

## 2. SPECIFICATION

### 2.1 Electrical data

(All accuracies stated at 23°C ± 1°C)

#### 2.1.1 Current measurement

(DC, DCRMS\*, ACRMS)

##### LH240

Measuring range.....	0 - 200A DC or AC pk
Autorange facility.....	40A / 200A
Resolution.....	10mA in 40A range 100mA in 200A range
Accuracy   > 5A.....	± 1.3% rdg ± 3 digits
< 5A.....	± 0.2A

##### LH1040

Measuring range.....	0 - 1000A DC or AC pk
Autorange facility.....	400A / 1000A
Resolution.....	100mA in 400A range 1A in 1000A range
Accuracy   > 15A.....	± 1.3% rdg ± 3 digits
< 15A.....	± 0.5A

##### LH2040/LH2015

Measuring range.....	0 - 2000A DC or AC pk
Autorange facility.....	400A / 2000A
Resolution.....	100mA in 400A range 1A in 2000A range
Accuracy   > 25A.....	± 1.3% rdg ± 3 digits
< 25A.....	± 1.0A
Frequency range.....	DC and 15Hz to 1kHz in DCRMS 15Hz to 1kHz in ACRMS

Frequency characteristics above 1kHz

Signal Amplitude.....	3dB @ 5kHz 6dB @ 10kHz
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Crest factor..... 6 maximum

Maximum overload..... 10,000A or ACRMS x  
frequency < 400,000

Amps ACRMS or DCRMS\* offer AC or DC coupling of  
the amps measurement respectively.

### 2.1.2 Max RMS Current

This function is actuated by pressing MAX/ ))) when in  
DC, DCRMS\*, ACRMS Amps. No polarity indication is  
given for DC readings. Typical acquisition time is  
100ms

Accuracy.....	± 2% rdg ± 4 digits
Frequency Range.....	DC and 15 Hz to 1kHz in DCRMS * 15 Hz to 1kHz in ACRMS
Crest Factor.....	6 maximum

### 2.1.3 Voltage measurement\*

(DC, ACRMS)

Measuring range.....	0-600V
Autorange Facility.....	400V / 600V
Resolution.....	100mV in 400V range 1V in 600V range
Accuracy AC/DC.....	± 1% rdg ± 3 digits
AC < 20V.....	± 1V
Frequency Range.....	DC in DC 15 Hz to 1kHz in ACRMS
Maximum Overload.....	1000V
Crest Factor.....	6 maximum

### 2.1.4 Max RMS Voltage \*

This function is activated by pressing MAX/ ))) when in  
DC or ACRMS. No polarity indication is given in DC.  
Typical acquisition time is 100ms

Accuracy.....	± 2% rdg ± 4 digits
Frequency Range.....	15 Hz to 1kHz in ACRMS
Crest Factor.....	6 maximum

### 2.1.5 Diode Test \*

Measurement of the voltage drop across a forward  
biased diode.

Measuring range.....	0-2V
Resolution.....	1mV
Accuracy.....	± 1% rdg ± 2 digits
Input protection.....	600V (DC or sinewave RMS)

### 2.1.6 Resistance Measurement \*

Measuring range.....	0-4 k $\Omega$
Autorange Facility.....	400 $\Omega$ /4k $\Omega$
Resolution.....	100m $\Omega$ in 400 $\Omega$ range 1 $\Omega$ in 4k $\Omega$ range
Accuracy.....	$\pm 1\%$ rdg $\pm 3$ digits
Input protection.....	600V (DC or sinewave RMS)

### 2.1.7 Continuity \*

This function is actuated by pressing the MAX( ))) button when in  $\Omega$  measurement. The buzzer will sound for values of resistance below  $\approx 50\Omega$ .

### 2.1.8 Analogue Output (Current Measurement) \*

An analogue output of the measured current is provided for use with oscilloscopes and recording equipment. This can be accessed when the voltage input terminals are blocked off by the sliding safety cover. The output, either instantaneous or rms, is switch selectable by a slider switch located in the battery compartment.

#### **SAFETY WARNING**

**Before removing the battery cover, make sure that all external voltages are disconnected from the instrument. For certainty remove all leads.**

Output voltage in all ranges:

LH240.....	5mV/A
LH1040.....	1mV/A
LH2040.....	0.5mV/A
Accuracy.....	$\pm 1.3\%$ rdg $\pm 1$ mV (RMS) $\pm 1.3\%$ rdg $\pm 7$ mV (Instantaneous)
Frequency Range .....	DC -1kHz Instantaneous DC and 15Hz to 1kHz true RMS
Frequency characteristics above 1kHz.	
Signal / Amplitude.....	3dB @ 5kHz 6dB @ 10kHz

The analogue output adapter plugs into the front of the instrument and the output is obtained from a standard BNC plug.

### 2.2 General Data

#### 2.2.1 Display

Display 4000 count 12mm high characters.



	Low battery indicator
Pk	Max RMS Amps or Volts
	AC
	DC, DCRMS *
	Diode *
$\Omega$	Ohms *
)))	Continuity *
	Hold

#### 2.2.2 Power Supply

Battery Type 9V Alkaline PP3 ,NEDA1604 or IEC 6LR61

Battery life typically 40 hours continuous operation.

#### 2.2.3 Environmental

##### **FOR INDOOR USE ONLY**

Reference conditions. All accuracies stated at 23°C  $\pm 1$ °C

Temperature coeff. of current  $\pm 0.1\%$  of rdg per °C

Operating Temperature 0°C to 50°C (32°F to 122°F)

Maximum Relative Humidity 80% for temperatures up to 31°C (87°F) decreasing linearly to 50% Relative Humidity at 40°C (104°F)

Storage Temperature -20°C to +60°C (-4°F to 140°F)

Maximum operating altitude 2000m.