

Milwaukee Portable Meter MW105 MAX

Waterproof pH/ORP/Temp Portable Meter

The Milwaukee **MW106 MAX Waterproof 3-in-1 pH/OPR/Temp Logging Portable Meter** has won fans around the world with its reliable, fast and simple operation as well as its toughness and IP67 Waterproof rating.

Accurate to ± 0.002 pH with automatic or manual temperature compensation, and built in GLP key.

Ideal for use by brewers, wine makers, growers, labs, food processing, water treatment and many other applications with challenging pH measurement needs.

The easy-to-use datalogger function allows data collection without messy notes and errors.

The Milwaukee PRO pH meter offers:

ACCURACY

People choose the MW106 MAX Waterproof 3-in-1 pH/ORP/Temp Portable Logging Meter to improve the accuracy of their testing program. With up to 5 point calibration and 7 standard buffer choices (and two custom), the meter can be quickly calibrated to a higher accuracy compared with one or two point calibration. The MW106 MAX meter is accurate to ± 0.002 pH. 8x more accurate than some alternative meters.

The meter comes with an amplified, combination pH probe with a built in temperature sensor allowing the meter to automatically adjust the pH reading for the effect of temperature (ATC).

The meter can also be used as a very accurate thermometer with accuracy $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$)

TOUGHNESS

The rugged meter is built to take knocks and is IP67 Waterproof rated.

LOW MAINTENANCE

The MW106 MAX Waterproof pH/OPR/Temp Portable Logging Meter comes with the Milwaukee amplified MA906BR/1 combination pH/Temp sensor. This is Milwaukee's top selling field grade electrode with lab grade performance for a reason. Designed to be both low maintenance (gel filled) and able to withstand more challenging samples (double junction). The MA906BR/1 is ideal for use in beer making, winemaking and hydroponics and many other applications.

DESIGN FEATURES

- Fast easy to read results with large dual level digital LCD readout.
- Extreme accuracy to ± 0.002 pH | ± 1 mV OPR | $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$).
- Extended range (-2.00 pH to 20.00 pH / -2.000 to 20.000 pH).
- Lightweight and portable, IP67 rated.
- Simple easy-to-use logging and USB download functions ,manual or on demand up to 1,000 logs.
- Electrode diagnostics feature checks and displays the condition of the pH electrode.



- Easy measurement: just place the probe in the sample, gently stir and wait for the reading to stabilize.
- Simple push button, automatic up to 5 point calibration for increased accuracy.
- Gel-filled, double junction, amplified rugged field design. MA906BR/1 pH electrode is low maintenance with high accurate results and has a screw on cap to ensure proper storage.
- Built in temperature sensor.
- 3 x 1.5V alkaline batteries with 200 hours battery life (battery included).
- Auto shut-off feature to preserve battery energy.
- Alphanumeric LCD display messages for friendly, intuitive information, warnings and error messages.
- Internal clock date to keep track of different time-dependent functions (calibration, timestamp, calibration time out).
- 3 feet probe cables for extra flexibility when testing.

CARE AND USE

pH meters usually start performing poorly because of problems with the probe. The two parts of the pH probe that cause problems are the glass sensing bulb and the reference junction.

SENSING BULB

The glass bulb loses sensitivity with use and will eventually fail. This is true of all pH probes.

REFERENCE JUNCTION

The reference junction is a small hole that allows the meter to compare the sample to a reference. The reading is generated based on the electrical difference between the sample and reference. If the junction hole gets clogged, the pH electrode will no longer function.

You can extend the life of your pH electrode in the following ways.

CLEANING AND STORAGE

All pH sensors have a limited life and response time gets longer with age. Properly maintaining your pH pen tester will give you fast, accurate results for longer. So, be sure to order the Milwaukee pH Maintenance Kit code PH-Main at checkout time! This will be needed to help clean and condition the pH electrode before use!

STORAGE

The pH probe needs to be kept hydrated. Long periods of dry storage will damage the sensitivity of the probe. Allowing the probe to dry out may also result in the junction hole getting clogged.

Storing in pH probe storage solution MA9015 or pH calibration buffers will help address both these issues. Do not store in tap water and DI water. This will damage the sensitivity of the probe.

The best way to store the probe is with the probe's cap filled with storage solution or calibration buffer and the cap tightened to prevent leakage. It is also recommended that to store the electrode upright to further reduce the potential for leakage.

CLEANING

Residue from the sample can impact the sensitivity of the sensing bulb and clog the junction. This is especially true if the sample has a lot of organic material. We recommend regularly soaking your electrode in cleaning solution MA9016.

CALIBRATION

The pH sensing bulbs become less sensitive over time so make sure that you are calibrating regularly to keep your PRO Plus pH meter accurate. Also, calibrate after cleaning or a long period of storage.

Thank you for considering Milwaukee to help you take your results to the next level.

Technical data

SPECIFICATIONS

pH Range*:	-2.00 to 20.00 pH
pH Range Electrode:	0 to 12 pH
ORP Range:	±2000.0mV
Temp. Range Meter:	-20.0 to 120.00°C (-4.0 to 248.0°F)
Temp. Range Electrode:	-5 to 70°C (23 to 158°F)
Resolution:	0.01 pH
Resolution:	0.1mV
Resolution:	0.1°C (0.1°F)
Accuracy*:	±0.02 pH @ 25°C / 77°F
Accuracy:	±1mV
Accuracy:	±0.5°C (±1°C outside) ±1°F (±2°F outside)
pH Calibration:	up to 3 point automatic pH calibration 7 standard buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45)
ORP Calibration:	Factory calibrated

Temperature Compensation*:	Automatic, -20.0 to 120.0°C (-4.0 to 248.0°F) or manual (without temperature probe)
pH electrode:	MA906BR/1 amplified pH/temperature probe (supplied)
Accuracy electrode:	±0.02 pH (range 0 to 12 pH)
Temperature probe:	Built-in temperature sensor
Impedance:	10 Ohm
Battery type:	3 X 1.5V alkaline AA (included)
Battery life:	Approx. 200 hours of use
Auto-off:	Selectable 5, 10, 30, 60 min. or off
Environment:	0 to 50°C / 32 to 122°F; max RH 95%
Dimensions:	200 x 85 x 50 mm (7.9 x 3.3 x 2.0 inches)
Casing:	IP67
Weight:	0.26 Kg / 0.58 lbs (with battery)
Warranty:	2 years, Meter

*Limits will be reduced to sensor limits

Code	Description
M6100105	Milwaukee Portable Meter MW105 MAX

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