pH VERSUS TEMPERATURE CHART

TEMP		pH VALUES		
°C	°F	MA9004	MA9007	MA9010
0	32	4.01	7.13	10.32
5	41	4.00	7.10	10.24
10	50	4.00	7.07	10.18
15	59	4.00	7.04	10.12
20	68	4.00	7.03	10.06
25	77	4.01	7.01	10.01
30	86	4.02	7.00	9.96
35	95	4.03	6.99	9.92
40	104	4.04	6.98	9.85
45	113	4.05	6.98	9.85
50	122	4.06	6.98	9.82
55	131	4.07	6.98	9.79
60	140	4.09	6.98	9.77
65	149	4.11	6.99	9.76
70	158	4.12	6.99	9.75

OPTIONAL ACCESSORIES

M10007B	pH7.01 buffer solution, 25x20 mL sachet
M10004B	pH4.01 buffer solution, 25x20 mL sachet
M10010B	pH10.01 buffer solution, 25x20 mL sachet
M10031B	1413 µS/cm calibration solution, 25x20 mL sachet
M10032B	1382 ppm calibration solution, 25x20 mL sachet
M10442B	1500 ppm calibration solution, 25x20 mL sachet
MA9015	Electrode storage solution, 220 mL bottle
SE-600	pH/EC/TDS spare probe with 1m cable

SPECIFICATIONS:

RANGE	0.0 to 14.0 pH (**MW801**) 0.00 to 14.00 pH (**MW802**) 0 to 1990 ppm; 0 to 1990 µS/cm (**MW801**) 0 to 4000 ppm; 0.00 to 6.00 mS/cm (**MW802**)
RESOLUTION	0.1 pH (**MW801**) 0.10 pH (**MW802**) 10 ppm (**MW801/MW802**) 10 µS/cm (**MW801**) 0.01 mS/cm (**MW802**)
ACCURACY (@25°C)	±0.2 pH (**MW801**) ±0.20 (**MW802**) 2% FS (EC/TDS) (**MW801, MW802**)
TDS FACTOR	0.5 (**MW801**) 0.68 (**MW802**)
TEMPERATURE COMPENSATION	Automatic, 0 to 50°C
CALIBRATION	Manual, 1-point
PROBE	**SE-600** combination probe
ENVIRONMENT	0 to 50°C; 95% RH max.
BATTERY TYPE	1 x 9V
BATTERY LIFE	approx. 150 hours of use
DIMENSIONS	143 x 80 x 32 mm
WEIGHT	220 g (with battery)

CERTIFICATION

Milwaukee Instruments conform to the CE European Directives.

CE

RoHS compliant

Disposal of Electrical & Electronic Equipment. Do not treat this product as household waste. Hand it over to the appropriate collection point for the recycling of electrical and electronic equipment.

Disposal of waste batteries. This product contains batteries. Do not dispose of them with other household waste. Hand them over to the appropriate collection point for recycling.

Please note: proper product and battery disposal prevents potential negative consequences for human health and the environment. For detailed information, contact your local household waste disposal service or go to **www.milwaukeeinstruments.com** (USA & CAN) or **www.milwaukeeinst.com**.

RECOMMENDATION

Before using this product, make sure it is entirely suitable for your specific application and for the environment in which it is used. Any modification introduced by the user to the supplied equipment may compromise the meter's performance. For your and the meter's safety do not use or store the meter in hazardous environment. To avoid damage or burn, do not perform any measurement in microwave ovens.

WARRANTY

These instruments are warranted against defects in materials and manufacturing for a period of 2 years from the date of purchase. This warranty is limited to repair or free of charge replacement if the instrument cannot be repaired. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered by warranty. If service is required, contact your local Milwaukee Instruments Technical Service. If the repair is not covered by the warranty, you will be notified of the charges incurred. When shipping any meter, make sure it is properly packaged for complete protection.

