

## **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.

#### pН

- 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 µg/L, mg/L, g/L, mmol/L, pX, 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 F-, Cl-, Br-, I-, NO<sub>3</sub>-, BF<sub>4</sub>-, NH<sub>4</sub>+, K+, Na+, Ca<sup>2+</sup>, Cu<sup>2+</sup>, Pb<sup>2+</sup>, 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).

### $\overline{\mathbf{DO}}$

- 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), 50ml/vial
- 5. 1413 µS/cmEC standard solution, 50ml, 1 vial
- 6. Electrode holder
- 7. Silicone rubber case
- 8. Wristbands
- 9. Carrying Case





# **Specifications**

Parameters	Model		M310T
Resolution	Parameters		pH/EC/ISE/DO/Temp. (mV/pX/Resistivity/TDS/Sal./DO Saturation)
Accuracy		Range	-2.00 to 20.00 pH
Part	pН	Resolution	0.1, 0.01 pH
Standard Customization   Ves		Accuracy	±0.01 pH
Standard Customization   Yes		Calibration Points	Up to 5
Standard Recognition   NIST, GB, USA and DIN buffers		Standard Customization	Yes
Slope Limit   Yes		Calibration Reminder	Yes
Range		Standard Recognition	NIST, GB, USA and DIN buffers
Resolution		Slope Limit	Yes
Accuracy	mV	Range	-2000.0 to 2000.0 mV
Range		Resolution	0.1 mV
Resolution   0.1, 0.01 pX		Accuracy	±0.3 mV or ±0.1%
Accuracy		Range	-2.00 to 20.00 pX
Accuracy	<b>T</b> 7	Resolution	0.1, 0.01 pX
Range	pX	Accuracy	±0.01 pX
Units		<b>Calibration Points</b>	Up to 5
Resolution		Range	1.000e-9 to 9.999e+9
Resolution		Units	mol/L, mmol/L, g/L, mg/L, pg/L, ppm, ppb
Calibration Points   Up to 5	ISE	Resolution	
Range		Accuracy	±0.5%
Resolution       0.001 pS/cm minimum, various with range selection         Accuracy       ±1.0% FS         Reference Temperature       20, 25 °C         Calibration Points       Up to 3         Standard Recognition       84µS/cm, 1413µS/cm, 12.88mS/cm         Resistivity       Range       5.00 Ω·cm-20.00 MΩ·cm         Resolution       0.01Ω·cm minimum         Accuracy       ±1.0% FS         Range       0.00 ppm~300 ppt         Resolution       0.01mg/L minimum, 3 significant digits         Accuracy       ±1.0% FS         Range       0.0~80.0 ppt         Salinity         Resolution       0.1ppt         Accuracy       ±2ppt         Sensor Type       Polarographic         Range       0.00 to 50.00 ppm         Resolution       0.01mg/L         Accuracy       ±0.10ppm         Calibration Points       Air-saturated water or zero point         Barometric Compensation       Yes         Manual Salinity Factor Correction       Yes         Range       (0.		Calibration Points	Up to 5
Accuracy		Range	0.000 pS/cm to 1000 mS/cm
Reference Temperature   20, 25 °C		Resolution	0.001 pS/cm minimum,various with range selection
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Accuracy	±1.0% FS
Standard Recognition   84μS/cm, 1413μS/cm, 12.88mS/cm	Conductivity	Reference Temperature	20, 25 °C
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		<b>Calibration Points</b>	Up to 3
Resistivity   Resolution   0.01Ω · cm minimum     Accuracy		Standard Recognition	84μS/cm, 1413μS/cm, 12.88mS/cm
Accuracy		Range	5.00 Ω-cm~20.00 MΩ-cm
TDS  Resolution  Accuracy  #1.0%FS  Range  #2.00 ppt  Resolution  Accuracy  #2.00 ppt  Resolution  #3.00 ppt  Accuracy  #4.0%FS  Range  #4.0%FS  #4.0%FS  Range  #4.0%FS  Resolution  #4.00 ppt  #4.00	Resistivity	Resolution	0.01Ω ·cm minimum
TDS  Resolution  Accuracy  ±1.0%FS  Range  0.0~80.0 ppt  Resolution  0.1ppt  Accuracy  ±2ppt  Sensor Type  Polarographic  Range  0.00 to 50.00 ppm  Resolution  0.01mg/L  Accuracy  ±2ppt  Sensor Type  Polarographic  Range  0.00 to 50.00 ppm  Resolution  0.01mg/L  Accuracy  ±0.10ppm  Calibration Points  Barometric Compensation  Yes  Manual Salinity Factor Correction  Range  (0.0 to 300.0)%  Resolution  0.10%		Accuracy	±1.0% FS
Accuracy ±1.0%FS  Range 0.0-80.0 ppt  Resolution 0.1ppt  Accuracy ±2ppt  Sensor Type Polarographic  Range 0.00 to 50.00 ppm  Resolution 0.1mg/L  Accuracy ±0.10ppm  Concentration Calibration Points Air-saturated water or zero point  Barometric Compensation Yes  Manual Salinity Factor Correction Yes  Range (0.0 to 300.0)%  Saturation Resolution 0.10%		Range	0.00 ppm~300 ppt
