

## FEATURES and SPECIFICATIONS

### Features

- Accuracy is  $\pm 1\%$  of reading (50-20,000 $\mu\text{S}$ )  $\pm 1\%$  of scale.
- Rugged integral probe.
- Four-electrode cell technology.
- Waterproof to 3 feet/1 meter.
- 5 digit LCD displays full 20000  $\mu\text{S}$  or PPM.
- Full auto ranging conductivity measurements from 0 to 20,000  $\mu\text{S/cm}$ .
- Memory saves up to 20 readings.
- Calibrations protected from low battery loss (nonvolatile memory).

### General Specifications

Display: 5 Digit LCD

Dimensions (LxWxH): 5.3 x 3.3 x 1.6 in. (136 x 84 x 39 mm)

Conductivity Cell Capacity: 0.1 oz. (3.2 ml)

Power: AAA Alkaline Batteries (2)

Battery Life: 10,000 Readings

Operating/Storage Temperature: 32-132°F/0-55°C

Protection Ratings: IP67

# Water Conductivity Tester



## Operation Manual

## RESET to FACTORY DEFAULT

To reset all Menu items to the factory settings:

- 1) Press the **READ** key.
- 2) Press and hold all four buttons for five seconds.
- 3) The display will show the firmware version and then flash "RESET"
- 4) Press the **READ** key to reset to factory defaults. Press the **MENU** key to exit without resetting the meter.
- 5) Factory defaults are not calibrated. Follow calibration instructions in this manual.



## CARE and MAINTENANCE

Keep conductivity cell as clean as possible.

Flush out conductivity cell with clean water after use to prevent buildup on electrodes.

Clean oily films or organic material from conductivity cell with foaming non-abrasive household cleaner. Do not scrub inside cell. Avoid solvents.

Take care not to drop the tester. Shock may damage components.

Do not place solutions hotter than 160°F (71°C) in conductivity cell.

Do not exceed rated operating temperature. Take care not to leave tester in a vehicle or unairconditioned building on a hot day as temperatures may surpass 150°F.

## Recall Records Stored in Memory

- 1) **READ/ENTER** : Turns power on.
- 2) **MENU** : Displays menu items. (RECALL MEM flashes)
- 3) **READ/ENTER** : Displays memory locations.
- 4) **▼ / SAVE** or **▲** : To choose a record to view. Display will alternate between conductivity and temperature.

## Erase Individual Records from Memory

- 1) **READ/ENTER** : Turns power on.
- 2) **MENU** : Displays menu items.
- 3) **▼ / SAVE** or **▲** : To display CLEAR MEM (flashing)
- 4) **READ/ENTER** : Selects clear memory function.
- 5) **▼ / SAVE** or **▲** : To choose record to clear.
- 6) **READ/ENTER** : Displays data that is to be cleared.
- 7) **READ/ENTER** : Clears data from selected memory location and returns to measurement mode.

## Erase All Records from Memory

- 1) **READ/ENTER** : Turns power on.
- 2) **MENU** : Displays menu items.
- 3) **▼ / SAVE** or **▲** : To display CLEAR ALL MEM (flashing)
- 4) **READ/ENTER** : -- MEM flashes to indicate all records are about to be deleted.
- 5) **READ/ENTER** : Clears data from all memory locations and returns to measurement mode.

## Calibrate Conductivity

Conductivity calibration should be performed monthly, or upon changing batteries.

- 1) Rinse conductivity cell three times with proper conductivity standard.
- 2) Refill conductivity cell with same standard.
- 3) **READ/ENTER** : Turns power on and measures conductivity.
- 4) **MENU** : Displays menu items.
- 5) **▼ / SAVE** or **▲** : To select CAL CONDUCTIVITY (flashing)
- 6) **READ/ENTER** : Displays conductivity of standard.



- 7) ▼ / SAVE or ▲ : Change conductivity reading to match value of sample. Hold down key for rapid scrolling.
- 8) READ/ ENTER : Stores new calibration factor and returns to measurement mode.

