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DANOPLUS KIB0341_US

DANOPLUS Smart Water Quality Tester Instruction Manual

Model: KIB0341_US

INTRODUCTION

The DANOPLUS Smart Water Quality Tester is a multifunctional device designed for continuous monitoring of various water parameters. It provides accurate readings for pH, Total Dissolved Solids (TDS), Electrical Conductivity (EC), Salinity, Specific Gravity (SG), and Temperature. With its wireless app monitoring capabilities, users can view real-time data and historical trends, making it an ideal tool for aquariums, hydroponics systems, pools, spas, and other applications requiring precise water quality management.

WHAT'S IN THE BOX

Upon unpacking, please verify that all components listed below are present and in good condition:

- Multi-parameter Tester Main Unit
- pH Electrode
- EC/TDS/Salt/S.G Probe
- Temperature Probe
- Suction Cups (for mounting)
- Wall Mount Bracket
- USB Power Supply
- pH Buffer Powders (4.00, 6.86, 9.18 for calibration)



Image: All components included in the DANOPLUS Smart Water Quality Tester package, neatly arranged.

PRODUCT OVERVIEW

Familiarize yourself with the main unit and its various connection points and buttons.



Image: Detailed diagram of the DANOPPLUS Smart Water Quality Tester showing the DC In port, Mode/Decrease button, EC/TDS/Salt/S.G display, Temp/EC Calibration/Increase button, pH/Temp display, pH Calibration button, Wifi button, pH electrode port, and Temperature probe port.

1. **DC In:** Power input port for the device.
2. **Mode / Decrease button:** Used to switch between different measurement modes (TDS, EC, Salinity, SG) and decrease values during calibration.
3. **TDS/EC/SALT/S.G Display:** Shows readings for Total Dissolved Solids, Electrical Conductivity, Salinity, or Specific Gravity.
4. **Temp CAL / + button:** Used for temperature and EC calibration, and to increase values during calibration.
5. **pH/TEMP Display:** Shows pH and temperature readings.
6. **CAL button:** Initiates and confirms pH calibration.
7. **Wifi button:** Used to initiate Wi-Fi pairing mode.
8. **pH Electrode Port:** Connects the pH probe.
9. **Temperature Probe Port:** Connects the temperature probe.
10. **EC/TDS/Salt/S.G Probe Port:** Connects the multi-parameter probe.

SPECIFICATIONS

Parameter	Range	Accuracy
pH	0 ~ 14 pH	±0.03 pH
EC	0 ~ 19900 us/cm; 0 ~ 199.0 ms/cm	±2% F.S
TDS	0 ~ 19990 ppm; 0 ~ 199.0 ppt	±2% F.S
Salinity	0 ~ 20%	±2% F.S
Specific Gravity (SG)	0.990 ~ 1.400	N/A
Temperature	0°C ~ 50°C (32°F ~ 122°F)	±1°C

- **Item Model Number:** KIB0341_US
- **Package Dimensions:** 7.6 x 6.18 x 2.68 inches
- **Item Weight:** 1.39 Pounds
- **Manufacturer:** DANOPLUS



Image: The main unit of the tester with its dimensions (13cm length, 7.7cm height, 3.1cm thickness) and weight (200g) indicated.

SETUP

1. Physical Installation

The DANOPLUS Smart Water Quality Tester can be mounted on a wall or the side of an aquarium/tank using the provided bracket and suction cups.

1. Choose a suitable location near your water source, ensuring it is dry and stable.
2. Attach the wall mount bracket to the desired surface using screws (not included) or use the suction cups for temporary placement on smooth surfaces like glass.
3. Slide the main unit onto the bracket until it clicks securely into place.



Image: The water quality tester mounted on the side of an aquarium, demonstrating its wall-mounted design. An inset shows the included mounting bracket and suction cups.

2. Probe Connection

Connect the three probes to their respective ports on the main unit:

- Connect the pH electrode to the BNC connector labeled "pH electrode".
- Connect the EC/TDS/Salt/S.G probe to its designated port.
- Connect the temperature probe to the port labeled "Temperature".

Ensure all connections are secure. Carefully place the probes into the water you wish to monitor, ensuring the sensing elements are fully submerged.

3. Power Connection

Connect the USB power supply to the "DC In" port on the main unit and plug it into a standard power outlet. The device will power on automatically.

4. Mobile App Connection (Tuya Smart App)

For remote monitoring and advanced features, connect the device to the Tuya Smart app.

1. Download the "Tuya Smart" app from your smartphone's app store (available for iOS and Android).
2. Register or log in to your Tuya Smart account.
3. On the tester, press and hold the **Wifi button** until the Wi-Fi indicator light flashes rapidly, indicating pairing mode.
4. In the Tuya Smart app, tap "+" to add a device. Select "Sensor Other" or search for "Water Quality Tester".
5. Follow the on-screen prompts to connect the device to your 2.4GHz Wi-Fi network. *Note: The device only supports 2.4GHz Wi-Fi.*
6. Once connected, the Wi-Fi indicator light will become solid, and you can view real-time data and settings within the app.



Image: A smartphone screen showing the Tuya Smart app's interface for monitoring water quality, demonstrating the 24-hour online monitoring capability. The DANOPPLUS tester is visible in the background, connected to water samples.

