

DDS-201 Series

Benchtop Conductivity Meters

User Manual



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The specifications and information mentioned in this manual are for reference only and are subject to change without notice. Unless otherwise agreed, this manual is for guidance only, and all statements and information herein do not constitute any form of warranty.

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Declaration

The functions described in this manual are specific to the entire DDS-201 series of benchtop conductivity meters. The specific functions and parameters available depend on the model you purchased and its configuration.

We have carefully compiled this manual, but we cannot guarantee that the content is entirely accurate. We are not responsible for any losses caused to users due to the information provided in this manual. Furthermore, our products, including this manual, are constantly being improved, and we reserve the right to modify the manual without prior notice.

User Notice

To ensure the design performance and longevity of this product, anyone using or maintaining this product must strictly follow the guidelines in this manual. By carefully reading and understanding this manual, you will be able to fully grasp the product's functions, operation, and maintenance methods.

Precautions

The DDS-201 series benchtop conductivity meter is a precision testing instrument. Please adhere to proper usage and maintenance practices to ensure optimal instrument performance.

- The instrument should be used and stored in a suitable environment.
- Avoid severe shaking, collisions, and pulling during transport and use.

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1.Product Introduction

1.1 Overview

The **DDS-201 Series Benchtop Conductivity Meters** are high-precision laboratory instruments designed for accurate measurement of conductivity, resistivity, TDS, and salinity across a wide range of water quality applications. With Intelligent Electrode Management Technology, the instrument automatically recognizes connected electrodes and transfers calibration data for secure and error-free operation.

Featuring a 7-inch full-angle LCD, one-touch operation, IP54 splash protection, the DDS-201 series delivers stable, repeatable results for laboratories analyzing pure water, ultrapure water, natural water, and industrial solutions. Its flexible electrode holder, Bluetooth data transfer, and large 999-set storage capacity make it a powerful and user-friendly choice for routine water quality testing.

Key Features:

- **High measurement accuracy and stability:** Supports conductivity measurement of pure water and ultrapure water, significantly reducing data drift and instability caused by electrode contamination and interference.
- **Intelligent Electrode Management Technology:** Automatically recognizes intelligent electrodes and transmits calibration data from the electrode chip to the instrument, ensuring safer data handling and minimizing errors.
- **Flexible Electrode Holder:** Newly designed holder allows one-handed operation and vertical movement, enabling the electrode to be positioned precisely for optimal measurement performance, faster testing, and reduced risk of sample spillage or electrode damage.
- **User-Friendly Interface:** The 7-inch full-angle LCD screen offers an intuitive menu guide, making operation more convenient. Switching between various parameters before and after measurement is easy.

- **IP54 Protection Rating:** Depending on the instrument, electrode, and connection, the instrument's shell prevents water droplets from leaking and allows cleaning with a damp cloth.
- **Convenient Measurement:** One-touch operation for measurement, calibration, storage, and other functions, making it simple and convenient.
- **Multiple Data Storage and Transmission Methods:** Stores up to 999 measurement results. Data can be directly printed via Bluetooth.

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1.2 Technical Specifications