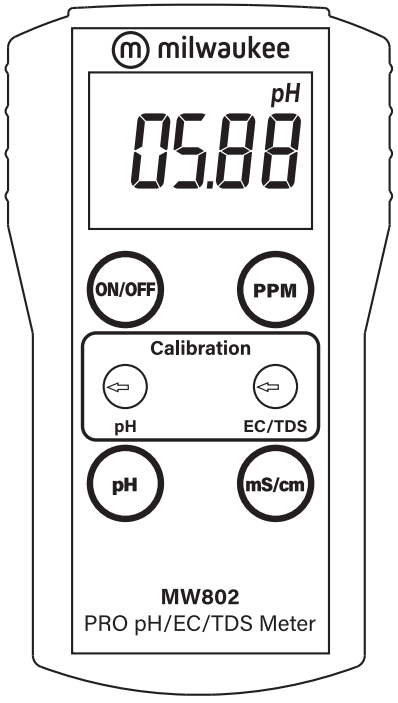
ISTMW802 11/20

SATISFACTION GUARANTEED

USER MANUAL

MW801, MW802

PRO Portable pH/EC/TDS Meters



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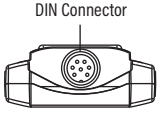
PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipment. If noticeable damage is found, notify your Dealer.
Each meter is supplied complete with:

- **SE-600** preamplified non refillable double junction combination pH electrode with built in EC/TDS probe and temperature sensor; 1m (3.3') cable.
- pH7.01, 1413 µS/cm & 1382 ppm (for **MW801**) or 1500 ppm (for **MW802**) solutions, 20 mL each.
- Instruction Manual.
- 1 x 9V battery.

OPERATION

Slide the battery compartment cover located on the back of the meter off, and install the battery into the battery clip connector while observing polarity.
Connect the probe to the meter securely by aligning the pins with the socket and pushing the plug in.



Always remove the electrode protective cap before use.
Make sure that the meter has been calibrated before taking any measurements (see calibration procedure).
Turn the instrument on by pressing the ON/OFF key.

pH MEASUREMENTS

If the electrode has been left dry, soak the tip in a pH7 (**M10007**) buffer solution for a few minutes to reactivate it.
Submerge the tip of the electrode into the sample to be measured, select the pH mode and allow the reading to stabilize before taking measurements.

EC/TDS MEASUREMENTS

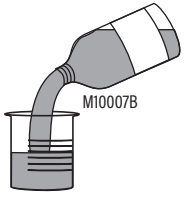
Immerse the tip of the electrode into the sample to be tested.
Select the measurement range (EC or TDS) and wait for the temperature sensor to reach thermal equilibrium with the samples before taking measurements.
AFTER MEASUREMENTS the instrument should be switched off and the probe cleaned and stored with a few drops of storage solution in the protective cap.

CALIBRATION PROCEDURE:

Remove the protective cap from the electrode.
Switch the meter on.
Select the range pressing the appropriate key for pH, EC or TDS.

pH Calibration

A. PREPARATION
Single point manual calibration. Choose buffer.
If you are going to measure samples near pH 7 use pH 7.01 buffer solution (**M10007B**) for calibration; use pH 4.01 buffer solution (**M10004B**) for acidic measurements, or pH 10.01 (**M10010B**) for alkaline measurements.



B. PROCEDURE
Rinse the tip of the electrode and immerse it in the calibration solution. Wait a couple of minutes for the reading to stabilize.
Measure the temperature of the buffer solution with a thermometer.

Adjust the calibration knob until the LCD shows the pH value of the buffer at the measured temperature (see pH versus temperature chart).

pH Calibration

The calibration is now complete and the meter is ready for use.

EC/TDS Calibration

A. PREPARATION
Single point EC calibration.
Choose appropriate standard:
Model **MW801**: use 1382 ppm (**M10032B**) for TDS or 1.413 µS/cm (**M10031B**) for EC calibration.
Model **MW802**: use 1500 ppm (**M10442B**) for TDS or 1.413 mS/cm (**M10031B**) for EC calibration.

B. PROCEDURE
Immerse the tip of the electrode in the standard solution.
Wait for the reading to stabilize, and thermal equilibrium be reached.
Turn the EC/TDS calibration knob until the display shows the EC or TDS reading at 25°C.

EC/TDS Calibration

The calibration is now complete and the meter is ready for use.
The instrument should be re-calibrated at least once a month, or when the probe or battery is replaced.

Note: *The conversion between EC and TDS is made by a built-in circuit. If calibration is made in EC range, TDS range is automatically calibrated (or vice versa).*

BATTERY REPLACEMENT

The meters are powered by a 9V battery that is in a compartment located in the rear of the instrument.
When the battery becomes weak, the instrument automatically switches off.
Replacement must only take place in a non-hazardous area using an alkaline 9V battery. Slide off the battery compartment cover and replace the old battery with a new one. Make sure that the battery contacts are fully engaged in the connector. Seat the battery in is compartment and replace the cover.