# Exceptional Accuracy Digital Thermometers Single and Dual Input Models







The HH-20 series microprocessor-based handheld thermometers offer wide-ranging temperature readings and feature state-of-the-art innovations. The easy-to-read custom 5-digit LCD readout with trend display and self-diagnostics are all standard. The case is drop/splash and dust-proof, and has a built-in tilt stand/handle for bench use or hands-free field measurements.

The HH-21 is a single input unit that accepts J, K and T thermocouple types. From the front panel, the user can select the thermocouple type, display units (°C or °F), and display resolution (0.1° or 1°). The HH-21 also has a display hold function. As with all HH-20 series units, the HH-21 features exceptionally high accuracy, 0.1% of reading plus 0.5°C.

The HH-22 and HH-23 accept dual inputs. The HH-22 accepts either J or K thermocouples, while the HH-23 works with J, K or T types. Both models can display T1 (input 1), T2 (input 2), T1-T2 (difference), or scan between T1, T2 and T1-T2. Standard features for both the HH-22 and HH-23 include display hold, min and max storage, and trend indication. The min and max functions record minimum and maximum values for T1, T2 and T1-T2. Trend indication shows if the displayed input is increasing, decreasing or stable.

When you turn on an HH-20, it remembers what you were doing; the thermocouple type, resolution, and temperature units are stored in non-volatile memory so you don't have to reprogram every time you start up.

69.0

HH-21 single J/K/T input, £111, shown smaller than actual size.

JTSS-HH miniature transition joint probe, sold separately, £19.50. See page L-48.

Single and Dual Input Models with Display Hold

OEOMEGA

Dual Input Models Feature Trend, Min/Max and Differential Measurements

ADE IN THE U.S.A

- HH-21 and HH-23 Accept J, K and T Inputs
- HH-22 Accepts J and K Inputs
- 0.1 Resolution in °F and °C Over Full Range
- High 0.1% Reading Accuracy
- Self-Diagnostics and Retention of User Programming

HH-22 dual J/K input, £144, shown smaller than actual size. Each unit supplied with 2 Type K beaded wire thermocouples, integral tilt stand, wrist strap, 9 V battery, protective rubber holster (HH20-HB), and operator's manual.

L-27

The HH20-HB

holster (std)

provides additional

shock protection

and a convenient

belt clip.

Spare holster (HH20-HB), £16.75

### **Specifications**

**Display:** 5-digit LCD; custom indicators for thermocouple type°C/°F units, hold and low battery; HH-22 and HH-23 have additional indicators for input (T1, T2, T1-T2, scan), up/down trend arrows and min/max data storage

**Keypad:** Momentary switches with tactile feedback; on/off, thermocouple type, units, resolution, hold; HH-22 and HH-23 have additional keys for record min/max, view min/max, stop/clear record input type (T1, T2, T1-T2, scan) **Configuration Retention:** Selected readout, input type, units and resolution retained on power-off

Diagnostics: Low battery, open thermocouple, invalid keypad entry out of range, internal hardware fau Accuracy: 0.1% rdg + 0.5°C (1°F) Repeatability: 0.2°C for 1 week at constant temperature

# HH20SW E100 All Models

- 6 Inputs with Rotary Selector
- Works with a Wide Variety of Handheld Meters
- 2-Position Output Connector for Single and Dual Input Thermometers
- Available for J, K and T Calibrations
  Specifications

**Operating Ambient:** 0 to 50°C; less than 90% RH to 35°C; reduce RH limit by 3%/°C from 35 to 50°C

**Connectors:** 1 male, 6 female subminiature thermocouple connectors, type SMP

**Dimensions:** 127 H x 71 W x 38 D mm (5 x 2.8 x 1.5")

Weight: 341 g (12 oz)

#### **To Order** (Specify Model No.)

Model No.	Price	Desc.		
HH20SW-(*)	£100	Multiprobe switchbox		
SMPW-(*)I-M	1.15	Mating male connector		
Comes with operator's manual.				

\* Specify calibration: J, K, or T. Ordering Example: HH20SW-K, multiprobe switchbox, SMPW-KI-M, mating male connector, £100 + 1.15 = £101.15. **Resolution:** 0.1° throughout entire range

**Temperature Coefficient:** (0.02% rdg + 0.1°C)

below 64°F (18°C) and over 82°F (28°C); included in accuracy, between 18 and 28°C (64 and 82°F)

Ambient Temperature:

0 to 50°C (32 to 122°F), 0 to 90% RH **Reading Rate:** 1 per second

Max Common Mode Voltage: 42 V peak to earth ground Power: 9 Vdc battery, alkaline

9

(included)

The HH20SW, £100, multiprobe switchbox allows up to 6 probes. Order below. Battery Life: 100 h, typical, alkaline battery

**Dimensions:** 178 H x 74 W x 28 mm D (7.0 x 2.9 x 1.1")

Weight: 284 g (10 oz)

Accessories Included: 9 Vdc alkaline battery, beaded wire Type K probe (for each input), integral tilt stand/ handle, wrist strap, rubber holster, and operator's manual

14

The HH20CAL, £113, turns a handheld into a portable calibrator for checking calibration on other J, K, and T instruments. Order below.

### Input Ranges

	Туре	°C Range	°F Range
	J	-210 to 760	-346 to 1400
	K	-200 to 1372	-328 to 2502
	Т	-200 to 400	-328 to 752

### ALL MODELS AVAILABLE FOR FAST DELIVERY!

<b>To Order</b> (Specify Model Number)				
Price	No. of Inputs	Input Types		
£111	1	J/K/T		
144	2	J/K		
151	2	J/K/T		
	Price £111 144 151	Price     No. of Inputs       £111     1       144     2		

Comes with beaded wire Type K probe (for each input), integral tilt stand/handle, wrist strap, 9 V battery, shock resistant holster (HH20-HB) and operator's manual.

**Ordering Example:** HH-22, digital thermometer with Type J/K input, £144. OCW-2, OMEGACARE<sup>SM</sup> extends standard 3-year warranty to a total of 5 years (£26), £144 + 26 = £170.

#### Accessories

A0003501105						
Model No.	Price	Description				
SC-450L	£8.	Soft carrying case	OMEGACARE <sup>s</sup> extended			
HH20-HB	16.75	Spare protective rubber holster				
MN1604	2	Extra alkaline battery	- warranty program is available for models			
CAL-3-HH	50	Traceable calibration with points	shown on this page. Ask your sales representative			
(*)TSS-HH	29	General purpose meter probe	for full details when placing			
HH20CAL	113	Portable calibrator module an order. OMEGACARE <sup>ss</sup> covers parts, labor and				
HH20SW-(*) 100 Multiprobe switchbox		equivalent loaners.				

(\*) Specify calibration J, K or T.

# omega.co.uk®

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622

Fax +44(0) 161 777 6622

Sales@omega.co.uk

# www.omega.co.uk



**UNITED STATES** www.omega.com 1-800-TC-OMEGA Stamford, CT.

**CANADA** www.omega.ca Laval(Quebec) 1-800-TC-OMEGA

**GERMANY** www.omega.de Deckenpfronn, Germany 0800-8266342

UNITED KINGDOM www.omega.co.uk Manchester, England 0800-488-488

> FRANCE www.omega.fr 088-466-342

**CZECH REPUBLIC** www.omegaeng.cz Karviná, Czech Republic 596-311-899

> BENELUX www.omega.nl 0800-099-33-44



# More than 100,000 Products Available!

# Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

# Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

# pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

# Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

# Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

## Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters