

# High Performance Talking/Seeing! Digital Multimeter - Dual Input Thermometer & **NEW Infrared** Pyrometer



**OMEGASAYS™**  
Model HHM2-IR

**£286** Basic Unit

Includes One English Voice Chip  
and Infrared Pyrometer

- Non-Contact IR Temperature Measurement Pyrometer
- Built-in Laser Sighting
- Voice Annunciation of Measured Parameters in a Choice of 5 Languages
- Dual Type K Thermocouple Inputs With Differential Measurements
- 0.25 % Basic dc Accuracy
- True RMS ac Measurement
- 4 Digit Temperature Display, 3½ Digit DMM Display
- 0.1° Resolution to 1000°
- Continuous or Manual Button Control of Voice Annunciation

The new OMEGASAYS™ digital multimeter/ thermometer/IR Pyrometer is a full function digital multimeter which also features non-contact infrared temperature measurement, dual type K thermocouple inputs and voice annunciation of measured values. This compact, portable meter measures true RMS ac voltage and current, as well as resistance and temperature, and will accept any two type K thermocouples terminated with miniature SMP connectors. The HHM2-IR features a standard voice annunciation used to verbally tell the user the current measurement in a choice of five different languages. The OMEGASAYS™ displays measured values on an easy to read LCD for visual indication, which also includes an indication of the current measurement function, the other available measurement functions, speech function status (continuous, on demand or off), measurement units, thermocouple probe input (T1, T2 or T1-T2), display hold and low battery. All DMM connections plug into the front of the unit. Thermocouples, pyrometer module, earphones and the ac adaptor plug into the rear panel of the unit, which also contains a three-position volume selector switch. On top of the

Plug-In Voice Chips: English, French, German, Japanese, Spanish

**Measures Temperature in the Dark!**

**OMEGASAYS™ + OMEGASCOPE™ = SUPER-DUPER METER™**



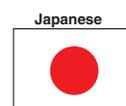
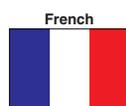
**NEW!** Complete kit with infrared pyrometer!



OMEGACARE™ extended warranty programme is available for models shown on this page. OMEGACARE™ covers parts, labour and equivalent loaners. Ask your sales representative for full details when placing an order.

HHM2-IR meter is an on/off switch along with six pushbuttons to select from among a variety of unique additional functions. These include a "TEMP" function, which selects IR/thermocouple input T1, T2 or the differential. The "Ω ZERO" function compensates for the resistance of the test leads when taking resistance measurements. "DISPLAY HOLD/SPEAK" selects continuous or on-demand speech or freezes the display. The "SPEECH" button turns the speech function on and off. °C/°F

switches the temperature units. "AC/DC" similarly switches between ac and dc measurements. Included with each HHM2-IR is a set of test leads for measuring voltage, current and resistance. The red lead handle includes a convenient pushbutton to easily operate the speech function while holding the leads. An optional pistol grip type K thermocouple handle is also available with a similar pushbutton to activate the voice function remotely for temperature measurements.



## Meter Specifications

**Power Supply:** 9 V battery or 230 Vac adaptor (included)  
**Battery Life:** Approx. 150 hrs/no speech/approx., 30 hrs continuous speech; alkaline battery  
**Ambient Operating Conditions:** 0 to 50°C; 0 to 80% RH  
**Storage Temperature:** -10 to 60 °C  
**Dimensions:** 6 H x 8 W x 14 cm D  
**Weight:** 0.5 kg, including battery, fuses, speech module

## Current Measurement

| Range  | Resolution | Accuracy   |          |
|--------|------------|------------|----------|
|        |            | dc         | ac       |
| 400 mA | 0.1 mA     | ±0.5% ±2 d | ±2% ±2 d |
| 4 A    | 1 mA       | ±1% ±2 d   | ±2% ±2 d |

Note: ac bandwidth is 50 to 20 kHz; 50 Hz to 5 kHz for signals > 40 mA in 400 mA range, for signals < 0.4 A in 4 A range.

**Ranges:** The 400 mA and 4 A current ranges have separate, individually fused inputs.

## Type-K Temperature Measurement

| Range          | Resolution | Accuracy |        |
|----------------|------------|----------|--------|
|                |            | HHM2     | HHM2A  |
| -200 to -150°C | 0.1°C      | ±12°C    | ±1.5°C |
| -328 to -238°F | 0.2°F      | ±24°F    | ±3.0°F |
| -150 to -100°C | 0.1°C      | ±6.0°C   | ±1°C   |
| -238 to -148°F | 0.2°F      | ±12°F    |        |
| -100 to -50°C  | 0.1°C      | ±3.0°C   |        |
| -148 to -58°C  | 0.2°F      | ±6.0°F   |        |
| -50 to 0°C     | 0.1°C      | ±1.5°C   |        |
| -58 to 32°F    | 0.2°F      | ±3.0°F   |        |
| 0 to 999°C     | 0.1°C      | ±1.0°C   |        |
| 32 to 999°F    | 0.2°F      | ±2.0°F   |        |
| 1000 to 1372°C | 1°C        | ±1°C     |        |
| 1000 to 2502°F | 1°F        | ±2°F     |        |

