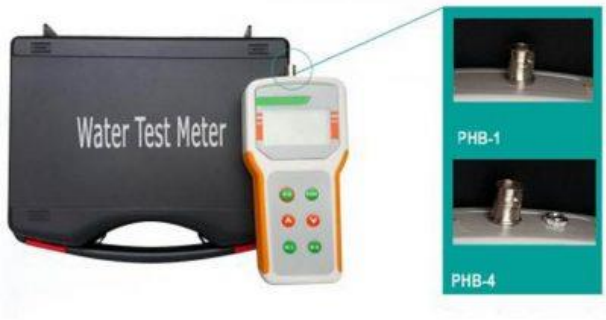
PHB-4 MICROCOMPUTER PORTABLE PH METER

Technical characteristics and operating conditions of the instrument

Measurement range :pH: 0 ~ 14.00pH; MV: & plusmn; 1600 mv,
Temperature: 0 ~ 60 ℃
Resolution :pH: 0.01pH
Temperature: & plusmn; 1 ℃
Precision :pH: 0.01pH, temperature: ± 1 ℃
Automatic temperature compensation: 0-60 ℃ temperature compensation/manual compensation
Basic configuration: e201-c plastic shell PH composite electrode; PH calibration specimen; Four dc1.5v batteries



The working conditions

When the environment temperature degrees: 0 ~ 40 ℃ relative humidity: < 85%
Power supply: 1.5V battery /4 knots
Has no noticeable vibrations
There is no interference from external magnetic fields except earth's
Input impedance: ≥ 1 & times; 1012 & Omega;
Zero drift: ≤ 0.01 pH± 1 word / 2 hours
Low solution temperature compensation scope: 0 ~ 60 ℃
Appearance size and weight: 180× 80 & times; 30 mm (long & times; Wide & times; High) 0.5 Kg
Consumption power: 2 W
Iii. Working principle of the instrument

Basic principle of pH measurement

The pH value of aqueous solution is generally measured by using glass electrode as the indicator electrode and calomel electrode as the reference electrode. When the hydrogen ion concentration (strictly speaking, activity) in the solution, i.e. the pH value of the solution changes, the electric potential between the glass electrode and the calomel electrode also changes, and the relation of electric potential changes conforms to the following formula:

Delta E = 58.16 & times; Delta pH× (273 ℃) + t / 293 (mV)
Sector E: represents a change in potential in millivolts. (mV)
Flowering pH: represents the change in the pH of the solution.