

## PH METER



Mars-PH/TDS-Meter-01

## SPECIFICATION

- Measure range: 0.00-14.00pH
- Resolution: 0.01 pH
- Accuracy:  $\pm 0.01$  pH
- Power supply: 2\*1.5V (LR44 Button cell)
- Operating temperature: 32°F—140°F
- Calibration: three points automatic calibration (only 6.86 point calibration: the accuracy is 0.1 pH)
- Dimension: 155mm\*31mm\*14mm
- Weight: 52g

## OPERATION

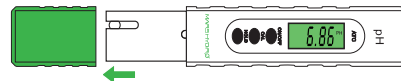
- 1.Remove the protective cap and protective film on the screen.
- 2.First rinse the electrode with distilled water, and suck it with filter paper.
- 3.Turn the meter on by pressing the "ON/OFF" key.
- 4.Immerse the pH meter electrode in the solution to be tested (cannot be over the immersion line)
- 5.Stir gently and wait around 10 seconds till the reading stabilized.
- 6.After finished ,clear the electrode with pure water ,turn the meter off by pressing the "ON/OFF" key.
- 7.Always clean the protective cap after use

## NOTE:

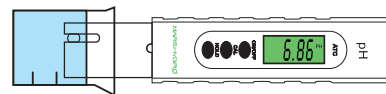
- Except these 3 included calibration solution, if you calibrate this ph meter in another solution such as 7.00 calibration solution, the ph meter will display "----". Recalibration is required in the following conditions:
- Lengthy periods of inactivity.
  - Very frequent use.
  - The testing accuracy requirement is very high.
  - The "cal" (calibration) button was pushed and electrode exposed to air for extended period of time.

## USAGE METHOD

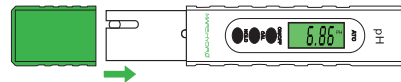
- 1.Take off cap and press "ON/OFF" button.



- 2.Get reading



- 3.clean the protective cap after use.



## WARRANTY

The instrument comes with a one-year warranty from the date of the purchase. If during these periods repair is required, please contact MARS HYDRO customer service. (Warranty does not cover damage due to negligence or erroneous operation by the user).

## CALIBRATION

- 1.Turn on pH meter.
- 2.Dissolve each buffer solution in 250 ml of distilled water. Please DON'T mix all buffer solutions in one bottle. One buffer solution, one water bottle.
- 3.Take about 80 ml water out, retain the left calibration solution in sealed bottles which can be used in next days.
- 4.Immerse the electrode into the pH 6.86 solution, (under the temperature of 77°F)
- 5.Press the "CAL"(calibration) button for 5 seconds and release.
  - Display will start flashing 6.86
  - Wait until the display stops flashing.
- Rinse the electrode with distilled water and dry it with filter paper.
- 6.Immerse the electrode in pH 4.01 solution.
  - Press "CAL" button for 5 seconds , then press and release immediately second time. Reading will start flashing 4.01.
  - Wait until display stops flashing.
- Rinse and dry the electrode with distilled water as before.
- 7.The third step is the calibration method for 9.18 point which is same as 6.86 and 4.01. If display incorrect ph reading, please repeat the previous three steps.
- 8.If approximate pH of your test solution is known to be above 7.0, using 6.86 and 9.18 buffer solutions to calibrate the meter is enough.

## ATTENTION

- 1.Always replace protective cap after using digital meter to prevent electrode from drying out. Because prolonged exposure to air will lead to slow or unstable readings. If electrode has been dried out, immerse it into distilled water for a few hours.
- 2.When the display value is fuzzy or unshown, the battery should be replaced promptly. Pay attention to the polarity of battery.
- 3.If you calibrate the meter in the air or in wrong calibration solution, it will flash "—" on the screen. If necessary, recalibrate the meter.
- 4.When testing purified water like spring water or drinking water, it will take longer for the readings to get stabilized (typically 3—5 minutes) because there is very few ions left to be detected by the sensor in those purified water.
- 5.If the solution is over the immersion line of the ph meter which is not whole body waterproof, the meter may be broken.
- 6.This part is easily broken or damaged.

## TDS METER



## PRODUCT DESCRIPTION

The Portable 4in1 TDS meter is a professional instrument with multi-functionality and can be used to test TDS (the weight of total dissolved solids in water, units measured in mg/L or ppm), the conductivity of the water (expressed in us/cm), and the temperature. It is a high-performance, pen-type design that reads quickly and accurately.

Conductivity	0-19990 us/cm	Fahrenheit	32.0-176.0°F
TDS	0-9990 ppm	Accuracy	±2%
Celsius	0.0-80.0°C	N.W	52g
Size	155*31*14 (mm)		

## USAGE STEPS

- 1.Remove the protective cap before use.
- 2.Press the ON/OFF button and immerse the meter into the solution (the solution should not be over the immersion line).
- 3.After the numerical display is steady, press the HOLD button and take it out of the solution to check the results.
- 4.Wipe clean the electrode after using. Turn off the meter and close the protective cap.

## HOLD FUNCTION

The instrument will lock the measurement result when you press the HOLD button. It will automatically turn off after 5 minutes. After the measurement has been locked, press the SHIFT button to change to a different mode.

## AUTO SHUT-OFF FUNCTION

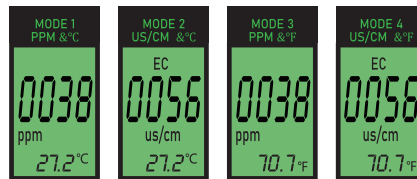
The instrument will automatically shut off to save battery power if no key is pressed for 9 minutes.

## AUTOMATIC TEMPERATURE COMPENSATION

The instrument has an automatic temperature compensation function

## MODE SHIFT

When you press the SHIFT button, the instrument automatically shifts between the following four display modes:



\*The instrument has a memory function that will display the previous measurement from the last time the device was turned on.

## ATTENTION

- 1.TDS Meter had been calibrated by manufacturer in advance. You can use it directly.
- 2.Avoid heat and direct sunlight.
- 3.Incorrect calibration may result in error affecting the accuracy of measurement or cause malfunctions.
- 4.The instrument is not waterproof. Do not drop or place the instrument in water or other liquid solutions over the immersion line to avoid damage to the circuitboard.
- 5.Always keep the electrode clean. Always close the electrode protective cap. Please remove the batteries if the device will not be used for long periods

## WARRANTY

The product warranty period begins at the date of purchase. The following situations are not within the warranty range: damage caused by mis-operation (battery leakage, water on circuitboard, etc.).