Item	DDS-201A	DDS-201B	DDS-201C
Conductivity			
Measurement Range	0.00 μS –199 mS/cm	0.000 μS –1000 mS/cm	0.000 μS –2000 mS/cm
Minimum Resolution	0.01 $\mu\text{S}/\text{cm}$	0.001 $\mu\text{S}/\text{cm}$	
Accuracy	$\pm 1.0\%$ FS		
Temperature Compensation Range	0°C to 100°C (Automatic/Manual)		
Calibration Function	2-point calibration		
Resistivity			
Measurement Range	5.000 $\Omega\cdot\text{cm}$ –20.00 M $\Omega\cdot\text{cm}$		5.000 $\Omega\cdot\text{cm}$ –100.00 M $\Omega\cdot\text{cm}$
Minimum Resolution	0.010 $\Omega\cdot\text{cm}$		
Accuracy	$\pm 1.0\%$ FS		$\pm 0.5\%$ FS
TDS (Total Dissolved Solids)			
Measurement Range	0.00 mg/L–200 g/L	0.00 mg/L–500 g/L	0.000 mg/L–1000 g/L
Minimum Resolution	0.01 mg/L		0.001 mg/L
Accuracy	$\pm 1.0\%$ FS		
Salinity			
Measurement Range	0.00–100.00 ppt		
Minimum Resolution	0.01 ppt		
Accuracy	$\pm 0.2\%$		
Temperature			
Measurement Range	—	-5.0–105.0 °C	-10.0–130.0 °C
Minimum Resolution	—	0.1 °C	
Accuracy	—	± 0.1 °C	
Basic Parameters			
Data Storage	Optional	999 sets	
Bluetooth Transfer	Optional	Standard	
Stored Data	Measurement value, unit, temperature, time		
Power Supply	AC 90–240 V input, DC 12 V output (adapter included)		
Auto Power Off	Yes		
Power-loss Protection	Yes		
Factory Reset	Yes		
Dimensions (L × W × H)	203 × 163 × 70 mm		
Weight (kg)	1.08		
Operating Temperature	5–45 °C		
Operating Humidity	$\leq 95\%$		
Protection Rating	IP54		

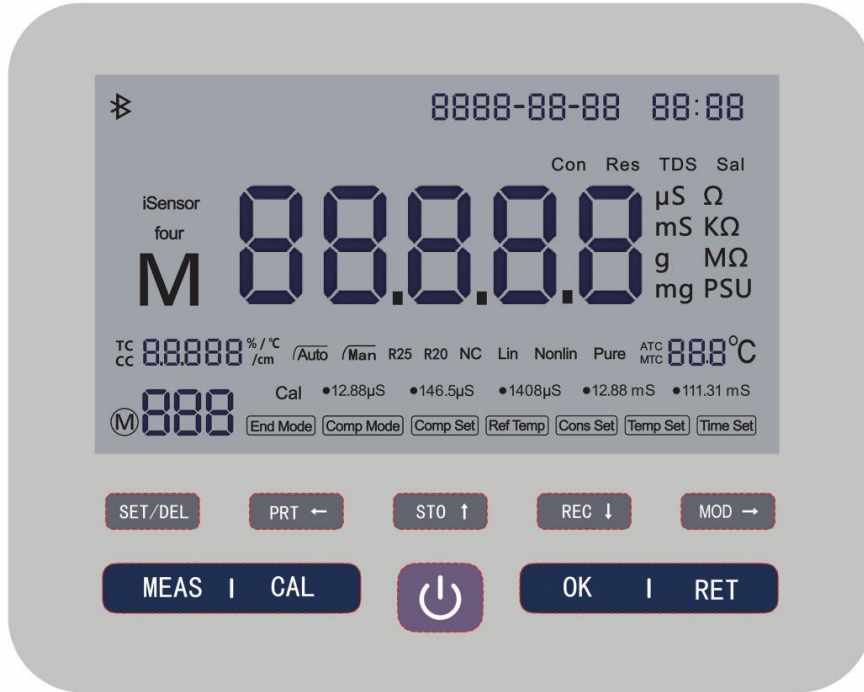
1.3 Instrument Appearance



1. 6-pin aviation connector – For electrode recognition and temperature input.
2. Independent temperature electrode port – For separate temperature probe connection.
3. RS232 printer interface – For connecting to a printer for data output.
4. Type-C interface – Used by the manufacturer for firmware upgrades and maintenance.
5. DC power socket – 12V dedicated power input

