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TWTADE WXLJQ-2M-5PCS

TWTADE K Type Mini-Connector Thermocouple Temperature Probe Sensor User Manual

Model: WXLJQ-2M-5PCS

Introduction Safety Information Product Overview Setup Operation Maintenance Troubleshooting Specifications Support

1. Introduction

This manual provides instructions for the safe and effective use of the TWTADE K Type Mini-Connector Thermocouple Temperature Probe Sensor. This product is designed for general-purpose temperature measurement applications, offering a fast response time and compatibility with Type-K temperature measuring instruments.

2. Safety Information

Please read and understand all safety precautions before using the thermocouple. Failure to follow these instructions may result in injury or damage to the product.

- **Temperature Range:** Do not expose the probe to temperatures outside its specified measurement range of -50°C to 350°C (-58°F to 662°F). Exceeding this range can damage the sensor and lead to inaccurate readings.
- **Electrical Safety:** Ensure the thermocouple is properly connected to a compatible measuring instrument. Avoid contact with live electrical circuits.
- **Physical Damage:** Handle the probe and cable with care. Avoid sharp bends, kinks, or excessive pulling on the cable, as this can damage the internal wiring and affect performance.
- **Contamination:** Keep the probe tip clean and free from contaminants that could affect temperature readings.
- **Intended Use:** This product is intended for general temperature measurement. Do not use it for critical applications where precise, certified measurements are required without proper calibration and verification.

3. Product Overview

The TWTADE K Type Mini-Connector Thermocouple is designed for reliable temperature sensing. Each package contains 5 thermocouple units, each with a 3-meter cable and a standard K-type mini-connector.



Figure 1: Five TWTADE K Type Thermocouple Probes with Mini-Connectors. Each probe features a 3-meter cable and a yellow mini-connector.

Components:

- **Thermocouple Probe:** The sensing element at the end of the cable.
- **Cable:** 3-meter insulated cable connecting the probe to the connector.
- **Mini-Connector:** A standard K-type mini-connector for interfacing with compatible temperature measuring instruments.

