

True RMS AC/DC Clamp-on Multimeters for Professional Use**Accurate, Rugged, Versatile
and Reliable**

- *Three models: 200A, 1,000A and 2,000A*
- *AC and DC Amps, Volts, Ohms, Diode and Continuity Test*
- *Large jaw capacity takes 50mm \varnothing or 2 x 30mm \varnothing cables*
- *True RMS measurement of complex waveforms and analysis of AC and DC current components*
- *Autoranging and Auto-zeroing*
- *Excellent accuracy, even for distorted or non-sinusoidal A and V*
- *Display-Hold and Max-Hold (surge) modes for convenience in use*
- *Analogue outputs for recorder, logger or oscilloscope*
- *Conformance to IEC1010 and EMC standards*

High Accuracy

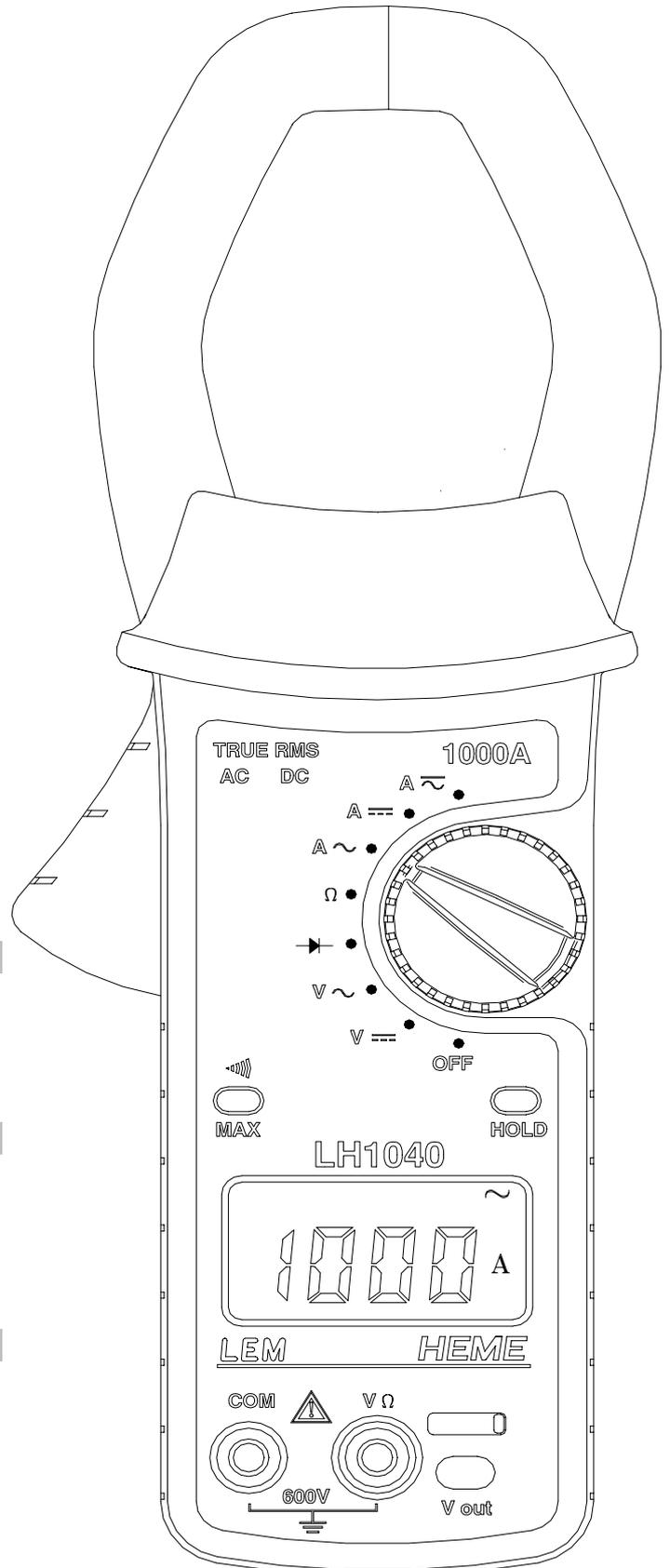
Advanced jaw design means that 40-series accuracy is little affected by external magnetic fields or off-centre conductor positioning. Utilisation of Hall effect technology ensures a broad flat frequency response resulting in optimum accuracy even when harmonics are present.

True RMS measurement

By using True RMS measurement techniques the 40-series instruments avoid errors (up to 50%) which can occur when non-sinusoidal waveforms created by today's complex loads are measured using traditional average-reading techniques. True RMS measurements are available for AC, DC (A,V) and AC+DC (A).