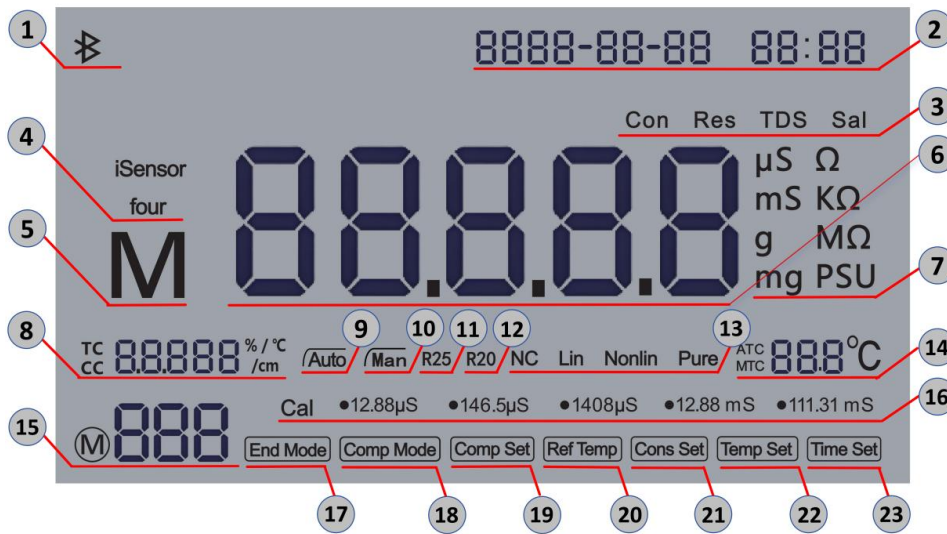
1.3.1 Key Control

This product adopts a button-based operation mode. There are 10 control buttons on the instrument panel.



Button	Name	Function
	Power Key	Short press to power on or off the instrument
	Calibration Key	Press to enter calibration mode and confirm calibration.
	Measurement Key	Short press to start or stop measurement
	Confirm Key	Performs different functions depending on the operation (see “Operating Procedures”)
	Return Key	Short press to return to the measurement interface; long press to restore factory settings
	Settings/Delete Key	Short press to enter the settings menu or delete selected stored data
	Print/Left Key	Short press to print the current or stored data; also serves as the left direction key
	Store/Up Key	Short press to manually store measurement data; also serves as the up direction key
	Recall/Down Key	Short press to view stored data; also serves as the down direction key
	Mode/Right Key	Switch between measurement modes; also serves as the right direction key

1.3.2 Display Description



1. Bluetooth connection indicator
2. Date and time display
3. Measurement mode indicator
4. Electrode type indicator
5. Data storage icon
6. Measurement value display
7. Measurement unit display
8. Electrode constant and compensation coefficient indicators:
 - Electrode constant: CC x.xxx/cm
 - Temperature coefficient: TC x.xxxx%/°C
9. Automatic endpoint mode
10. Manual endpoint mode
11. Reference temperature: 25°C
12. Reference temperature: 20°C
13. Compensation mode indicator (None / Linear / Nonlinear / Pure water)
14. Temperature setting indicator (Automatic / Manual) and current temperature display
15. Storage icon and record number
16. Calibration mode – Allows selection of standard calibration solution type.
17. Endpoint mode – Allows selection between automatic and manual endpoint.
18. Compensation mode – Allows selection among None, Linear, Nonlinear, and Pure Water compensation.
19. Compensation coefficient setting – Allows manual input of desired coefficient.
20. Reference temperature – Choose between 25°C and 20°C as reference temperature.
21. Electrode constant setting – Input corresponding electrode constant according to the electrode in use.
22. Temperature setting – Select between automatic temperature compensation or manual temperature input.
23. Time setting – Modify date and time.

2. Installation and Safety Precautions

2.1 Installation

2.1.1 Unboxing

Carefully unbox the instrument, and store the external packaging, certificate of compliance, and user manual in a safe place. Connect the 12V DC power supply to the instrument's compatible socket.

2.1.2 Holder Installation

The electrode holder can be installed on the right side of the instrument based on usage. The height of the electrode holder can be adjusted according to personal preference. Use tools to secure the holder.

2.2 Safety Precautions

2.2.1 Operator Protection Measures

Never operate the instrument in explosive environments, as the instrument's casing is not airtight and could pose an explosion risk due to sparks or corrosive gases.

2.2.2 Handling Chemicals or Solvents

Follow the supplier's operating instructions and laboratory safety procedures when using chemicals or solvents.