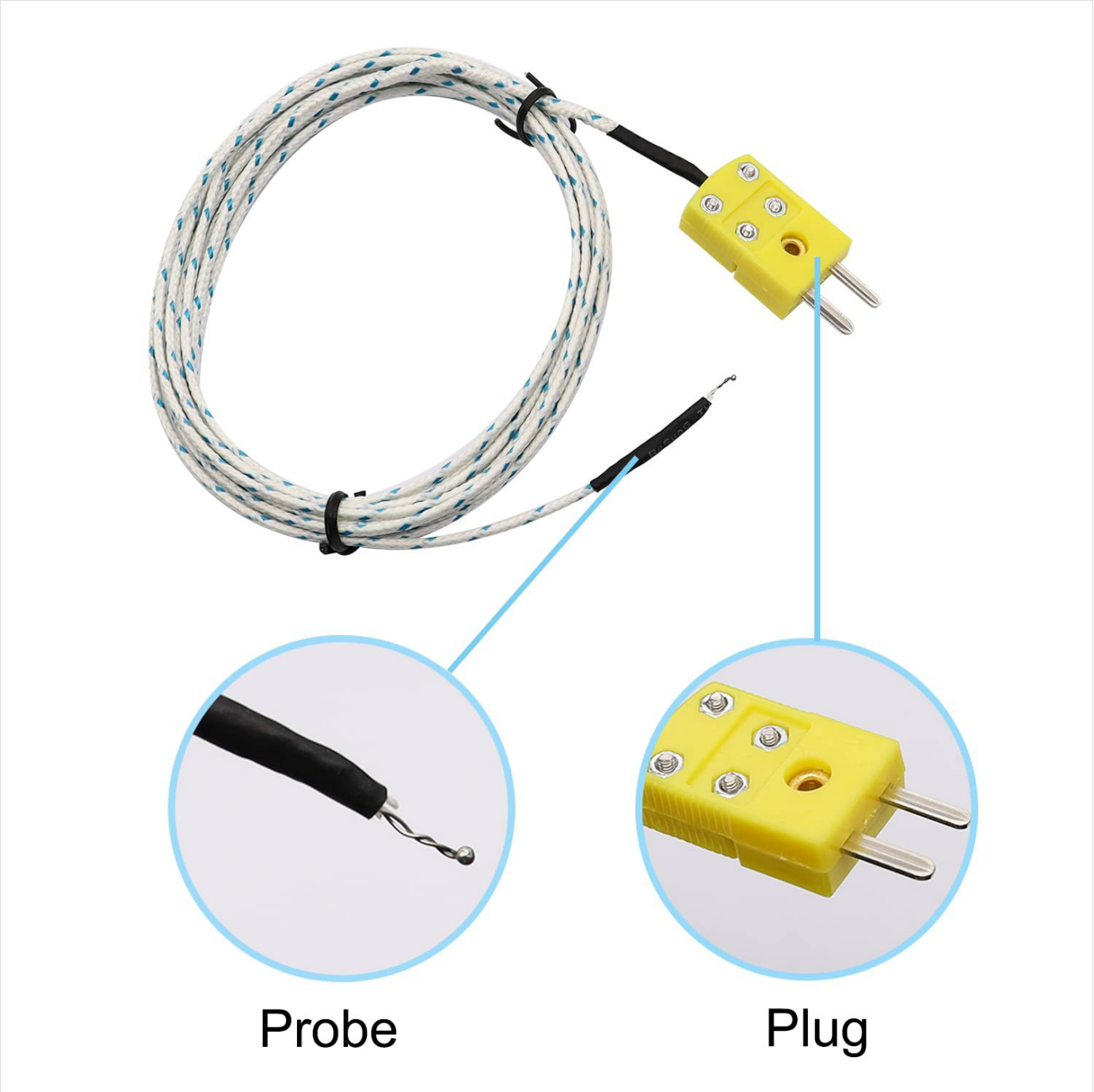


Figure 2: Close-up view illustrating the thermocouple probe tip and the K-type mini-connector. The probe tip is exposed for fast response, and the connector has two flat pins.

4. Setup Instructions

Follow these steps to set up your TWTADE K Type Thermocouple:

1. **Inspect the Thermocouple:** Before use, visually inspect the probe, cable, and connector for any signs of damage, such as frayed insulation or bent pins.
2. **Prepare the Measuring Instrument:** Ensure your temperature measuring instrument is compatible with K-type thermocouples and is powered off before connection.
3. **Connect the Thermocouple:** Insert the K-type mini-connector into the corresponding input port on your measuring instrument. Ensure a firm and secure connection. The connector is polarized; do not force it if it does not fit easily.
4. **Stabilize the Instrument:** For optimal accuracy, allow your measuring instrument to stabilize at the ambient room temperature for at least 20 minutes before taking measurements, especially if it has been moved from a significantly different temperature environment. This allows the internal cold junction compensation system to stabilize.

5. Operating Instructions

Once the thermocouple is connected to a compatible instrument, you can begin taking temperature measurements.

- **Placement:** Position the thermocouple probe tip at the point where you wish to measure the temperature. Ensure good thermal contact with the object or medium.
- **Measurement Range:** The probe is designed to measure temperatures within the range of -50°C to 350°C (-58°F to 662°F).
- **Fast Response:** Due to its design, the probe offers a fast response time, allowing for quick temperature readings.
- **Reading Display:** Refer to your specific temperature measuring instrument's manual for instructions on how to read and interpret the displayed temperature values.

6. Maintenance

Proper maintenance ensures the longevity and accuracy of your thermocouple probes.

- **Cleaning:** Clean the probe tip with a soft, dry cloth. For stubborn residues, a mild solvent may be used, ensuring it does not damage the probe material. Allow to dry completely before use.
- **Storage:** Store the thermocouples in a clean, dry environment, away from extreme temperatures and direct sunlight. Coiling the cables loosely can prevent damage.
- **Cable Integrity:** Regularly check the cable insulation for any signs of wear, cuts, or fraying. Damaged insulation can affect accuracy and pose a safety risk.
- **Connector Care:** Ensure the mini-connector pins are clean and straight. Bent or corroded pins can lead to poor connections and inaccurate readings.

7. Troubleshooting

If you encounter issues with your thermocouple, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Inaccurate or erratic readings	• Poor connection at the instrument. • Probe tip not making good thermal contact. • Instrument not stabilized (cold junction compensation). • Probe damaged or contaminated. • Measurement range exceeded.	• Ensure connector is firmly seated. • Reposition probe for better contact. • Allow instrument to stabilize for 20+ minutes. • Inspect and clean probe; replace if damaged. • Verify temperature is within -50°C to 350°C.
No reading or "Open" error	• Disconnected or loose connector. • Broken internal wire in cable or probe. • Loose wires within the mini-connector (user repairable).	• Check and re-seat the connector. • Inspect cable for visible damage. • *Carefully* open the mini-connector and ensure wires are securely fastened to the screws.
Slow response time	• Poor thermal contact. • Probe tip coated with insulating material.	• Ensure direct contact with the measurement point. • Clean the probe tip thoroughly.

8. Specifications

Key technical specifications for the TWTADE K Type Thermocouple:

- **Product Name:** Thermocouple Connector
- **Thermocouple Type:** K Type
- **Cable Length:** 3 meters (approximately 9.8 feet)
- **Measurement Range:** -50°C to 350°C (-58°F to 662°F)
- **Connector Type:** Mini-Connector
- **Response Time:** Fast
- **Compatibility:** Compatible with Type-K temperature measuring instruments
- **Model Number:** WXLJQ-2M-5PCS
- **Package Contents:** 5 x Temperature Sensor units



Figure 3: Dimensional diagram showing the approximate measurements of the probe tip and the mini-connector.



Figure 4: Visual representation confirming the 3-meter cable length of the thermocouple.

9. Warranty and Support

For warranty information or technical support regarding your TWTADE K Type Mini-Connector Thermocouple Temperature Probe Sensor, please refer to the retailer where the product was purchased or visit the official TWTADE brand store on Amazon:

Visit the TWTADE Store on Amazon

Please have your model number (WXLJQ-2M-5PCS) and purchase details ready when contacting support.

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