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Cooper-Atkins 31901-K

Cooper-Atkins 31901-K Thermocouple Needle Probe

Model: 31901-K | Brand: Cooper-Atkins

PRODUCT OVERVIEW

The Cooper-Atkins 31901-K is a Type-K thermocouple needle probe designed for precise temperature measurement in various industrial applications. It features a durable silicone-jacketed cable and a robust nylon handle, ensuring reliability and longevity in demanding environments.



Image: The Cooper-Atkins 31901-K thermocouple needle probe, showing the needle, handle, cable, and Type-K connector.

KEY FEATURES

- Type-K Thermocouple:** Specifically designed for accurate temperature readings in industrial settings.
- Wide Temperature Range:** Measures temperatures from -40 to +400 degrees F (-40 to +205 degrees C).
- Optimal Probe Length:** The probe measures 4 inches, suitable for various applications.
- Fast Response Time:** Achieves readings in approximately 4 seconds when immersed in liquid.

- **Durable Cable:** Silicone-jacketed cable designed to withstand temperatures up to 400 degrees F (205 degrees C).

PACKAGE CONTENTS

Upon opening the package, please verify that all components are present and undamaged:

- 1 x Cooper-Atkins 31901-K Thermocouple Needle Probe Unit
- 1 x Instruction Guide

SETUP INSTRUCTIONS

Follow these steps to prepare your thermocouple needle probe for use:

1. **Inspect the Probe:** Before each use, visually inspect the probe for any signs of damage to the needle, handle, or cable. Ensure the silicone jacket is intact.
2. **Connect to Meter:** Connect the Type-K thermocouple connector (yellow plug) of the probe to a compatible Type-K thermocouple thermometer or data logger. Ensure a secure and firm connection.
3. **Power On Device:** Turn on your temperature measurement device and allow it to stabilize according to its own instruction manual.



Image: The thermocouple probe with its Type-K connector, ready to be plugged into a compatible device.

OPERATING INSTRUCTIONS

The Cooper-Atkins 31901-K probe is designed for direct contact temperature measurement. Always ensure safe handling practices.

1. **Prepare for Measurement:** Ensure the probe tip is clean and free from debris. For liquid measurements, ensure the liquid is well-mixed for accurate readings.
2. **Insert the Probe:** Carefully insert the needle probe into the substance or material whose temperature you wish to measure. For liquids, ensure the tip is fully submerged. For semi-solids, insert the probe deep enough to ensure the sensing junction is fully within the material.
3. **Read Temperature:** Observe the temperature reading on your connected thermometer or data logger. Allow a few seconds for the reading to stabilize, especially in liquids, due to the 4-second response time.
4. **Remove Probe:** Once the reading is taken, carefully withdraw the probe from the substance.



Image: A close-up view of the needle tip and handle of the Cooper-Atkins 31901-K probe, highlighting its design for insertion.

CARE AND MAINTENANCE

Proper care will extend the life and accuracy of your probe:

- Cleaning:** After each use, clean the probe needle and handle with a damp cloth and mild detergent. Rinse thoroughly and dry completely. Do not immerse the entire probe or connector in water.
- Storage:** Store the probe in a clean, dry place, away from extreme temperatures and corrosive materials. Protect the needle tip from bending or damage.
- Inspection:** Regularly inspect the cable for cuts, abrasions, or kinks, and the connector for corrosion or damage.
- Calibration:** While the probe itself does not require user calibration, ensure your connected thermometer is regularly calibrated according to its manufacturer's guidelines for accurate measurements.

TROUBLESHOOTING

If you encounter issues with your Cooper-Atkins 31901-K probe, consider the following common solutions:

Problem	Possible Cause	Solution
No temperature reading or "Open" error	Loose connection to thermometer; damaged cable or connector; probe outside temperature range.	Ensure the probe is securely plugged into the thermometer. Inspect the cable and connector for visible damage. Verify the measured temperature is within the probe's specified range (-40 to +400°F).
Inaccurate temperature readings	Probe tip not fully immersed/inserted; thermometer calibration issue; external interference.	Ensure the probe tip is properly positioned within the substance. Check the calibration of your thermometer. Move away from strong electromagnetic fields.
Slow response time	Probe tip not making good contact; substance not uniform in temperature.	Ensure firm contact or proper immersion. Stir liquids if possible to ensure uniform temperature.

TECHNICAL SPECIFICATIONS

Attribute	Detail
Model Number	31901-K
Probe Type	Type-K Thermocouple Needle Probe
Temperature Range	-40°F to +400°F (-40°C to +205°C)
Probe Length	4 inches
Response Time	4 seconds (in liquid)
Cable Material	Silicone-jacketed
Handle Material	Molded Nylon
Product Dimensions	6 x 10 x 1 inches
Product Weight	2.56 ounces
Manufacturer	Cooper Atkins
Country of Origin	USA

WARRANTY AND SUPPORT

Information regarding the specific warranty period and direct customer support contacts for the Cooper-Atkins 31901-K Thermocouple Needle Probe was not provided in the product data. For warranty claims, technical assistance, or service inquiries, please refer to the official Cooper-Atkins website or contact their customer service department directly. Keep your purchase receipt as proof of purchase.

You may also visit the [Cooper-Atkins Store on Amazon](#) for additional product information and resources.