

PerfectPrime TL0700

Perfect-Prime TL0700 K-Type Sensor Probe Instruction Manual

Model: TL0700 | Brand: PerfectPrime

1. INTRODUCTION

This instruction manual provides essential information for the proper use, setup, and maintenance of your Perfect-Prime TL0700 K-Type Sensor Probe. Please read this manual thoroughly before using the product to ensure accurate measurements and safe operation. Retain this manual for future reference.



Image 1.1: General overview of thermocouple probes and sensors.

2. PRODUCT OVERVIEW AND FEATURES

The Perfect-Prime TL0700 is a K-Type thermocouple sensor probe designed for precise temperature measurements across a wide range. It is compatible with various K-Type thermocouple thermometers and meters.

Key Features:

- **Operating Temperature Range:** -30 °C to 700 °C (-22 °F to 1292 °F)
- **Probe Length:** 100 cm (1 Meter)
- **Sensor and Wire Material:** USA Thermocouple Sensor and Wire with Glass Braid Insulation
- **Wire Diameter:** 0.5 mm x 2

- **Package Diameter:** Approximately 3 mm
- **Connector Type:** Flat Shape Male K-Type Connector



Image 2.1: The Perfect-Prime TL0700 K-Type Sensor Probe, showing the coiled wire and the yellow flat male connector.

3. SETUP

Follow these steps to properly set up your TL0700 K-Type Sensor Probe:

1. **Inspect the Probe:** Before each use, visually inspect the probe wire and connector for any signs of damage, fraying, or corrosion. Do not use if damage is observed.
2. **Identify Connector:** The TL0700 probe features a standard flat shape male K-Type connector, typically colored yellow.
3. **Connect to Thermometer:** Insert the male connector of the TL0700 probe into the corresponding female K-Type input port on your compatible thermometer or meter. Ensure a firm and secure connection. The polarity of K-Type connectors is standardized, but always ensure the pins align correctly.
4. **Power On:** Turn on your K-Type thermometer/meter according to its specific instructions.



Image 3.1: Detailed view of the K-Type flat male connector, highlighting its design for secure connection.



Image 3.2: Example of a K-Type thermometer with multiple probes connected, illustrating typical usage.

4. OPERATING INSTRUCTIONS

Once the TL0700 probe is securely connected to your K-Type thermometer, you can begin taking temperature measurements:

1. **Placement:** Carefully position the tip of the sensor probe at the point where you wish to measure the temperature. Ensure good thermal contact with the object or medium.
2. **Stabilization:** Allow a few moments for the temperature reading on your thermometer to stabilize. The response time for this probe is approximately 500 milliseconds, but stabilization time may vary depending on the thermal mass of the object being measured and the thermometer's processing speed.
3. **Read Measurement:** Read the temperature displayed on your thermometer.
4. **Temperature Range:** Ensure that the measured temperature falls within the probe's specified operating range of -30 °C to 700 °C (-22 °F to 1292 °F). Exceeding this range can damage the probe.

Note: The accuracy of the measurement depends on both the probe and the connected thermometer. Refer to your thermometer's manual for its specific accuracy specifications and calibration procedures.

5. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your TL0700 K-Type Sensor Probe:

- **Cleaning:** After each use, especially when measuring in corrosive or dirty environments, gently wipe the probe tip and wire with a clean, damp cloth. For stubborn residues, use a mild, non-abrasive cleaner. Ensure the probe is completely dry before storage.
- **Storage:** Store the probe in a clean, dry environment, away from extreme temperatures, direct sunlight, and corrosive chemicals. Avoid kinking or sharply bending the wire, as this can damage the internal conductors and insulation.
- **Inspection:** Regularly inspect the probe for any physical damage, such as cuts in the insulation, exposed wires, or bent connector pins. Replace the probe if any damage is detected to prevent inaccurate readings or electrical hazards.

6. TROUBLESHOOTING

If you encounter issues with your TL0700 K-Type Sensor Probe, consider the following:

- **No Reading or Erratic Readings:**
 - Ensure the probe is securely connected to the thermometer.
 - Check if the thermometer is set to the correct K-Type input mode.
 - Inspect the probe wire and connector for damage. A damaged probe may need replacement.
 - Verify that the thermometer itself is functioning correctly by testing with another known good K-Type probe if available.
- **Inaccurate Readings:**
 - Ensure good thermal contact between the probe tip and the object being measured.
 - Allow sufficient time for the reading to stabilize.
 - Confirm that the measured temperature is within the probe's specified operating range.
 - Consider if the probe needs calibration, or if the thermometer requires calibration.