Salinity  Range  Resolution  O.1ppt  Accuracy  ±2ppt  Sensor Type  Polarographic  Range  0.00 to 50.00 ppm  Resolution  Oxygen Concentration  Concentration  Calibration Points  Barometric Compensation  Manual Salinity Factor Correction  Yes  Range  Range  (0.0 to 300.0)%  Resolution  O.1ppt  O.01ppt  Accuracy  Folarographic  Accuracy  Accuracy  ±0.10ppm  Calibration Points  Air-saturated water or zero point  Barometric Compensation  Yes  Manual Salinity Factor Correction  Resolution  O.10%	TDS	Resolution	0.01mg/L minimum, 3 significant digits
Salinity  Resolution  Accuracy  ±2ppt  Sensor Type  Polarographic  Range  0.00 to 50.00 ppm  Resolution  0.01mg/L  Accuracy  ±0.10ppm  Calibration Points  Barometric Compensation  Yes  Manual Salinity Factor Correction  Saturation  Resolution  0.1ppt  0.1ppt  Polarographic  Range  0.00 to 50.00 ppm  Accuracy  ±0.10ppm  Calibration Points  Air-saturated water or zero point  Barometric Compensation  Yes  Range  (0.0 to 300.0)%  Resolution  0.10%		Accuracy	±1.0%FS
Accuracy ±2ppt  Sensor Type Polarographic  Range 0.00 to 50.00 ppm  Resolution 0.01mg/L  Accuracy ±0.10ppm  Calibration Points Air-saturated water or zero point  Barometric Compensation Yes  Manual Salinity Factor Correction Yes  Range (0.0 to 300.0)%  Resolution 0.10%		Range	0.0~80.0 ppt
Dissolved Oxygen Concentration  Sensor Type Range  O.00 to 50.00 ppm  Resolution  O.01mg/L  Accuracy  Calibration Points Air-saturated water or zero point  Barometric Compensation  Manual Salinity Factor Correction  Range  (0.0 to 300.0)%  Resolution  O.00 to 50.00 ppm  Accuracy  ±0.10ppm  Calibration Points  Air-saturated water or zero point  Yes  Manual Salinity Factor Correction  Range  (0.0 to 300.0)%  Resolution  O.10%	Salinity	Resolution	0.1ppt
Dissolved Oxygen Concentration Concentration  Range  Resolution  O.00 to 50.00 ppm  Resolution  O.01mg/L  Accuracy  Edibration Points  Air-saturated water or zero point  Barometric Compensation  Yes  Manual Salinity Factor Correction  Range  (0.0 to 300.0)%  Resolution  O.10%		Accuracy	±2ppt
Dissolved Oxygen Concentration  Resolution  Accuracy  Calibration Points  Barometric Compensation  Manual Salinity Factor Correction  Range  (0.0 to 300.0)%  Resolution  O.01mg/L  Accuracy  ±0.10ppm  Air-saturated water or zero point  Yes  (0.0 to 300.0)%  Resolution  O.10%		Sensor Type	Polarographic
Oxygen Concentration  Accuracy  Calibration Points  Barometric Compensation  Manual Salinity Factor Correction  Resolution  Pes  Range  (0.0 to 300.0)%  Resolution  Resolution  O.01mg/L  20.10ppm  Calibration Points  Air-saturated water or zero point  Yes  (0.0 to 300.0)%  Resolution  O.10%	<b>-</b>	Range	0.00 to 50.00 ppm
Concentration  Calibration Points Air-saturated water or zero point  Barometric Compensation Yes  Manual Salinity Factor Correction Yes  Range (0.0 to 300.0)%  Resolution  O.10%		Resolution	0.01mg/L
Calibration Points Air-saturated water or zero point  Barometric Compensation Yes  Manual Salinity Factor Correction Range (0.0 to 300.0)% Resolution 0.10%		Accuracy	±0.10ppm
Manual Salinity Factor Correction Yes  Range (0.0 to 300.0)%  Resolution 0.10%	Concentration	<b>Calibration Points</b>	Air-saturated water or zero point
Range (0.0 to 300.0)% Resolution 0.10%		<b>Barometric Compensation</b>	Yes
Saturation Resolution 0.10%		<b>Manual Salinity Factor Correction</b>	Yes
0.2070	Saturation	Range	(0.0 to 300.0)%
Accuracy ±2.0%		Resolution	0.10%
		Accuracy	±2.0%



Temperature	Range	-5 to 110 °C, 23.0 to 230 °F
	Unit	°C, °F
	Resolution	0.1
	Accuracy	±0.2°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
	<b>GLP Features</b>	Yes
	pH Electrode	BNC(Q9)
Inputs	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, 100-240V AC input, DC5V output
	Dimensions	90 x 255 x 40 mm
	Weight	500g (1.1 lb)
	Dimensions (Carton)	490×410×220 mm
		5.5 kg