

# Thermocouple Thermometers

## Why use a thermocouple thermometer?

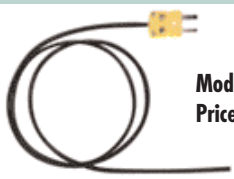
Digital thermometers provide fast and accurate temperature measurement for a variety of applications. Many different styles of probes are available to suit almost any kind of job in which contact thermometers are used. Air and gas temperatures, internal food temperatures, and surface temperatures in both industrial and commercial environments can be made using these instruments. Because most units are provided with standard mini-plug connections, a single unit can be used with a variety of probes.

Thermocouples are the most common, convenient, and versatile devices used to measure temperature. They convert units of heat into useable engineering units that serve as input signals into process controllers, recorders and digital thermometers.

A thermocouple consists of a welded 'hot' junction between two dissimilar metals - usually wires - and a reference junction at the opposite end of the parent materials. Heating the 'hot' junction in the working environment produces a temperature gradient which generates an EMF. The EMF is converted in units of heat calibration.

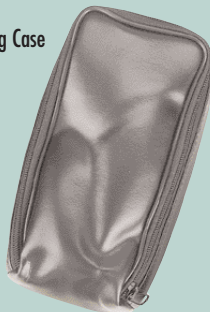
## Accessories

Please see p.10 for more information on our complete line of thermocouple probes.



Model TP-01 Bead Probe  
Price \$19

Model CA-03 Carrying Case  
Price \$18



**\$135**  
**ST-9610B**



### Model ST-9610B

Single input digital thermometer with large LCD and rugged rubber holster.

- Portable, 3 1/2 digit, compact-sized digital thermometer designed to accept external K-type thermocouples
- Temperature indication follows National Bureau of Standards and IEC 584 temperature/voltage tables for Type K thermocouples
- Rugged design for field use - includes rubber holster
- Accurate to 0.3%
- °C/°F switchable
- Front panel offset adjustment to optimize accuracy
- Displays Maximum reading plus Data Hold on large LCD display
- Includes 9V battery, holster with stand & wrist strap
- Thermocouple probe extra, see p.12 for options

**\$395**  
**ST-9610B DELUXE**



### Model ST-9610BDELUXE

Model ST-9610B is also available as a complete kit.

- Thermometer Kit includes: Model ST-9610B single input digital thermometer with LS-103 Air Probe, LS-109 Surface Probe & LS-107 General Purpose Probe in a hard carrying case

## Specifications

Model	ST-9610B/ST-9610BDELUXE
Temperature Range	-50 to 1300°C/-58 to 2000°F
Temperature Resolution	0.1°C/°F or 1°C/°F
Temperature Accuracy	±(0.3% rdg. + 1°C) or ±(0.5% rdg. + 2°F)
Humidity Range	-
Humidity Resolution	-
Humidity Accuracy	-
Power Supply	1 x 9V battery
Dimensions	147 x 70 x 39 mm (unit only)
Weight	210 g (unit only)
Price	<b>\$135/\$395</b>

# Thermocouple Thermometers

**\$167**  
**ST-610B**



**Model ST-610B**

**A compact single input thermocouple thermometer designed for field use.**

- Accuracy to 0.5%
- Display maximum reading plus Data Hold
- Large LCD display with backlight
- User selectable °C or °F
- User selectable 0.1°C or 1°C (0.1°F or 1°F) resolution
- Accept K-type thermocouples
- Includes 9V battery & holster
- Thermocouple probe extra, see p.12 for options

**\$199**  
**ST-612**



**Model ST-612**

**Dual input thermocouple thermometer provides differential temperature measurements.**

- Differential Temperature (T1-T2) mode freezes display
- Scan Function (T1, T2, T1-T2, Max, Hold...)
- Direct or differential measurements to 0.1°C/ 0.1°F resolution over the entire measurement range
- Accuracy to 0.5%
- Display maximum reading plus Data Hold
- Large LCD display with backlight
- User selectable °C or °F
- Accept K-type thermocouples
- Includes 9V battery & holster
- Thermocouple probe extra, see p.12 for options

**\$195**  
**ST-615**



**Model ST-615**

**A digital thermo-hygrometer with remote or integral probe, plus large dual display with backlighting.**

- Measures air temperature & temperature from thermocouple, as well as humidity
- Fast sampling time
- °C/°F switchable
- Dual easy-to-read backlit LCD display
- Data hold & Max Hold
- Auto power off
- Includes K-type thermocouple probe, humidity probe & 9V battery

ST-610B	ST-612	ST-615
-50 to 1300°C/-58 to 2000°F	-50 to 1300°C/-58 to 2000°F	-20 to 1000°C/-4 to 1832°F
0.1°C/°F or 1°C/°F	0.1°C/°F or 1°C/°F	0.1° up to 200°; 1° over 200°
±(0.5% rdg. ±1°C/±2°F)	±(0.5% rdg. ±1°C/±2°F)	±2.0% rdg. ±2°C/4°F
-	-	0 to 100% RH
-	-	0.1% RH
-	-	±3.5%
1 x 9V battery	1 x 9V battery	1 x 9V battery
165 x 76 x 43 mm	165 x 76 x 43 mm	150 x 72 x 35 mm
403 g	403 g	210 g
<b>\$167</b>	<b>\$199</b>	<b>\$195</b>

