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# ANALYST

# 2000P 2020P

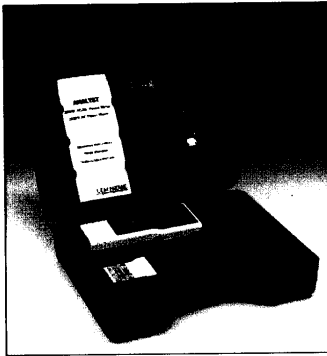


# *Hand Held Power Meters*

# **LEM**

**LEM HEME LIMITED**

# More than just a power meter . . .



- **2000P AC/DC POWER/MULTIMETER**
- **2020P AC POWER/MULTIMETER**
- **3PA THREE PHASE ADAPTOR**
- **PCL1 DIGITAL INTERFACE**
- **HC1 HARD CASE**

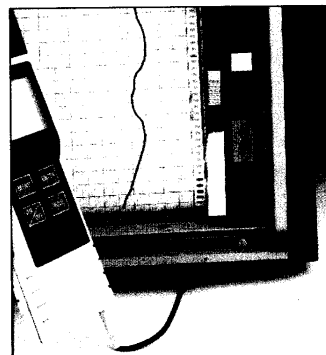
## . . . a total measurement solution

### *Clamp-on current measurement*



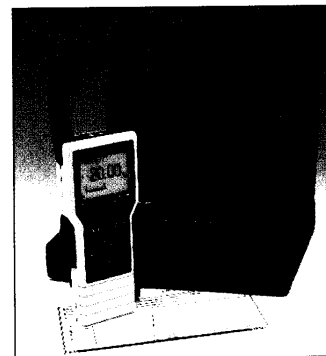
The Analyst takes portable power measurement instrumentation into new territory. The microprocessor-controlled Analyst incorporates multimeter and oscilloscope functions in its impressive array of measurement options. The clamp-on design allows current measurement up to 2000A without breaking into the circuit.

### *Chart recorder and oscilloscope outputs*



Standard accessories include voltage test leads, instrument carrying case and analogue output lead for use with chart recorders and oscilloscopes.

### *Digital interface for data logging*



Optional accessories include:

#### **PCL1**

**Digital Interface and Software**  
Allows data logging of A, V, kW, kVA  $\cos\phi$ ,  $\phi$ ,  $\Omega$  and Hz on a personal computer for further analysis. Logging intervals from 2 seconds to 20 minutes. The interface is compatible with all new Analyst instruments.

#### **3PA**

##### **Three Phase Adaptor**

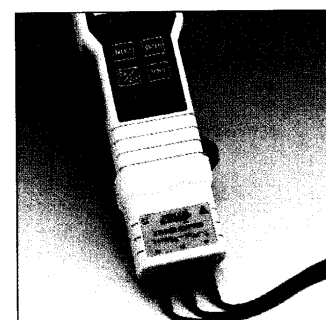
Enables measurements to be made on three phase systems when the neutral conductor is inaccessible.

#### **HC1**

##### **Hard Carrying Case**

For the Analyst and complete range

### *Three Phase*



The Analyst combines the features of several instruments in one package, providing the operator with new levels of confidence in electrical measurement without the need for additional on-site equipment. Measurement features include:

- Oscilloscope mode for voltage and current waveforms.
- Autoranging digital and bar graph displays.
- Isolated current measurement to 2000A Pk.
- Voltage to 750V RMS.
- True Power and Apparent Power: DC - 2000kW/kVA Max. AC - 1000kW/kVA Max.
- True RMS, Peak, Average and Surge measurement options.
- Selectable 100Hz Filter.
- Frequency measurement to 1000Hz.
- Resistance to 400K $\Omega$ .
- Diode and continuity test.
- Analogue and Digital Outputs.

DC functions and analogue output are unique to the 2000P.