2.2.3 Operator Safety Precautions

Do not separate the instrument's casing. Only authorized service personnel are allowed to service the instrument. Any liquid splashed onto the instrument should be immediately wiped off, as some solvents may cause casing corrosion.

2.2.4 Avoid Environmental Factors

Avoid the following environmental factors:

- Severe vibration
- Prolonged exposure to direct sunlight
- Atmospheric humidity above 80%
- Presence of corrosive gases
- Ambient temperature below 0°C or above 45°C
- Strong electric fields or magnetic fields

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3. Disclaimer and Warranty

3.1 Disclaimer

1. The specifications and information mentioned in this manual are for reference only and are subject to change without notice.
2. Please read the safety instructions carefully before using the instrument. The company is not responsible for accidents caused by improper operation.
3. This product is intended for use in professional fields. Operators must have relevant knowledge and skills. Accidents caused by misuse are not covered.

3.2 Warranty

1. All products undergo strict inspection before shipment and are covered by a one-year free warranty for quality issues.
2. During the warranty period, if problems arise due to improper operation, unsuitable environment, human error, accidents, or improper storage/transportation, the company may charge repair costs.
3. For out-of-warranty instruments, paid repair and service are available.
4. Warranty does not apply under the following conditions:
 - a. Unauthorized disassembly, modification, or repair.
 - b. Repairs by non-authorized personnel.
 - c. Tampering or breaking of anti-disassembly seals.
 - d. Use of non-original consumables causing malfunctions.
 - e. Products purchased through unauthorized channels.
 - f. Improper use or operation in unsuitable environments.

4. Instrument Operation

4.1 Connecting the Electrode

4.1.1 Before Connection

Before connect the conductivity electrode to the instrument, it needs to remove the protective cap from the instrument's aviation connector.

If using a separate temperature electrode, connect the RCA plug of the electrode to the ATC RCA socket.

4.1.2 Electrode Connection

When connecting an intelligent conductivity electrode to the instrument, the cable must be connected to the 6-pin (7-pin for four-electrode conductivity probes) aviation connector.

Align the red mark on the plug with the connector on the instrument before inserting it.

Once a "click" sound is heard, the connector is automatically locked.

During power-on, calibration, or measurement, the calibration data stored in the electrode's internal chip will automatically transfer to the instrument for use in subsequent measurements.

Note: Always turn off the instrument before disconnecting the electrode. This ensures that the electrode will not be detached while the instrument is reading or writing data to the electrode's identification chip.

4.1.2 Intelligent Electrode Instructions

The instrument adopts intelligent electrode management technology, which provides safer, more reliable data transmission and reduces operational errors.

Once the intelligent electrode is connected, the instrument will automatically identify it and retrieve calibration data, electrode constants, and other parameters. This allows users to easily check the electrode's condition and determine whether recalibration, cleaning, or replacement is needed.

After calibration, the data will automatically be transferred from the instrument to the electrode's internal chip. The electrode stores the latest two calibration datasets, ensuring that the most recent calibration data is always saved and automatically used for future measurements.

4.2 Powering on the Instrument

Press the "Power" key. When a short "beep" is heard, the device will power on and automatically detect the connected electrode.

The screen will display the date, time, Bluetooth status, intelligent electrode type (four-electrode), measurement mode, measurement value, unit, endpoint mode, reference temperature, compensation mode, temperature compensation coefficient, temperature mode and value, electrode constant, number of stored records, and calibration points.

The backlight turns on automatically at startup and will switch off after 10 minutes of inactivity to enable the screen saver mode. Press any key to reactivate the screen backlight.

4.3 Instrument Settings

Press the "SET/DEL" key to enter the settings mode.

Use the Left or Right direction keys to select from the following options: Endpoint Mode, Compensation Mode, Compensation Coefficient, Reference Temperature, Cell Constant, Temperature Setting, and Time Setting.

4.3.1 Endpoint Mode

Press the "SET/DEL" key — "Endpoint Mode" will flash.