# Thermocouple Probes (Type K)

**\$78**  
**LS-109**



**Model LS-109**

- Ribbon-style surface probe
- Maximum Temperature: 752°F/400°C

**\$88**  
**LS-139**



**Model LS-139**

- Spring loaded probe is ideal for high temperature surface measuring requirements
- Extremely fast response time
- Not recommended for use as an immersion probe
- Maximum Temperature: 932°F/500°C

**\$98**  
**LS-104**



**Model LS-104**

- Unique right angle design allows temperature of hard to reach areas to be taken
- Great for monitoring temperature inside pipes, also flat surfaces, without keeping hands over heated area
- Maximum Temperature: 752°F/400°C

**\$88**  
**LS-103**



**Model LS-103**

- Specially designed to measure air or gases in heating & cooling units, ovens & engine exhausts
- Perforated shield permits fast response while providing exceptional element protection
- Maximum Temperature: 1472°F/800°C

**\$78**  
**LS-134A**



**Model LS-134A**

- Medium gauge hypodermic needle tip, used to measure softer food stuffs, rubbers & solids
- Ideal for use in industrial, laboratory & chemical environments
- Maximum Temperature: 1472°F/800°C

**\$78**  
**LS-107**



**Model LS-107**

- Used to measure both air or liquids, but is best recommended for immersion applications
- Excellent for checking temperature of oils, water & non-corrosive fluids
- Maximum Temperature: 1292°F/700°C

# Thermocouple Accessories

From \$1

**J20**



## Model J20/K20

### Thermocouple Wire.

- Types J and K
- Insulated solid wire, 20 gauge
- Available by the foot or in 50', 100', 200' and 500' rolls
- Available with PVC or fiberglass insulation
- PVC is highly flexible, whereas fiberglass is chemical and flame-resistant
- Temperature limit of PVC: 221°F/105°C
- Temperature limit of fiberglass: 900°F/482°C

### Model KX20PP Type K Wire w/ PVC insulation

Price/1 foot:	\$1
Price/50 feet:	\$28
Price/100 feet:	\$55
Price/200 feet:	\$110
Price/500 feet:	\$275

### Model K20GG Type K Wire w/ Fiberglass insulation

Price/1 foot:	\$2
Price/50 feet:	\$80
Price/100 feet:	\$110
Price/200 feet:	\$200
Price/500 feet:	\$350

### Model JX20PP Type J Wire w/ PVC insulation

Price/1 foot:	\$1
Price/50 feet:	\$32
Price/100 feet:	\$55
Price/200 feet:	\$110
Price/500 feet:	\$275

### Model J20GG Type J Wire w/ Fiberglass insulation

Price/1 foot:	\$2
Price/50 feet:	\$75
Price/100 feet:	\$100
Price/200 feet:	\$159
Price/500 feet:	\$350

From \$2

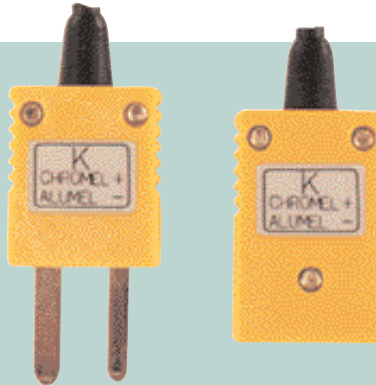
**K20**

\$5

**LS-181**

\$6

**LS-182**



## Model LS-181/LS-182

### Thermocouple Connectors.

- Glass filled nylon
- Heavy duty construction
- Rated to 425°F
- Type K connector uses Chromel-Alumel alloy in a yellow shell
- Type J connector uses Iron-Constantin alloy in a black shell

### Model LS-181 Male connector, K-type

Price: \$5

### Model LS-182 Female connector, K-type

Price: \$6

### Model SMP-J-M Male connector, J-type

Price: \$7

### Model SMP-J-F Female connector, J-type

Price: \$7

\$12

**AD-1**



## Model AD-1

### Thermocouple Adaptor.

- Converts a type K probe with a mini connector to standard 3/4" banana jacks

\$18

**CA-03**



## Model CA-03

### Carrying Case.

- Approx. Dimensions: 8 x 4.75 x 2.5" (205 x 120 x 65mm)

\$21

**CA-05A**



## Model CA-05A

### Carrying Case.

- Approx. Dimensions: 10 x 5.25 x 2.5" (250 x 130 x 65mm)

\$15

**CA-52A**



## Model CA-52A

### Carrying Case.

- Approx. Dimensions: 8 x 3.5 x 2.25" (205 x 90 x 57mm)