## SPECIFICATION

Function		2000P	2020P	Range	Accuracy
<b>CURRENT A</b> Max overload 10,000 A	DC	✓		40/400/2000A Peak autoranging 8-400A, 40-2000A	± 1% range
	AC RMS	✓	✓		
	DC RMS	✓			± 3.5% range
	Average	✓	✓		
	Peak	✓			± 2% range
	Filtered	✓	✓		
Surge	✓	✓	± 2% range		
<b>VOLTAGE V</b> Max overload 1000 V	DC	✓		40/400/1000V RMS autoranging	± 0.5% range
	AC RMS	✓	✓		
	DC RMS	✓			± 3.5% range
	Average	✓	✓		
	Peak	✓			± 1% range
	Filtered	✓	✓		
<b>POWER W/VA</b>	AC RMS	✓	✓	4/40/400/1000kW/kVA	± 2% range
	DC RMS	✓		4/40/400/2000kW/kVA	
<b>POWERFACTOR</b>	Cos $\phi$	✓	✓	0.3 cap. - 0.3 ind. 72.5° cap. - 72.5° ind.	± 3°
<b>FREQUENCY</b>	Hz	✓	✓	10-1000Hz	± 0.5% range
<b>RESISTANCE</b>	$\Omega$	✓		4/40/400K $\Omega$	± 1% range
<b>CONTINUITY</b>		✓		0-800 $\Omega$ Buzzer < 120 $\Omega$	± 1% range
<b>DIODE TEST</b>		✓		0 - 2V	± 2% range
<b>Analogue Output</b>		✓		400mV Full Scale	± 1% range
<b>Digital Interface</b>	PCLI	✓	✓	Optional Accessories	
<b>3-Phase Adaptor</b>	3PA	✓	✓		
<b>Hardcase</b>	HC1	✓	✓		

## GENERAL DATA

### Dimensions

L x W x D

280 x 98 x 52mm

### Weight

850g

### Max. Conductor Size

60mm

Circular

22 x 68mm

Rectangular

### Power Supply

9V Alkaline Battery

(approx. 10 hours  
continuous use)

### Safety

Maximum voltage  
between uninsulated  
current carrying  
conductor and ground  
1000V RMS. Voltage  
withstand 6KV, 50 Hz  
for 1 minute

### Display

Dot matrix LCD,  
characters 13mm high,  
4 digit. Display facilities:  
22 segment bar graph,  
low battery and  
polarity indications.

Voltage and current ranges for frequency and power factor measurement are 20-750V RMS and 10-2000A Peak.

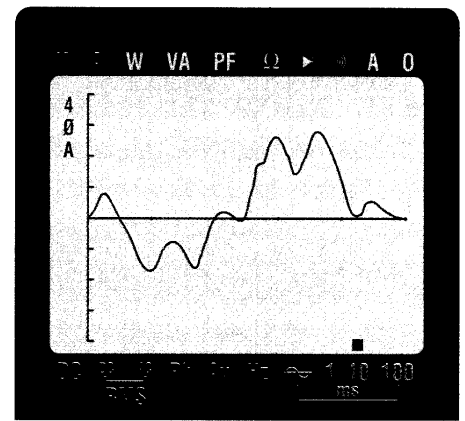
Maximum overload for resistance, continuity and diode test is 500V.

For True RMS measurement, maximum crest factor is 6.

# The Analyst and Harmonics

The Analyst uses advanced Hall Effect technology for current measurement. This approach ensures a broad, flat frequency response which is essential for accurately monitoring the presence of harmonics.

The oscilloscope display mode provides a simple and fast method for identifying distorted signals caused by harmonics. The ability to measure both true RMS and average current and a switchable 100Hz filter allows detection of harmonics through comparison of readings.



Distorted waveform due to harmonics  
Average  $I \times 1.11 < \text{True RMS } I$

## Other Products from LEM HEME

### PR20, PR30, PR200, PR1001 AC/DC Current Probes

A new range of high performance AC/DC current probes for use with oscilloscopes, multimeters and recording equipment. The compact clip-on design conforms to the IEC 1010 safety standard and allows non-intrusive measurement of current from 5mA to 1000A peak. Utilising Hall Effect technology, the probe range will accurately measure AC, DC and complex waveforms.

- Frequency ranges up to 100kHz
- 1% Accuracy
- Compact and self-contained



### H600 AC/DC Clip-on Multimeter

This versatile instrument replaces both multimeter and clampmeter. The H600 uses clamp-on Hall Effect technology to measure AC and DC currents up to 600A and test lead inputs for voltage and resistance.

- AC or DC Selectable
- 1% Accuracy
- Voltage up to 750V
- Resistance up to 2000Ω
- Continuity Test



Information on the full range of products available from LEM HEME can be obtained from LEM subsidiaries and authorised distributors worldwide.

Distributor



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*LEM HEME LIMITED have a policy of continual product improvement and the*