

OPTIONAL ACCESSORIES

|         |                                                        |
|---------|--------------------------------------------------------|
| M10007B | pH7.01 buffer solution, 20 mL sachet (25 pcs)          |
| M10004B | pH4.01 buffer solution, 20 mL sachet (25 pcs)          |
| M10010B | pH10.01 buffer solution, 20 mL sachet (25 pcs)         |
| M10031B | 1413 µS/cm calibration solution, 20 mL sachet (25 pcs) |
| M10032B | 1382 ppm calibration solution, 20 mL sachet (25 pcs)   |
| M10442B | 1500 ppm calibration solution, 20 mL sachet (25 pcs)   |
| MA9015  | Electrode storage solution, 230 mL bottle              |
| SE600   | pH/EC/TDS spare probe with 1m cable                    |

SPECIFICATIONS

|                                   | MW801                      | MW802              |
|-----------------------------------|----------------------------|--------------------|
| Range                             | pH 0.0 to 14.0 pH          | 0.00 to 14.00 pH   |
|                                   | EC 0 to 1990 µS/cm         | 0.00 to 6.00 mS/cm |
|                                   | TDS 0 to 1990 ppm          | 0 to 4000 ppm      |
| Resolution                        | pH 0.1 pH                  | 0.10 pH            |
|                                   | EC 10 µS/cm                | 0.01 mS/cm         |
|                                   | TDS 10 ppm                 | 10 ppm             |
| Accuracy                          | pH ±0.2 pH                 | ±0.20 pH           |
|                                   | EC 2 % FS                  | 2 % FS             |
|                                   | TDS 2 % FS                 | 2 % FS             |
| TDS Factor                        | 0.5                        | 0.68               |
| EC / TDS Temperature Compensation | Automatic                  |                    |
| Calibration                       | Manual, 1-point            |                    |
| Probe                             | SE600 combination probe    |                    |
| Operating Temperature             | 0 to 50 °C; 95 % RH max.   |                    |
| Battery Type                      | 1 x 9 V                    |                    |
| Battery Life                      | approx. 150 hours of use   |                    |
| Dimensions                        | 143 x 80 x 32 mm           |                    |
| Weight                            | 220 g (meter with battery) |                    |

CERTIFICATION

Milwaukee Instruments conform to the CE European Directives.



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.

RoHS compliant



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](http://www.milwaukeeinstruments.com) (USA & CAN) or [www.milwaukeeinstruments.eu](http://www.milwaukeeinstruments.eu).

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.

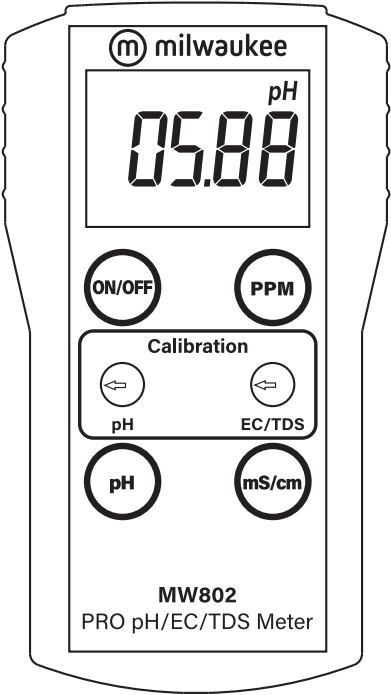
WARRANTY

These instruments are warranted against defects in materials and manufacturing for a period of 2 years from the date of purchase. Probe is warranted for 6 months. 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.

USER MANUAL

MW801, MW802

PRO Portable  
pH/EC/TDS Meters



[milwaukeeinstruments.com](http://milwaukeeinstruments.com) (USA & CAN)  
[milwaukeeinstruments.eu](http://milwaukeeinstruments.eu)



## PRELIMINARY EXAMINATION

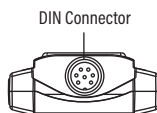
Each meter is supplied complete with:

- **SE600** preamplified non refillable double junction combination pH electrode with built in EC/TDS probe and temperature sensor; 1 m (3.3') cable
- Calibration solutions, 20 mL each
  - ▶ pH 7.01, 1413  $\mu\text{S}/\text{cm}$ , 1382 ppm (**MW801**)
  - ▶ pH 7.01, 1413  $\mu\text{S}/\text{cm}$ , 1500 ppm (**MW802**)
- Instruction manual
- 1 x 9 V battery

## OPERATION

Slide off the battery compartment cover located on the back of the meter, 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 **MA9015** Storage Solution for a few hours (or overnight) to reactivate. 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.

EC/TDS measurements have a high thermal dependency and readings taken with this instrument are temperature compensated.

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.

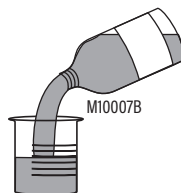
Select the range pressing the appropriate key for pH, EC or TDS. For best calibration results we suggest calibration to be done at room temperature (around 25 °C/77 °F).

### 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.

Adjust the calibration knob until the LCD shows the pH value at the value printed on the used buffer standard.



Calibration is now complete and the meter is ready for use.

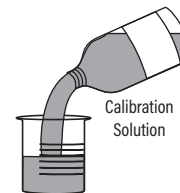
### EC/TDS Calibration

#### A. PREPARATION

Single point EC calibration.

Choose appropriate standard:

- **MW801**: use 1382 ppm (**M10032B**) for TDS or use 1413  $\mu\text{S}/\text{cm}$  (**M10031B**) for EC calibration.
- **MW802**: use 1500 ppm (**M10442B**) for TDS or use 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 value printed on the calibration bottle's or sachet's label you are using.



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 9 V 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 9 V 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 its compartment and replace the cover.