7. SPECIFICATIONS

Specification	Value
Operating Temperature Range	-30 °C to 700 °C (-22 °F to 1292 °F)
Probe Length	100 cm (1 Meter)
Wire Diameter	0.5 mm x 2
Package Diameter	~ 3 mm
Connector Type	Flat Shape Male K-Type
Response Time	500 milliseconds
Manufacturer	Perfect Prime
Article Model Number	COMINHKPR131550
UPC	638414477455
Package Dimensions	12.9 x 12.7 x 0.99 cm; 31.75 grams

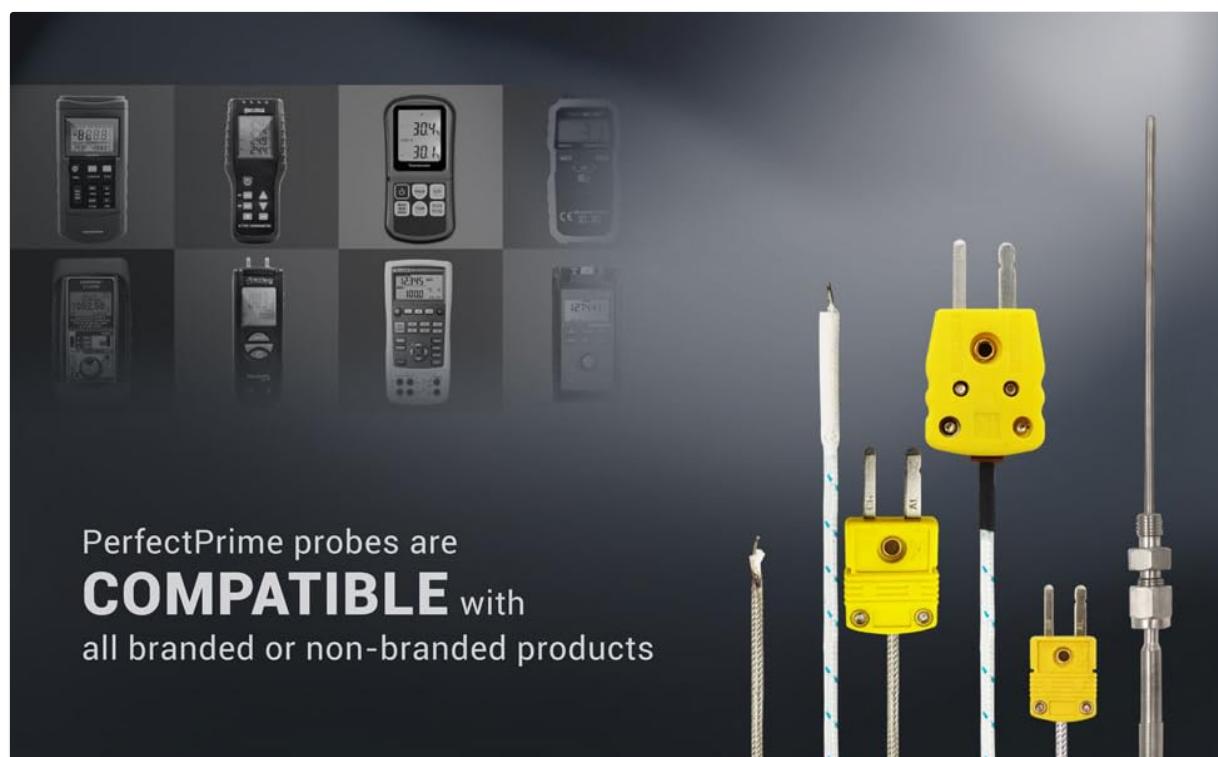


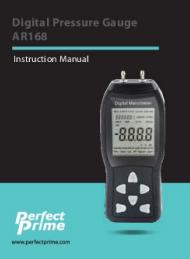
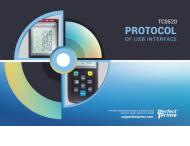
Image 7.1: PerfectPrime probes are compatible with various branded and non-branded products.

8. WARRANTY AND SUPPORT

For specific warranty information regarding your Perfect-Prime TL0700 K-Type Sensor Probe, please refer to the documentation included with your purchase or visit the official PerfectPrime website. Warranty terms may vary by region and retailer.

If you require technical assistance, have questions about product functionality, or need to report an issue, please contact PerfectPrime customer support through their official channels. Contact information can typically be found on the manufacturer's website or on your product packaging.

Related Documents - TL0700

	<p><u>PerfectPrime AR168 Digital Pressure Gauge Instruction Manual</u></p> <p>Instruction manual for the PerfectPrime AR168 Digital Pressure Gauge, covering product introduction, basic functions, technical performance, measurement ranges, symbol definitions, button operations, precautions, and additional information.</p>
	<p><u>PerfectPrime TC0520 USB Interface Protocol Guide</u></p> <p>A comprehensive guide to the USB interface protocol for the PerfectPrime TC0520 datalogger thermometer, detailing commands, data output, and error checking.</p>
	<p><u>PerfectPrime AR168 Digital Pressure Gauge Instruction Manual</u></p> <p>Instruction manual for the PerfectPrime AR168 Digital Pressure Gauge, covering product introduction, basic functions, technical performance, measurement ranges, symbol definitions, button operations, precautions, and additional information.</p>
	<p><u>PerfectPrime TC0520 USB Interface Protocol Guide</u></p> <p>A comprehensive guide to the USB interface protocol for the PerfectPrime TC0520 datalogger thermometer, detailing commands, data output, and error checking.</p>