

Ultra-High Accuracy and Resolution Handheld Thermistor Thermometer

HH40 Series



Standard
No Points

- ✓ Works with Standard OMEGA® "400" Series Thermistor Probes with Phone Jack Termination
- ✓ Ultra-High Accuracy, up to $\pm 0.015^{\circ}\text{C}$ ($\pm 0.027^{\circ}\text{F}$)
- ✓ Includes NIST-Traceable Calibration Certificate
- ✓ High Resolution, up to 0.01°F or $^{\circ}\text{C}$
- ✓ -20 to 130°C (-4 to 266°F) Temperature Range
- ✓ Model HH42 has RS232 Communications
- ✓ Hold Function, Auto Shut-Off, Rate of Change Arrow Indicators, Over/Under Range and Low Battery Indication

Applications

- ✓ R and D Labs
- ✓ Metrology Labs
- ✓ Industry

The HH41 handheld thermistor thermometer is a rugged, field tested unit that fits a wide variety of temperature measurement applications requiring ultra-high accuracy and high resolution at an economical price. The HH41 accepts OMEGA's 400 Series thermistor probes with phone jack termination. The HH41 features display hold and $^{\circ}\text{F}/^{\circ}\text{C}$ selection from the single front panel tactile



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.



HH41 shown with ON-403-PP tubular stainless steel thermistor probe, sold separately.

feedback silicone function button. The unit's LCD display features a low battery indication and also rate of temperature change arrows which, flashing at different speeds, inform the operator of the rate at which the temperature is changing. The unit has internal jumpers to disable selection of $^{\circ}\text{F}$ or $^{\circ}\text{C}$ from the front panel and enable display of either $^{\circ}\text{F}$ or $^{\circ}\text{C}$ only. Internal jumpers are also present to select either auto or manual shut-off mode. In the auto shut-off mode, the unit will automatically shut off 10 minutes after the last function key entry. Model HH42 has all the features of the HH41 with the addition of RS232 communications. In situations where very high system accuracy is required, OMEGA offers a total system calibration service (probe plus meter); ask for CAL-4.

Specifications

Accuracy: See Instrument Accuracy vs. Temperature Table on next page

Resolution: See Display Resolution Table on next page

Repeatability: 0.002 to 0.01°C (-20 to 70°C); 0.004 to 0.02°C (-4 to 158°F) typical for 1 week at constant ambient temperature

Temperature Range: -20 to 130°C (-4 to 266°F)

Reading Rate: 2 per second

Display: $4\frac{1}{2}$ digit LCD

Power: 9 Vdc battery, alkaline (included), optional 110 Vac or 220 Vac adaptor

Battery Life: 20-hour, typical, alkaline battery

Battery Indicator: Displays flashing battery indicator when less than 1-hour of battery life remains

A Complete Listing of Thermistor Probes Available Online



OMEGA® 400 Series thermistor probes (sold separately).

- A: ON-401-PP, general purpose probe
- B: ON-401-PP-V, flexible probe
- C: ON-403-PP, immersion probe
- D: ON-404-PP, glass probe
- E: ON-405-PP, air temperature probe
- F: ON-408-PP, surface temperature probe
- G: ON-409-PP, surface temperature probe
- H: ON-410-PP, 1/8 NPT probe 4.5" long

400 Series standard connector

Instrument Accuracy* vs. Temperature

Temp °C (°F)	Accuracy °C (°F)
-20 (-4)	±0.016 (0.029)
-10 (14)	±0.015 (0.027)
0 (32)	±0.015 (0.027)
10 (50)	±0.015 (0.027)
20 (68)	±0.015 (0.027)
30 (86)	±0.015 (0.027)
40 (104)	±0.017 (0.031)
50 (122)	±0.019 (0.034)
60 (140)	±0.023 (0.041)
70 (158)	±0.029 (0.052)
80 (176)	±0.037 (0.067)
90 (194)	±0.049 (0.088)
100 (212)	±0.066 (0.119)
110 (230)	±0.088 (0.158)
120 (248)	±0.117 (0.211)
130 (266)	±0.156 (0.281)

* Ambient temperature: 18 to 28°C (64 to 82°F).

Display Resolution

Temp Range °C (°F)	Resolution °C (°F)
-20 to 102 (-4 to 215)	0.01 (0.01)
102 to 130 (215 to 266)	0.02 (0.05)

Temperature Unit Selection:

°F/°C selectable from front panel function button, or internal jumpers to enable °F or °C only

Shut-Off Mode: Internal jumper selection for auto or manual shut-off mode; auto shut-off in 10-min with no function key entry

Thermistor Sensor: Works with OMEGA® 400 Series thermistor (2252 Ω) probes with ¼" phone jack (Model PPM-2) connection

Operating Ambient: 10 to 40°C (50 to 104°F); 0 to 85% RH

RS232 Communications:

9600 baud, no parity

Case Material: ABS

Dimensions:

184.1 H x 83.8 W x 31.8 mm D

(7.25 x 3.30 x 1.25")

Weight: 312 g (11 oz)

To Order

Model No.	Description
HH41	Handheld thermistor thermometer
HH42	Handheld thermistor thermometer with RS232 communications

Accessories

Model No.	Description
HH40-AC	110 Vac adaptor for HH41 or HH42
HH40-AC220	220 Vac adaptor for HH41 or HH42
HH40-SOFT	Software for HH42
SC-HH500	Soft case for HH41 or HH42
RCC-1000	Rugged attache style case for HH41 or HH42 plus probes
MN1604	Spare alkaline battery

Comes complete with 9 Vdc alkaline battery, NIST-traceable calibration certificate (no data points), and operator's manual. HH42 comes with built-in RS232 connector.

Ordering Example: HH41, thermometer, and HH40-AC, 110 Vac adaptor.

OCW-3, OMEGACARESM extends standard 1-year warranty to a total of 4 years.