Press "OK" to enter the mode. The instrument provides two types of endpoint modes that can be selected using the direction key:

- **Automatic Endpoint:**

When this function is selected, the instrument determines the completion of a

measurement based on the connected electrode and the selected stability standard.

This ensures convenient, fast, and accurate measurement results.

- **Manual Endpoint:**

When using manual mode, the user must manually confirm the end of each measurement.

After selecting the desired mode, the instrument automatically returns to the settings menu

4.3.2 Compensation Mode

Use the direction keys to select “Compensation Mode”, then press “OK” to enter.

Move the direction key to select one of the following modes and press “OK”:

- No Compensation: Displays the conductivity value under the current temperature condition.
- Linear Compensation: Suitable for solutions with medium to high conductivity.
- Nonlinear Compensation: Suitable for natural water samples (valid only between 0–36 °C).

The measured conductivity is temperature-compensated to the reference temperature (20 °C or 25 °C).

- Pure Water Compensation: Uses an optimized temperature compensation method designed for high-purity water.

4.3.3 Compensation Coefficient

The compensation coefficient corresponds to the TDS factor used in total dissolved solids (TDS) measurements.

Use the direction keys to select “Compensation Coefficient Setting”, press “OK” to enter the mode, and then use the “Up/Down” keys to adjust the coefficient value as needed:

TC x.xxxx %/°C

TDS (Total Dissolved Solids) is obtained by multiplying the conductivity reading by the TDS factor (range: 0.10 – 2.00).

For details on the conductivity-to-TDS conversion coefficient, refer to the appendix.

4.3.4 Reference Temperature

Use the Left/Right direction keys to select “Reference Temperature”, then press “OK” to enter selection mode.

Use the Left/Right direction keys to choose between R25 or R20, and press “OK” to save.

- R25: Displays conductivity compensated to the reference temperature of 25 °C.
- R20: Displays conductivity compensated to the reference temperature of 20 °C.

4.3.5 Electrode Constant Setting

To precisely set the electrode constant of the conductivity electrode currently in use, the constant can be manually entered into the instrument.

During calibration, the screen will display the entered electrode constant value.

Use the Left/Right direction keys to select “Electrode Constant Setting”, press “OK” to enter, and then use the Up/Down keys to adjust the value as needed.


4.3.6 Temperature Setting

When the temperature probe is not detected, the screen will display  .

In this case, the sample temperature must be entered manually (range: -55 °C to 130 °C).

Use the Left/Right keys to select “Temperature Setting”, press “OK” to enter the temperature setting interface. The detected temperature value will flash.

Use the Left/Right keys to move the cursor to the desired digit (flashing), then use the Up/Down keys to adjust the value. Press “OK” to save the setting and automatically exit.

If using a conductivity electrode with an automatic temperature compensation (ATC) probe or a separate temperature electrode, the display will show  , and manual temperature setting is not required.

4.3.7 Time Setting

Use the Left/Right direction keys to select “Time Setting”, and press “OK” to enter the interface.

Use the Left/Right keys to move the cursor to the desired position (flashing), and the

Up/Down keys to adjust the date (Year–Month–Day) and time (24-hour format).

4.4 Calibration

4.4.1 Conductivity Calibration

The instrument supports one-point or multi-point calibration. Calibration can only be performed in Calibration Mode. Five standard calibration solutions are available for selection: 12.88 $\mu\text{S/cm}$, 146.5 $\mu\text{S/cm}$, 1408 $\mu\text{S/cm}$, 12.88 mS/cm , and 111.31 mS/cm .

For each standard solution, the instrument automatically detects whether a temperature electrode is connected and selects the appropriate temperature compensation mode accordingly

4.4.2 Conductivity Electrode Calibration

1) Place the conductivity electrode into the selected standard solution. Press the “CAL” key to enter calibration mode. The instrument display will show all available calibration values.

