



Description:

This pH sensor is commonly used to test the pH of a liquid as it measures the hydrogen-ion activity in water-based solutions. Wherever acidity and alkalinity testing is required, it is frequently employed in the chemical businesses, pharmaceutical industry, dye industry, and scientific research. This kit's drive board works with both 9V systems. It's also very easy to work with Arduino and Raspberry Pi.

It can be used in a variety of PH measurements with fast response and excellent thermal stability. It has good reproducibility, and can eliminate basic alkali errors. In 0pH to 14pH range, the output voltage is linear. The reference system which consists of the Ag/AgCl gel electrolyte salt bridge has a stable half-cell potential and excellent anti-pollution performance. The ring PTFE membrane is not easy to clog, so the electrode is suitable for long-term online detection.

Features:

1. This pH sensor is a piece of equipment used in science to determine whether a solution is naturally acidic or alkaline
2. pH levels can be detected between 0 and 14 by the sensor set

3. This pH sensor kit can be used to assess the quality of both soil and water
4. As part of the sensor package, a pH probe and sensor board will be used to condition the signal

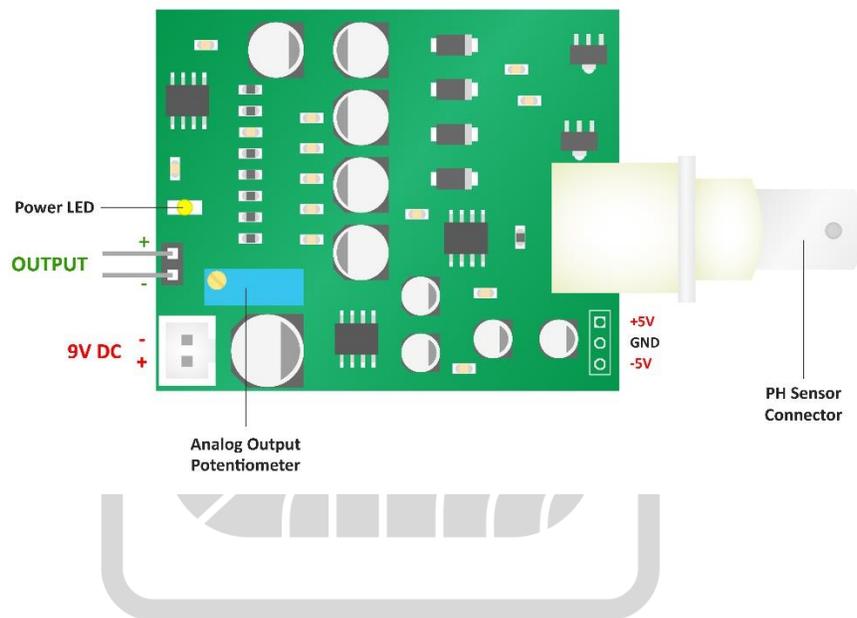
Specification:

- Input supply – 9VDC
- Supply current – 1Amp
- Measuring range – 0-14 PH
- Measuring temperature – 0-60 °C
- Accuracy - ± 0.01 pH
- Response time - ≤ 1 min
- pH interface (2 feet patch)
- Power indication LED
- Output – Analog values in range of 0.5V to 3V
- Alkali error – 0.2pH
- Internal resistance – 250M Ohm
- Terminal blocks – BNC plug
- BNC Connector suitable for most pH meters and controllers
- Suitable for wide range of application – Aquariums, Hydroponics, Laboratory etc.
- pH sensor calibrated @24 °C room temperature. Calibrated values are pH4 = 1.5V, pH7=2.0V, pH9=2.5V

Cautions:

- Before being measured, the electrode must be calibrated with a standard buffer solution of known pH value. In order to obtain more accurate results, the known PH value should be reliable, and closer to the measured one.
- When the measurement is completed, the electrode protective sleeve should be put on. A small amount of 3.3mol / L potassium chloride solution should be placed in the protective sleeve to keep the electrode bulb wet.

- The leading end of the electrode must be kept clean and dry to absolutely prevent short circuits at both ends of the output, otherwise, it will lead to inaccurate or invalid measurement results.
- After long-term use of the electrode, if you find that the gradient is slightly inaccurate, you can soak the lower end of the electrode in 4% HF (hydrofluoric acid) for 3-5 seconds, wash it with distilled water, and then soak in potassium chloride solution to make it new.



Activation:

- pH/REF – Soak the glass bulb and ceramic junction in 0.1M Hydrochloric Acid for 2 hours and then rinse thoroughly with distilled water
- ORP – Electrodes may need additional cleaning occasionally with polishing paper
- Conductivity cell – Replating is required if the mentioned cell constants are not obtained

Probe Specification:

- Measuring range :- 0~14pH
- Resolution :- 0.01pH
- % Theoretical slope :- (PTS) $\geq 98.5\%$ (25 °C)
- Probe length :- 1 meter
- Resistance :- $\leq 250\text{M}\Omega$ (25 °C)
- Alkali error :- $\leq 15\text{mV}$ (25 °C)
- Ambient Temp. (Operating) :- 0°C~80°C (32°F~152°F)
- Relative humidity (Operating) :- $\leq 85\%$

NOTE:

Maintenance and precautions:

1. Test before removing the electrode protective sleeve (kit solution is 3MKCL, if there are crystals oozing is normal and does not affect the use of electrodes)
2. Observe whether all sensitive bulb filled with liquid inside, if there is a bubble, you should gently shake the electrode downward (like rejection thermometer) to remove air bubbles inside the sensitive bulb, otherwise it will affect test accuracy.

Applications:

- Water quality testing
- Aquaculture