## M310T Multi-parameter Analyzer

## Features

- Color High contrast LCD touchscreen, 4.3 inches.
- Multi-reading feature allows auto-read, timed-read and continuous-read.
- Automatic/Manual temperature compensation ensures accurate results.
- Auto-hold feature senses and locks the measurement endpoint.
- Data capacity of up to 500 sets for each parameter (GLP-compliant).
- Support for USB communication.
- Auto-power off feature effectively extends the battery service life.
- Reset feature automatically resumes all settings back to factory default options.
- IP65 waterproof. The portable meter is suitable for fields measurements and out door measurements.


## pH

1.1-5 points calibration with Standard Recognition.
2. Selectable pH buffer groups, including NIST, DIN, GB, USA.
3. Automatic electrode diagnosis with pH slope and offset display.

## Ion

1.1-5 points calibration.
2. Selectable measurement unit, including $\mu \mathrm{g} / \mathrm{L}, \mathrm{mg} / \mathrm{L}, \mathrm{g} / \mathrm{L}, \mathrm{mmol} / \mathrm{L}, \mathrm{pX}, \mathrm{ppm}$, ppb, etc.
3. Measurement modes are supported, including Direct Reading mode, Standard Addition mode, Sample Addition mode and GRAN mode.
4. Over 10 methods are built-in, including $\mathrm{F}^{-}, \mathrm{Cl}^{-}, \mathrm{Br}^{-}, \mathrm{I}^{-}, \mathrm{NO}_{3}^{-}, \mathrm{BF}_{4}^{-}, \mathrm{NH}_{4}^{+}, \mathrm{K}^{+}, \mathrm{Na}^{+}, \mathrm{Ca}^{2+}, \mathrm{Cu}^{2+}, \mathrm{Pb}^{2+}, \mathrm{Ag}^{+}$and etc., user-defined method is supported.

## Conductivity

1. 1-3 points calibration with Standard Recognition.
2. Settable parameters, including cell constant, temperature compensation coefficient, and TDS factor.
3. Temperature compensation type (none, linear, pure water).

## DO

1. Support for air-saturated water or zero oxygen calibration.
2. Auto barometric pressure compensation
3. Manual Salinity Factor Correction
4. Selectable pressure unit, including kPa , mbar, Torr, Atm.

## Includes

1. E-301-QC 3 in 1 pH composite electrode
2. DJS-1VTC EC electrode
3. DO-958-Q polarographic DO electrode
4. NIST pH standard solution $(4.01,7.00,10.01), 50 \mathrm{ml} /$ vial
5. $1413 \mu \mathrm{~S} / \mathrm{cmEC}$ standard solution, $50 \mathrm{ml}, 1$ vial
6. Electrode holder
7. Silicone rubber case
8. Wristbands
9. Carrying Case


