

# High Accuracy Handheld Thermometers

## Series 450



- ✓ Models Read Thermocouples, RTD's and Thermistors
- ✓ 0.1° Resolution on Lower Range
- ✓ Auto-Ranging



450-AET shown smaller than actual size.

### Model 450-AJT

Input Type	Range	Res	Accuracy
<b>J</b> Iron-Constantan	-179.4 to 398.3°F	0.1°F	± (0.45° F + 0.1% rdg)
	- 318 to 1858°F	1°F	± (1.8° F + 0.1% rdg)
	-117.4 to 203.5°C	0.1°C	± (0.25°C + 0.1% rdg)
	-194 to 1014°C	1°C	± (1 °C + 0.1% rdg)

### Model 450-AKT

Input Type	Range	Res	Accuracy
<b>K</b> CHROMEGA®-ALOMEGA®	-219.7 to 398.7°F	0.1°F	± (0.45°F + 0.1% rdg)
	-308 to 2501°F	1°F	± (1.8°F + 0.1% rdg)
	-139.8 to 203.7°C	0.1 °C	± (0.25°C + 0.1% rdg)
	-189 to 1372°C	1°C	± (1°C + 0.1% rdg)

### Model 450-AET

Input Type	Range	Res	Accuracy
<b>E</b> CHROMEGA®-Constantan	-215.0 to 398.4°F	0.1°F	± (0.5°F + 0.1% rdg)
	-351 to 1844°F	1°F	± (1.5°F + 0.1% rdg)
	-137.2 to 203.5°C	0.1°C	± (0.3°C + 0.1% rdg)
	-212 to 1006°C	1°C	± (0.8°C + 0.1% rdg)

### Model 450-ATT

Input Type	Range	Res	Accuracy
<b>T</b> Copper-Constantan	-234.8 to 399.0°F	0.1°F	± (0.45°F + 0.1% rdg)
	-360 to 758°F	1.0°F	± (1.5°F + 0.1% rdg)
	-148.2 to 203.9°C	0.1°C	± (0.25°C + 0.1% rdg)
	-217 to 403°C	1.0°C	± (0.8°C + 0.1% rdg)

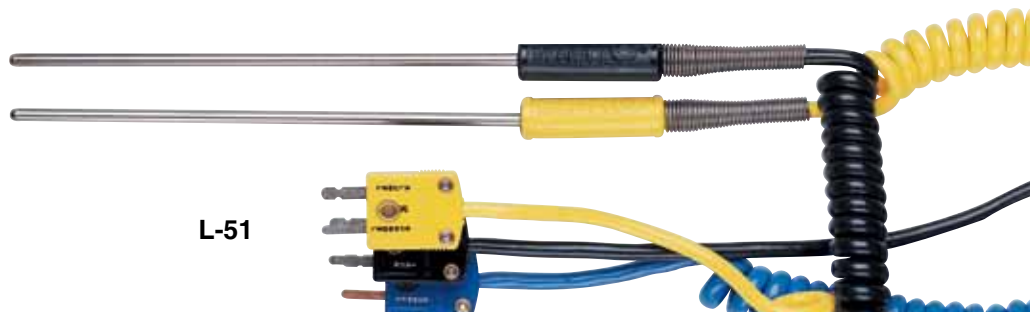
### Model 450-APT

Input Type	Range	Res	Accuracy
<b>RTD</b> 100Ω Pt RTD α = 0.00385	-153.2 to 398.3°F	0.1°F	± (0.5°F + 0.1% rdg)
	-388 to 1660°F	1°F	± (1.5°F + 0.1% rdg)
	-102.9 to 203.5°C	0.1°C	± (0.3°C + 0.1% rdg)
	-233 to 904°C	1°C	± (0.8°C + 0.1% rdg)