OPERATING INSTRUCTIONS

1. Reading Measurements

Once powered on and probes are submerged, the device will display real-time readings on its LCD screens. The left screen shows TDS/EC/Salinity/SG, and the right screen shows pH and Temperature.

- Press the **Mode / Decrease button** to cycle through TDS, EC, Salinity, and SG readings on the left display.
- Temperature is displayed simultaneously with pH on the right screen.

2. Calibration

Regular calibration ensures the accuracy of your readings. It is recommended to calibrate the pH and EC/TDS/Salinity/SG probes periodically, especially after prolonged use or if readings appear inconsistent.

pH Calibration (3-point calibration)

You will need pH buffer solutions (4.00, 6.86, and 9.18) for calibration.

1. Prepare the buffer solutions according to their instructions (usually by dissolving powder in distilled water).
2. Rinse the pH electrode with distilled water and gently blot dry.
3. Submerge the pH electrode into the 6.86 pH buffer solution.
4. Press and hold the **CAL button** until the display shows "CAL" and the reading stabilizes to 6.86. Release the button.
5. Rinse the electrode again. Submerge it into the 4.00 pH buffer solution.
6. Press the **CAL button** briefly. The display will adjust to 4.00. Wait for the reading to stabilize.
7. Rinse the electrode. Submerge it into the 9.18 pH buffer solution.
8. Press the **CAL button** briefly. The display will adjust to 9.18. Wait for the reading to stabilize.
9. Once all three points are calibrated, the device will automatically save the calibration data.



Image: The water quality tester displayed alongside three packets of pH buffer powder (9.18, 4.00, 6.86), essential for accurate pH calibration.

EC/TDS/Salinity/SG Calibration

Specific calibration solutions are required for these parameters (e.g., 12880 us/cm EC solution). Refer to the solution's instructions for precise values.

1. Rinse the EC/TDS/Salt/S.G probe with distilled water.
2. Submerge the probe into the standard calibration solution.
3. Press and hold the **Temp CAL / + button** until the display shows "CAL" and the reading stabilizes to the value of your standard solution. Release the button.
4. The device will automatically save the calibration.

3. Using the Mobile Application

The Tuya Smart app provides enhanced monitoring and control features:

- **Real-time Data:** View current readings for all parameters directly on your smartphone.

- **Historical Data:** Access data curves for each parameter for up to 30 days, allowing for trend analysis.
- **Alarm Function:** Set custom high and low limits for each parameter. Receive notifications on your phone if readings fall outside the set security range.
- **Data Export:** Some app versions may allow exporting historical data for further analysis.

MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your DANOPLUS Smart Water Quality Tester.

- **Probe Cleaning:** Regularly clean the probes with distilled water to remove any residue or buildup. For stubborn deposits, use a soft brush or a mild cleaning solution specifically designed for probes, then rinse thoroughly.
- **Probe Storage:** When not in use for extended periods, store the pH electrode in a suitable storage solution (e.g., KCL solution or pH 4 buffer solution) to prevent it from drying out. Do not store in distilled water.
- **Recalibration:** Calibrate the device regularly, typically once a week or every two weeks, depending on usage and the criticality of measurements. If readings become erratic or deviate significantly from known values, recalibrate immediately.
- **General Cleaning:** Wipe the main unit with a soft, damp cloth. Do not use abrasive cleaners or immerse the main unit in water.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Inaccurate or erratic readings	<ul style="list-style-type: none"> ◦ Probes are dirty or fouled. ◦ Probes are dry or damaged. ◦ Calibration is outdated or incorrect. ◦ Interference from other electronics. 	<ul style="list-style-type: none"> ◦ Clean probes thoroughly with distilled water or appropriate cleaning solution. ◦ Ensure pH probe is stored in solution when not in use. Replace damaged probes. ◦ Perform a full calibration using fresh buffer solutions. ◦ Move the device away from strong electromagnetic fields.
Device does not power on	<ul style="list-style-type: none"> ◦ Power adapter not connected or faulty. ◦ Power outlet is not working. 	<ul style="list-style-type: none"> ◦ Ensure power adapter is securely connected to the device and outlet. ◦ Test the power outlet with another device.
Cannot connect to Wi-Fi / App	<ul style="list-style-type: none"> ◦ Incorrect Wi-Fi band (only 2.4GHz supported). ◦ Weak Wi-Fi signal. ◦ Incorrect pairing procedure. 	<ul style="list-style-type: none"> ◦ Ensure your router is broadcasting a 2.4GHz network and your phone is connected to it during pairing. ◦ Move the device closer to the Wi-Fi router. ◦ Follow the app connection steps carefully, ensuring the device is in pairing mode. Try manually adding the device as "Sensor Other" if auto-detection fails.
pH reading stuck at 15.00 or other extreme value	<ul style="list-style-type: none"> ◦ pH electrode failure or severe damage. ◦ Calibration error. 	<ul style="list-style-type: none"> ◦ Attempt recalibration with fresh buffer solutions. ◦ If recalibration fails, the pH electrode may need replacement.

WARRANTY AND SUPPORT

DANOPLUS products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please contact DANOPLUS customer support through the retailer where the product was purchased or visit the official DANOPLUS website. Please have your model number (KIB0341_US) and purchase date ready when contacting support. For the latest information and updates, please refer to the DANOPLUS Store on Amazon.