IEC 1010 and EMC Conformance

IEC 1010 safety features including a tactile barrier and special jaw design provide the user with confidence when making measurements in hazardous voltage areas. Conformance to EMC standards ensures high reliability through reduced susceptibility to electromagnetic interference.



SPECIFICATIONS

MODEL	LH240	LH1040	LH2040
NON-INVASIVE CURRENT MEASUREMENT			
Ranges (auto-ranging)	40A, 200A	400A, 1,000A	400A, 2,000A
Measurement methods	DC or AC True RMS, or DC only		
Resolution	10mA (40A range) 100mA (200A range)	100mA (400A range) 1A (1,000A range)	100mA (400A range) 1A (2,000A range)
Accuracy	± 1.3% of reading ± 3 digits (1)		
Crest Factor	6 maximum for True RMS measurements		
Maximum measurable load	200A DC or AC peak	1,000A DC or AC peak	2,000A DC or AC peak
Maximum overload	10,000 Amps		
ANALOGUE OUTPUT (2)			
Switchable Instantaneous or RMS (100 ms) output	5 mV / A	1 mV / A	0.5 mV / A
Analogue output accuracy	± 1.3 % of reading ± 1 mV (1)		

VOLTAGE MEASUREMENT

Methods of measurement	AC True RMS or DC (4)
Maximum overload	1,000V
Ranges (auto-ranging)	400V, 600V
Accuracy	± 1% of reading ± 3 digits (1)
Resolution	100mV (400V range); 1V (600V range)
Crest Factor	6 for V < 1,000 V peak
Input impedance	1MΩ

RESISTANCE, CONTINUITY AND DIODE TESTING

Ω ranges (auto-ranging)	400 Ω, 4 kΩ
Ω resolution	0.1 Ω (400 Ω range), 1 Ω (4 kΩ range)
Ω accuracy	± 1% of reading ± 3 digits (1)
Continuity sounder (Ω range only)	Toggled on & off by))) button; Sounds when resistance < 50 Ω
Input protection, Ω & diode-test	To 600 V, DC or sinewave RMS
Diode test 3.2V max. open circuit, 0.3mA short-circuit	Reads forward-biased diode voltage to 2,000 mV
Diode-test accuracy	± 1% of reading ± 2 digits

FREQUENCY RESPONSE

(Measurements and Analogue Output)	
AC only True RMS V & A	15 Hz - 1kHz (3, 4)
DC True RMS A	DC + 15Hz to 1kHz (3, 4)
DC V and A	DC only

DISPLAY

Size and type	4000-count LCD 12mm / 0.5-inch characters
Status indication	Low Battery, Data Hold, Pk (MAX Hold), AC, DC, Diode Test, Ω,))) (Continuity)
Refresh rate	3 times per second

POWER SUPPLY

Battery type	9 V Alkaline: MN1604, PP3, IEC 6LR61 or equivalent
Battery life	Typically 40 hours

MECHANICAL DATA

Dimensions (H x W x D);	251 x 98 x 52 mm 9.88 x 3.86 x 2.05 inches
Weight	500 gm / 1.1 lbs
Jaw Capacity	1 x 50mm / 2.0-inch Ø cable or 2 x 30mm / 1.2-inch Ø cables
Jaw Opening	55mm / 2.2 inches

ENVIRONMENTAL DATA

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Temperature Coefficient (Current)	± 0.1 % of reading per °C ± 0.06 % of reading per °F
Storage Temperature	-20° to 60° (-4 °F to 140 °F)

SAFETY

All models comply with IEC1010-1, 600V working, Installation category III, Pollution degree 2.

MAXIMUM SAFE VOLTAGES

Current measurement (bare conductors)	600V AC RMS or DC between uninsulated conductor & ground
Voltage measurement	600V AC RMS or DC between input terminals or between live terminal & local ground.

Notes:

- All accuracies stated at 23°C ± 1 °C (73.4 ± 1.8 °F)
- Analogue output is from plug-in adaptor with standard BNC output socket
- At stated accuracy; extend to 5 kHz for -3dB.
- True RMS measurements taken over 100 ms

LEM

The LEM group offer a wide range of non-invasive transducers, probes and instrumentation for the measurement and analysis of current, voltage and power.

Since the introduction of the world's first digital AC/DC clamp-on ammeter in 1982, LEM HEME has continued to provide innovative test and measurement solutions encompassing current measurement from 5mA to 2,000A

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