### Model 450-ATH

Input Type	Range	Res	Accuracy
<b>OMEGA® 400 Thermistor</b>	-14.4 to 217.8°F	0.1°F	± (0.45°F + 0.1% rdg)
	-25.7 to 103.2°C	0.1°C	± (0.25°C + 0.1% rdg)

For general purpose meter probes, see [omega.com](http://omega.com)

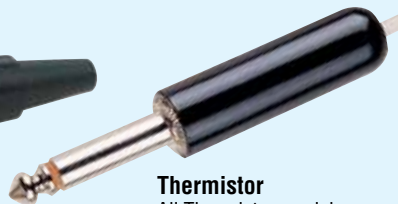


## Included!



### RTD

All RTD models include a free TA3F connector  
**Order a Spare!**  
**Model TA3F**



### Thermistor

All Thermistor models include a free Phono connector. **Order a Spare!**  
**Model PPM-2**



### Thermocouple

Thermocouple models include a free 1 m (40") beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). **Order a Spare! Model SC-TT-(\*)-30-36**  
*\* Insert thermocouple Type, J, K, T, E.*

## Specifications

**Display:** 7.62 mm (0.3") LCD

**Indication:** °F/°C selectable

**Operating Range:** 0 to 50°C (32 to 122°F) ambient

**Accuracy Over Time:** 90 days: add ±0.05% rdg; 1 year: add 0.1% rdg

**Temperature Drift:** Zero: +2 µV/°C; Span: ±0.02%/°C

**Input Connections:** Standard OMEGA® subminiature connector (thermocouple); ¼" phone plug (thermistor); TA3F (RTD), mating connector supplied with RTD and thermistor units

**Storage Temperature:** -20 to 70°C (-4 to 158°F)

**Normal Mode Rejection:** 50 dB at 50 or 60 Hz

**Common Mode Rejection:** 140 dB at 50 or 60 Hz

**Maximum Common Mode Voltage:** 1000 Vac, +2000V peak

**Measurement Technique:** Dual-slope A/D conversion

**Linearization:** 100% digital; typically 100 segments, depending on range selected

**Reference Junction Stability with Temperature:** ±0.7°C from 5 to 45°C; (±1.3°F from 41°F to 113°F) (thermocouple)

**Input Resistance:** Thermocouple: 13 MΩ;  
Thermistor: 698; RTD: 21.2 kΩ

**Update Rate:** 2 readings/sec typical

**Battery:** 9V alkaline (included)

**Battery Life:** 2000 hours, thermocouple; 1200 hours, thermistor; 500 hours, RTD

**Dimensions:** 178 H x 84 W x 46 mm D (7.0 x 3.3 x 1.8")

**Weight:** 255 g (9 oz)

## Accessories

Model No.	Description
SC-450S	Small soft case—a protective soft case for the Model 450; dimensions: 51 H x 89 W 152 mm D (2.0 x 3.5 x 6.9" )
SC-450L	Large soft case—a protective soft case with room for the Model 450, probes up to 200 mm L (9") and other accessories; dim: 51 H x 102 W x 254 mm D (2.0 x 4.0 x 10")
CAL-3-HH	NIST-traceable calibration with points
HH-NIST	NIST-traceable calibration, no points
PPM-2	Additional phone plug mating connector for 450-ATH (1 supplied with unit)
TA3F	Additional T-series mating connector for 450-APT (1 supplied with unit)
SMPW-J-M SMPW-K-M SMPW-T-M SMPW-E-M	Thermocouple connectors
EXPP-J-20-50 EXPP-K-20-50 EXPP-T-20-50 EXPP-E-20-50	Thermocouple extension wire, 20 gage polyvinyl insulation, 15 m (50') spool
OT-201-2	57 g (2 oz) jar of high-thermal conductivity paste for fast surface measurements

**Ordering Example:** 450-AJT, handheld thermometer with Type J thermocouple input, SC-450S, carrying case.

OCW-3, OMEGACARE<sup>SM</sup> extends standard 2-year warranty to a total of 5 years.