## Specifications

| Model |  | M310T |
| :---: | :---: | :---: |
| Parameters |  | pH/EC/ISE/DO/Temp. (mV/pX/Resistivity/TDS/Sal./DO Saturation) |
| pH | Range | -2.00 to 20.00 pH |
|  | Resolution | 0.1, 0.01 pH |
|  | Accuracy | $\pm 0.01 \mathrm{pH}$ |
|  | Calibration Points | Up to 5 |
|  | Standard Customization | Yes |
|  | Calibration Reminder | Yes |
|  | Standard Recognition | NIST, GB, USA and DIN buffers |
|  | Slope Limit | Yes |
| mV | Range | -2000.0 to 2000.0 mV |
|  | Resolution | 0.1 mV |
|  | Accuracy | $\pm 0.3 \mathrm{mV}$ or $\pm 0.1 \%$ |
| pX | Range | -2.00 to 20.00 pX |
|  | Resolution | 0.1, 0.01 pX |
|  | Accuracy | $\pm 0.01 \mathrm{pX}$ |
|  | Calibration Points | Up to 5 |
| ISE | Range | 1.000e-9 to 9.999e+9 |
|  | Units | mol/L, mmol/L, g/L, mg/L, pg/L, ppm, ppb |
|  | Resolution | Up to 4 significant digits |
|  | Accuracy | $\pm 0.5 \%$ |
|  | Calibration Points | Up to 5 |
| Conductivity | Range | $0.000 \mathrm{pS} / \mathrm{cm}$ to $1000 \mathrm{mS} / \mathrm{cm}$ |
|  | Resolution | $0.001 \mathrm{pS} / \mathrm{cm}$ minimum, various with range selection |
|  | Accuracy | $\pm 1.0 \%$ FS |
|  | Reference Temperature | 20, $25{ }^{\circ} \mathrm{C}$ |
|  | Calibration Points | Up to 3 |
|  | Standard Recognition | $84 \mu \mathrm{~S} / \mathrm{cm}, 1413 \mu \mathrm{~S} / \mathrm{cm}, 12.88 \mathrm{mS} / \mathrm{cm}$ |
| Resistivity | Range | $5.00 \Omega \cdot \mathrm{~cm} \sim 20.00 \mathrm{M} \Omega \cdot \mathrm{cm}$ |
|  | Resolution | $0.01 \Omega \cdot \mathrm{~cm}$ minimum |
|  | Accuracy | $\pm \mathbf{1 . 0 \%}$ FS |
| TDS | Range | 0.00 ppm 300 ppt |
|  | Resolution | 0.01mg/L minimum, 3 significant digits |
|  | Accuracy | $\pm 1.0 \%$ FS |
| Salinity | Range | 0.0 80.0 ppt |
|  | Resolution | 0.1ppt |
|  | Accuracy | $\pm 2 \mathrm{ppt}$ |
| Dissolved <br> Oxygen <br> Concentration | Sensor Type | Polarographic |
|  | Range | 0.00 to 50.00 ppm |
|  | Resolution | $0.01 \mathrm{mg} / \mathrm{L}$ |
|  | Accuracy | $\pm 0.10 \mathrm{ppm}$ |
|  | Calibration Points | Air-saturated water or zero point |
|  | Barometric Compensation | Yes |
|  | Manual Salinity Factor Correction | Yes |
| Saturation | Range | (0.0 to 300.0)\% |
|  | Resolution | 0.10\% |
|  | Accuracy | $\pm \mathbf{2 . 0 \%}$ |


| Temperature | Range | -5 to $110{ }^{\circ} \mathrm{C}$, 23.0 to $230{ }^{\circ} \mathrm{F}$ |
| :---: | :---: | :---: |
|  | Unit | ${ }^{\circ} \mathbf{C},{ }^{\circ} \mathbf{F}$ |
|  | Resolution | 0.1 |
|  | Accuracy | $\pm 0.2{ }^{\circ} \mathrm{C}$ |
| Measurement | Reading Mode | Auto-Read (Fast, Medium, Slow), Timed, Continuous |
|  | Reading Prompts | Reading, Stable, Locked |
|  | Temp. Compensation | ATC, MTC |
| Data management | Data Storage | 1000 Groups |
|  | GLP Features | Yes |
| Inputs | pH Electrode | BNC(Q9) |
|  | DO with Temp. Probe | 4-pin aviation connector |
|  | Conductivity with Temp. Probe | 5-pin aviation connector |
| Outputs | USB | PC, printer |
| Display options | Backlight | Yes |
|  | Auto Shutdown | 300, 600, 1200, 1800, 3600sec., off |
|  | IP Rating | IP65 |
|  | Date and Time | Yes |
| General | Power | Rechargeable Lithium battery, AC Adapter, $100-240 \mathrm{~V}$ AC input, DC5V output |
|  | Dimensions | $90 \times 255 \times 40 \mathrm{~mm}$ |
|  | Weight | $500 \mathrm{~g}(1.1 \mathrm{lb})$ |
|  | Dimensions (Carton) | $490 \times 410 \times 220 \mathrm{~mm}$ |
|  | Weight (Gross) | 5.5 kg |