2) The calibration process depends on the previously selected endpoint mode:

- **Automatic Endpoint Mode:**

The instrument automatically identifies the type of standard calibration solution and displays it flashing on the screen. When the reading stabilizes, a “beep” sound is emitted, indicating successful automatic calibration. The calibration result will appear on the display. Press the “OK” key to save the calibration data — the instrument will automatically exit calibration mode.

- **Manual Endpoint Mode:**

The instrument automatically identifies and flashes the standard calibration solution type. After verifying the correct standard solution and waiting for the reading to stabilize, press the “OK” key manually. The calibration result will be displayed. Then press and hold the “OK” key until a “beep” sound is heard — this saves the calibration data and automatically exits calibration mode.

3) To cancel calibration, press the “RET” key to abort. The instrument will automatically

return to the measurement interface

Note: The second calibration point in the conductivity calibration curve corresponds to the “zero point.” When the electrode is left exposed to air, its resistance tends toward infinity — equivalent to 0 S/m. Press and hold the “OK” key until a “beep” sound is heard to complete the zero-point calibration. To ensure the most accurate conductivity readings, it is recommended to periodically verify the electrode constant using standard solutions and recalibrate if necessary.

4.5 Sample Measurement

Insert the electrode into the sample and press the “MEAS” key to start measurement.

The display will show the measured value of the sample. The instrument automatically switches the display unit between $\mu\text{S}/\text{cm}$ and mS/cm according to the measured value — the standard units for most conductivity measurements. The endpoint mode icon (“Auto” or “Manual”) will flash, indicating that the measurement is in progress.

Once the reading becomes stable based on the selected stability criteria, the “Auto” or “Manual” icon will stop flashing.

- If “Automatic Endpoint Mode” is selected, the instrument will automatically stop measurement and lock the reading once stability is reached.
- If “Manual Endpoint Mode” is selected, press the “OK” key to manually stop the measurement and lock the reading.

Note: After a reading has been locked, if the conductivity of the test solution fluctuates by more than 4% of the locked value, the instrument will automatically release the lock. Press the “MOD” key briefly to switch among measurement modes: Conductivity, Resistivity, TDS, and Salinity. Refer to the appendix for detailed measurement methods for each mode.

4.6 Data Storage

The instrument can store up to 999 sets of measurement data. Stored data entries are displayed on the screen as M* (e.g., M1, M2, ..., M999).

When the measurement reaches the endpoint, the store indicator will appear on the screen. Press the “STO” key to save the stabilized reading. After saving, the screen displays M1 to indicate one stored record, and up to M999 for 999 stored results. When the storage reaches M999, the next saved record will automatically overwrite the last stored data.

4.7 Data Recall

Press the “REC” key to access stored data from memory. Use the Up or Down direction keys to browse stored readings. Entries from M1–M999 represent each stored result, with M0 as the starting point. Press the “RET” key to exit the recall mode and return to the measurement interface.

4.8 Data Printing

All stored data can be transferred from the instrument’s memory to a printer for printing. The printing step as below:

- 1) Connect the RS232 cable to the corresponding ports on the instrument and the printer.
- 2) Locate the data to be printed from memory, then press the “PRT” key to output the data.

© The printed report includes:

- Measurement date and time
- Measurement value and unit
- Measurement temperature
- Cell constant
- Compensation mode
- Reference temperature

3) For some printers, the following communication parameters must be set:

- Baud rate: 9600
- Data bits: 8
- Stop bits: 1
- Parity: None
- Handshake: None

4.9 Data Deletion

Stored data in the instrument memory can be cleared.

Press the “REC” key to access stored data. Then press and hold the “SET/DEL” key until a “beep” is heard — all data in memory will be deleted c

4.10 Restore Factory Settings


The instrument can restore factory settings with one key, clearing all calibration and measurement data.


While in the measurement interface, press and hold the “RET” key until a “beep” is heard.

The instrument will then automatically erase all stored data and return to factory settings

4.11 Temperature Compensation

It is recommended to use the built-in or an external temperature electrode.

When a temperature electrode is connected, the display shows “Auto” along with the sample temperature (see illustration ).

