation algorithm. After submerged into the soil, it can directly test salt content in the soil.

## FEATURES

- On-line & real-time measurement
- With temperature compensation
- High accuracy
- Simple operation and high reliability
- Fast response
- Strong resistance to corrosion



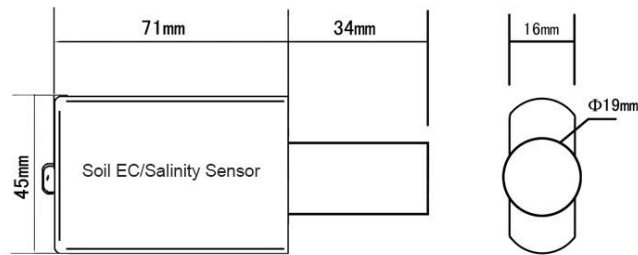
## APPLICATIONS

- Environmental protection
- Agriculture & planting
- Forestry
- Soil quality measurement
- Sewage treatment
- Oil and gas pipeline corrosion monitoring

## TECHNICAL SPECIFICATION

| Item                  | Technical Specification   |             |
|-----------------------|---------------------------|-------------|
|                       | EC                        | Salinity    |
| Range                 | 0-20mS/cm                 | 0-0.15mol/L |
| Supply                | 5VDC, 12-24VDC            |             |
| Accuracy              | ±2%                       |             |
| Response time         | <1s                       |             |
| Output Signal         | 4-20mA, 0-2V, 0-5V, RS485 |             |
| Electrode             | Graphite                  |             |
| Housing material      | ABS                       |             |
| Operating Temperature | -30℃~+70℃                 |             |
| Ingress Protection    | IP67                      |             |
| Storage               | 10-60℃@20%-90%RH          |             |

## DIMENSION



## INSTALLATION & USAGE

### 1. In soil

- **Section installation**

In the area of need to measure dig a soil profile, determine the position of the sensor and depth in the section, the section on level to dig deep for 10-20 cm round hole, insert the sensor level until the bottom of the hole, then filled out of the clay compaction, to ensure that the sensor electrode surface closely contact with soil. Sensors buried, the soil pit backfill compaction sequence according to the original soil layer.

- **Ground stiletto installation**

In the measurement area, down from the ground to play a hole to the desired depth, sensor inserted to the bottom of the hole, closely contact with the soil, will then stratified backfill compaction.

- **Measure the soil solution**

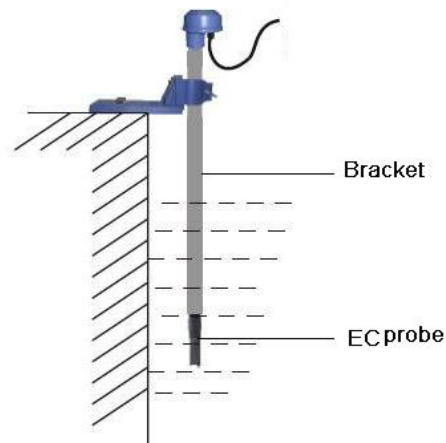
Take a 1 mm sieve separation of 20.00 g dried soil, put in 250 ml bottle drying triangle, add distilled water, 100 ml (water:soil = 5:1), oscillation for 5 minutes, the filtered in dry triangle in the bottle. Take the filtered solution 30 ml, placed in small 50 ml beaker, the sensor electrode in the leaching liquid to be tested.

### 2. In liquid

- **Directly into the liquid**

- **Adopt submersible mounting bracket(show in the below figure)**

Mounting bracket(length=1m):



In liquid, probe submersible installation.

## PARAMETER SELECTION TABLE

| Remark | Series | Type | Parameter & Range | Supply | Output | Accessory | Cable Length |                       |
|--------|--------|------|-------------------|--------|--------|-----------|--------------|-----------------------|
| RK     |        |      |                   |        |        |           |              |                       |
|        | 500    |      |                   |        |        |           |              |                       |
|        |        | 03   |                   |        |        |           |              |                       |
|        |        |      | E                 |        |        |           |              | EC                    |
|        |        |      | S                 |        |        |           |              | Salinity              |
|        |        |      | ES                |        |        |           |              | EC&Salinity           |
|        |        |      | X                 |        |        |           |              | Other                 |
|        |        |      |                   | A      |        |           |              | 5V                    |
|        |        |      |                   | B      |        |           |              | 12-24V                |
|        |        |      |                   | X      |        |           |              | Other                 |
|        |        |      |                   |        | A      |           |              | 4-20mA                |
|        |        |      |                   |        | B      |           |              | 0-5V                  |
|        |        |      |                   |        | C      |           |              | RS485                 |
|        |        |      |                   |        | D      |           |              | 0-2V                  |
|        |        |      |                   |        | X      |           |              | Other                 |
|        |        |      |                   |        |        | A         |              | With mounting bracket |
|        |        |      |                   |        |        | N         |              | Without any accessory |
|        |        |      |                   |        |        |           | 2000         | Unit(mm)              |
|        |        |      |                   |        |        |           | ...          | Unit(mm)              |
|        |        |      |                   |        |        |           |              |                       |

Example: RK500-03EBA N2000 EC sensor, Supply:12-24V, Output:4-20mA, Without any accessory, Cable length:2m.



Complies with applicable CE directives.

Specifications subject to change without notice. Version 1.0

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