### Change Conductivity Unit of Measure

- 1) READ/ ENTER : Turns power on.
- 2) MENU : Displays menu items.
- 3) ▼ / SAVE or ▲ : To select CONDUCTIVITY µS/cm PPM (flashing)
- 4) READ/ ENTER : Displays µS/cm or PPM.
- 5) ▼ / SAVE or ▲ : To select µS/cm or PPM.
- 6) READ/ ENTER or MENU : Stores unit of measure and returns to measurement mode.

### Change Conductivity Temperature Compensation

There is a direct relationship between the temperature of a solution and its conductivity. Temperature compensation is used to automatically adjust all readings to what they would be if the solution was measured at 25°C (77°F).

- 1) READ/ ENTER : Turns power on.
- 2) MENU : Displays menu items.
- 3) ▼ / SAVE or ▲ : To select CONDUCTIVITY TEMP (flashing)
- 4) READ/ ENTER : Displays current temperature compensation correction factor.
- 5) ▼ / SAVE or ▲ : Changes temperature compensation correction factor. (From 0.0 to 9.9) default is 2.0.
- 6) READ/ ENTER : Stores new temperature compensation factor and returns to measurement mode.

**NOTE:** Press **MENU** to exit without changing temperature compensation.

### Calibrate Temperature

- 1) READ/ ENTER : Turns power on.
- 2) MENU : Displays menu items.
- 3) ▼ / SAVE or ▲ : To select CAL TEMP (flashing)
- 4) READ/ ENTER : Display current temperature.
- 5) ▼ / SAVE or ▲ : Change temperature to desired value. (+/- 18°F, ±10°C from current reading)
- 6) READ/ ENTER : Stores calibrated temperature and returns to measurement mode.

### Select Fahrenheit or Celsius

- 1) READ/ ENTER : Turns power on.
- 2) MENU : Displays menu items.
- 3) ▼ / SAVE or ▲ : To select TEMP °F (or °C) (flashing)
- 4) READ/ ENTER : Enables unit of measure selection.
- 5) ▼ / SAVE or ▲ : Select °F or °C.
- 6) READ/ ENTER : Stores unit of measure and returns to measurement mode.

### BATTERIES

BATT will display constantly when batteries are low.

The batteries should last for several years. Opening the meter is discouraged. Doing so may increase your chance of damaging the meter and may void your warranty.

- 1) Dry the instrument thoroughly.
- 2) Remove four screws from bottom of tester.
- 3) Remove bottom of tester.
- 4) Remove batteries from circuit board clips.
- 5) Replace with two AAA alkaline batteries.
- 6) Replace bottom of tester.
- 7) Re-install screws.

**NOTE:** Removing the batteries will not affect the calibration values and other Menu settings. Stored measurement records, however, will be lost without battery power.

# OPERATION

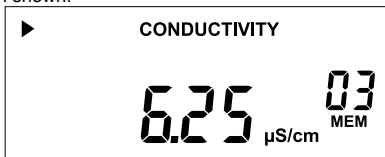
## Measure

- 1) Rinse conductivity cell three times with sample.
- 2) Fill cup with sample. All four electrodes must be submerged. Make sure there are no bubbles in cell.
- 3) **READ/ENTER**: Measures conductivity of sample. Display stops flashing when measurement is stable.
- 4) **▲**: Displays temperature of sample.
- 5) Power turns off automatically after 30 seconds of inactivity.

## Memory

The tester can save up to 20 readings.

- 1) **▼** / **SAVE**: Displays next available memory location.
- 2) **▼** / **SAVE** or **▲**: To select a specific memory location, if desired.
- 3) **READ/ENTER**: Stores conductivity and temperature data in location shown.



**NOTE:** Display shows -- when memory is full. Data cannot be overwritten, it must be erased via the MENU commands.

## Menu

**MENU** is used to:

- Recall stored measurements.
- Erase memory (individual records or all at once).
- Calibrate conductivity.
- Change conductivity unit of measure ( $\mu\text{S}/\text{cm}$  or PPM).
- Change the temperature compensation
- Calibrate temperature.
- Change temperature unit of measure (Celsius or Fahrenheit).

Press **MENU** at any time to go to reading without saving changes.