**Functions:** Dual input, with differential measurement capability (T1, T2, T1-T2)

**Input Type:** Type K thermocouple

**Units:** User selectable °C or °F

**Input Protection:** 24 V rms or 60 Vdc max. input voltage on any combination of input pins

**Common Mode Voltage:** 0.5 V max., between T1 and T2 during measurement

## Voltage Measurement

| Range             | Resolution | Accuracy         |                  |
|-------------------|------------|------------------|------------------|
|                   |            | dc               | ac               |
| 400 mV            | 0.1 mV     | ±0.25% ±2 digits | ±0.25% ±2 digits |
| 4 V               | 1 mV       |                  |                  |
| 40 V              | 10 mV      |                  |                  |
| 400 V             | 100 mV     |                  |                  |
| 1000 Vdc/ 750 Vac | 1 V        |                  |                  |

## Resistance Measurement

| Range  | Resolution | Accuracy         |  |
|--------|------------|------------------|--|
|        |            | Accuracy         |  |
| 400 Ω  | 0.1 Ω      | ±0.25% ±2 digits |  |
| 4 kΩ   | 1 Ω        |                  |  |
| 40 kΩ  | 10 Ω       |                  |  |
| 400 kΩ | 100 Ω      |                  |  |
| 4 MΩ   | 1 kΩ       |                  |  |
| 40 MΩ  | 10 kΩ      | ±0.5% ±2 digits  |  |

**Input Protection:** 400 mA/250 V fast acting fuse, 400 mA range; 4 A/250 V fast acting fuse, 4 A range

**Input Protection:** 250 V rms ac or dc

**Autorangeing:** Unit autoranges over all six ranges

**Digital Ohms Zero:** Nulls out test lead impedance for low resistance readings in the 4000 Ω range

**NEW!** Complete kit with infrared pyrometer!



## Non-Contact Infrared Specifications

**Temp Range:** -18 to 538°C  
**Accuracy:** ±3% of Reading or 2.2°C  
**Repeatability:** ±1% of Reading  
**Spectral Response:** 8 to 14 microns  
**Optical Field of View:** 6:1 (Distance/Spot Size)  
**Response Time:** 150 msec (0 to 63% of final value)  
**Emissivity:** Adjustable from 0.1 to 1.00  
**Analogue Output:** K-type Thermocouple (Compensated)  
**Output Connection:** (Universal Type-K Female) accepts both miniature and standard male Type-K connectors  
**Power:** 3.5 V Lithium Battery, (AA), 1900mAh  
**Low Power Indicator:** Flashing LED  
**Ambient Operating Conditions:** 0 to 50°C; Less than 95% RH (Non-Condensing)  
**Dimensions:** 2.5 x 5 x 10 cm  
**Weight:** 100 g  
**Sighting Type:** Built-In laser (Circle/Dot Combined)  
**Laser Wavelength (Colour):** 630-670 nm (Red)  
**Max Laser Power:** Less than 1 mW  
**Safety Classification:** Class 3A  
**Beam Diameter:** 5 mm  
**Beam Divergence:** Less than 2 mrad  
**Laser Power Switch:** Momentary  
**Laser Power Indicator:** Flashing Red LED

## To Order (Specify Model Number)

| Model No.    | Price | Description   |
|--------------|-------|---|
| HHM2-IR-230  | £286  | High performance DMM/Pyrometer <i>Includes One English Voice Chip</i>                           |
| HHM2A-IR-230 | 327   | Extra high performance DMM/Pyrometer <i>Includes One English Voice Chip</i>                     |
| HHM1-FR      | 28.50 | Plug-in speech chip - French  |
| HHM1-SP      | 28.50 | Plug-in speech chip - Spanish   |
| HHM1-GR      | 28.50 | Plug-in speech chip - German  |
| HHM1-JP      | 28.50 | Plug-in speech chip - Japanese  |
| HHM1-EG      | 28.50 | Add'l English speech chip   |
| SDX-HHM1     | 28.50 | Pistol grip thermocouple handle with speech actuator button and KMQSS-125G-6 thermocouple probe |
| HHM2-SC      | 12.25 | Spare soft case   |
| STS-2X-IEC   | 65    | Solder iron tip temperature tester  |
| STS-3X       | 65    | Solder iron tip temperature tester module   |
| STS-H        | 49    | Replacement sensor for STS testers  |
| STS-RE       | 49    | Replacement element for STS-H (3 pack)  |
| STS-RT       | 49    | Replacement thin arm element for STS-H (3 pack)   |

Each unit comes complete with IR Pyrometer Module, fuses, two beaded wire type K thermocouples, TAS standard-to-mini type-K transition adaptor, custom test leads, English speech chip, earphone, soft carrying case, 9V battery, 230 Vac adaptor and manual.

**Note:** The OMEGASAYS™ Meter was designed, engineered and calibrated in the USA. Partial assembly is done in Taiwan. The OMEGASCOPE™ IR Pyrometer Module and Patented Laser Sighting is made in the USA.

**Ordering Example:** HHM2-IR-230, very high performance DMM/IR Pyrometer with English speech chip, plus SDX-HHM1 thermocouple probe and handle with speech button, £286 + £28.50 = £314.50.

