

# Keysight E2307A Thermocouple Bead Probe Keysight E2308A Thermistor Probe

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## Keysight E2307A Thermocouple Bead Temperature Probe

- Exposed welded thermocouple junction with PTFE insulation wire, 36 inches (0.9 m) long, terminated in a 0.75 inch dual-banana plug.
- *Thermocouple type*: #24 gage ANSI-K type calibration.
- *Accuracy*: -260 °C to -110 °C (-436 °F to -200 °F)    2% of reading  
                  -110 °C to 260 °C (-200 °F to 500 °F)     $\pm 2.2$  °C ( $\pm 4$  °F)
- *Maximum temperature*: 260 °C (500 °F)
- *For use with*: Keysight 973A or any other device that accepts type-K thermocouples and a dual-banana plug.

## Keysight E2308A Thermistor Temperature Probe

- Stainless steel encapsulated thermistor (5000  $\Omega$  @ 25 °C), 36 inch (0.9 m) leads, terminated in a 0.75 inch dual-banana plug.
- *Accuracy*: -40 °C to 0 °C (-40 °F to 32 °F)     $\pm 0.4$  °C (0.8 °F)  
                  0 °C to 70 °C (32 °F to 158 °F)     $\pm 0.2$  °C (0.4 °F)  
                  70 °C to 100 °C (158 °F to 212 °F)     $\pm 0.3$  °C (0.6 °F)  
                  100 °C to 150 °C (212 °F to 302 °F)     $\pm 1$  °C (2 °F)
- *Maximum temperature*: 150 °C (302 °F)
- *Time constant*: 3 seconds typical in well-stirred water
- *Isolation*: 42 volts peak max
- *Stability (for 10 months)*: 25 °C    <0.01 °C  
  100 °C    <0.2 °C  
  150 °C    <1.5 °C
- *Stainless steel probe*: 1.5 in. L x 0.125 in. dia. (38 mm L x 3.2 mm dia.)
- *For use with*: Keysight 971A/972A/973A/974A and Keysight 3458A. Can also be used with the Keysight 34401A with application software.

## Combined Instrument and Temperature Probe Specification

When using the Keysight E2307A and Keysight E2308A temperature probes, you must add the specifications of the instrument to the specifications of the probe. The specifications are shown below for the Keysight E2307A and E2308A probes when used with Keysight 970-Series Handheld Multimeters.

### Keysight E2307A thermocouple probe

<b>Keysight 973A</b>	
Measurement range	-50 °C to 260 °C, -58 °F to 500 °F
Resolution	1 °C, 1 °F
Accuracy $\pm$ (% reading + no. of degrees)	2% + 4 °C (8 °F)

#### NOTE

Specifications apply only when the probe is used without any extension wire.

### Keysight E2308A thermistor probe

Measurement range	-40 °C to 0 °C -40 °F to 32 °F	0 °C to 70 °C 32 °F to 158 °F	70 °C to 100 °C 158 °F to 212 °F	100 °C to 150 °C 212 °F to 302 °F
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<b>Keysight 971A</b>					
Resolution	0.1 °C, 0.2 °F				
Accuracy	$\pm$ 1.5 °C, 3 °F	$\pm$ 0.9 °C, 1.8 °F	$\pm$ 0.7 °C, 1.4 °F	$\pm$ 0.8 °C, 1.6 °F	$\pm$ 1.5 °C, 3 °F

<b>Keysight 972A / 973A</b>					
Resolution	0.1 °C, 0.2 °F				
Accuracy	±1.3 °C, 2.5 °F	±0.7 °C, 1.3 °F	±0.5 °C, 0.9 °F	±0.6 °C, 1.1 °F	±1.3 °C, 2.5 °F

<b>Keysight 974A</b>					
Resolution	0.1 °C, 0.1 °F				
Accuracy	±1.2 °C, 2.4 °F	±0.6 °C, 1.2 °F	±0.4 °C, 0.8 °F	±0.5 °C, 1 °F	±1.2 °C, 2.4 °F

**NOTE**

Other temperature probes suitable for the Keysight multimeters are available for almost any application. Type-K thermocouples may be used with the Keysight 973A. Some probes may require an adapter to properly connect the probe to the instrument's dual-banana termination.

Thermistor temperature probes, 5000 Ω @ 25 °C with a 25 °C/125 °C ratio of 29.26, are suitable for the Keysight 971A/972A/973A/974A.

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