If no temperature electrode or probe is used,  is displayed, and the sample temperature must be entered manually. (Refer to “Temperature Settings” under “Instrument Settings” for details.) The instrument only supports NTC 10 kΩ temperature electrodes.

4.12 Power-off and Storage

4.12.1 Power-off

After use, press the “Power” key to turn off the instrument. Wipe the instrument body and probe surface with a paper towel (do not touch the membrane).

Remove the electrode properly:

- For BNC connectors, unscrew the connector.
- For aviation connectors, release the safety lock before unplugging the electrode.

Attach the protective caps to the BNC and aviation connector sockets after disconnection

4.12.2 Instrument Storage

Store the instrument in a clean, dry, and shaded environment. Avoid direct sunlight and temperatures below 0°C.

When not in use, it is recommended to turn off the power switch. Power on the instrument once per week to check for stability, and prepare calibration solution once per month to test the electrode performance and maintain its accuracy.

4.12.3 Instrument Transportation

When transporting the instrument to a new location, please follow these precautions:

- Handle the instrument carefully to avoid damage. Improper transport may cause malfunction.
- Disconnect the power plug and all connected cables.
- Remove the electrode holder.
- Use the original packaging for long-distance transportation to ensure protection.
- If the original packaging is unavailable, use alternative protective packaging that ensures safe transport.

4.12.4 Waste Disposal

This device must not be disposed of as household waste. Please follow relevant regulations for proper disposal. Dispose of this product at designated collection points for electrical and electronic equipment in accordance with local laws.

If you have questions, contact the relevant authorities or your equipment distributor.

When transferring this device to another user (for private or professional use), this requirement must also be communicated.

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5. Maintenance and Care

Do not disassemble the instrument housing.

The instrument requires no special maintenance, only occasional cleaning and battery replacement when depleted.

The housing is made of ABS/PC (Acrylonitrile Butadiene Styrene / Polycarbonate). This material can be damaged by organic solvents such as toluene, xylene, and methyl ethyl ketone (MEK). If any liquid is accidentally spilled on the housing, wipe it off immediately.

- Use water and mild detergent to clean the surface.
- Do not immerse the instrument in any liquid — the instrument is rated IP54 for protection against dust and splashing water.

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6. Packing List

Item	Number
Benchtop Conductivity Meter	1
Electrode Holder	1
Conductivity Electrode	1
Power Cable	1
User Manual	1
Certificate of Conformity	1
Warranty Card	1

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7. Appendix

7.1 Conductivity Standard Solutions (Reference Temperature: 25°C)

T [°C]	146.5 μS/cm	1408 μS/cm	12.85 mS/cm	111.3 mS/cm
15	118.5	1141.4	10.455	92.12
18	126.7	1220	11.163	97.8
20	132.2	1273.7	11.644	101.7
25	146.5	1408.3	12.852	111.31
35	176.5	1687.6	15.353	131.1

7.2 Practical Salinity Standards (UNESCO 1978)

The salinity measured by the conductivity meter is calculated according to the UNESCO 1978 official standard. Therefore, the salinity of the sample at standard atmospheric pressure is determined using the following formula:

$$S = \sum_{j=0}^5 a_j R_T^{j/2} - \frac{(T-15)}{1+k(T-15)} \sum_{j=0}^5 b_j R_T^{j/2}$$

$a_0 = 0.0080$	$b_0 = 0.0005$	$k = 0.00162$
$a_1 = -0.1692$	$b_1 = -0.0056$	
$a_2 = 25.3851$	$b_2 = -0.0066$	
$a_3 = 14.0941$	$b_3 = -0.0375$	
$a_4 = -7.0261$	$b_4 = 0.0636$	
$a_5 = 2.7081$	$b_5 = -0.0144$	

$$R_T = \frac{R_{\text{Sample}}(T)}{R_{\text{KCl}}(T)}$$

(32.4356 g of KCl per 1000 g of solution)

7.3 Temperature Correction Coefficient f₂₅ for Nonlinear Compensation

°C	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	1.918	1.912	1.906	1.899	1.893	1.887	1.881	1.875	1.869	1.863
1	1.857	1.851	1.845	1.84	1.834	1.829	1.822	1.817	1.811	1.805
2	1.8	1.794	1.788	1.783	1.777	1.772	1.766	1.761	1.756	1.75
3	1.745	1.74	1.734	1.729	1.724	1.719	1.713	1.708	1.703	1.698
4	1.693	1.688	1.683	1.678	1.673	1.668	1.663	1.658	1.653	1.648
5	1.643	1.638	1.634	1.629	1.624	1.619	1.615	1.61	1.605	1.601
6	1.596	1.591	1.587	1.582	1.578	1.573	1.569	1.564	1.56	1.555
7	1.551	1.547	1.542	1.538	1.534	1.529	1.525	1.521	1.516	1.512
8	1.508	1.504	1.5	1.496	1.491	1.487	1.483	1.479	1.475	1.471
9	1.467	1.463	1.459	1.455	1.451	1.447	1.443	1.439	1.436	1.432
10	1.428	1.424	1.42	1.416	1.413	1.409	1.405	1.401	1.398	1.384
11	1.39	1.387	1.383	1.379	1.376	1.372	1.369	1.365	1.362	1.358
12	1.354	1.351	1.347	1.344	1.341	1.337	1.334	1.33	1.327	1.323
13	1.32	1.317	1.313	1.31	1.307	1.303	1.3	1.297	1.294	1.29
14	1.287	1.284	1.281	1.278	1.274	1.271	1.268	1.265	1.262	1.259
15	1.256	1.253	1.249	1.246	1.243	1.24	1.237	1.234	1.231	1.228
16	1.225	1.222	1.219	1.216	1.214	1.211	1.208	1.205	1.202	1.199
17	1.196	1.193	1.191	1.188	1.185	1.182	1.179	1.177	1.174	1.171
18	1.168	1.166	1.163	1.16	1.157	1.155	1.152	1.149	1.147	1.144
19	1.141	1.139	1.136	1.134	1.131	1.128	1.126	1.123	1.121	1.118
20	1.116	1.113	1.111	1.108	1.105	1.103	1.101	1.098	1.096	1.093
21	1.091	1.088	1.086	1.083	1.081	1.079	1.076	1.074	1.071	1.069
22	1.067	1.064	1.062	1.06	1.057	1.055	1.053	1.051	1.048	1.046
23	1.044	1.041	1.039	1.037	1.035	1.032	1.03	1.028	1.026	1.024
24	1.021	1.019	1.017	1.015	1.013	1.011	1.008	1.006	1.004	1.002
25	1	0.998	0.996	0.994	0.992	0.99	0.987	0.985	0.983	0.981
26	0.979	0.977	0.975	0.973	0.971	0.969	0.967	0.965	0.963	0.961
27	0.959	0.957	0.955	0.953	0.952	0.95	0.948	0.946	0.944	0.942
28	0.94	0.938	0.936	0.934	0.933	0.931	0.929	0.927	0.925	0.923
29	0.921	0.92	0.918	0.916	0.914	0.912	0.911	0.909	0.907	0.905
30	0.903	0.902	0.9	0.898	0.896	0.895	0.893	0.891	0.889	0.888
31	0.886	0.884	0.883	0.881	0.879	0.877	0.876	0.874	0.872	0.871
32	0.869	0.867	0.866	0.864	0.863	0.861	0.859	0.858	0.856	0.854
33	0.853	0.851	0.85	0.848	0.846	0.845	0.843	0.842	0.84	0.839
34	0.837	0.835	0.834	0.832	0.831	0.829	0.828	0.826	0.825	0.823
35	0.822	0.82	0.819	0.817	0.816	0.814	0.813	0.811	0.81	0.808

7.4 Temperature Coefficient

Chemical (25°C)	Concentration (%)	Temperature α Coefficient (%/°C)
HCL	10	1.56
KCL	10	1.88
CH ₃ COOH	10	1.69
NaCl	10	2.14
H ₂ SO ₄	10	1.28
HF	1.5	7.2

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