AMPROBE®

LH41A

Clamp On Ammeter

User Manual

- Mode d'emploi
- Bedienungshandbuch
- Manual d'Uso
- Manual de uso
- Användarhandbok

AMPROBE®

LH41A

Clamp On Ammeter

Users Manual

English

April 2007, Rev.2

International Electrical Symbols	
⚠	Caution! Refer to this manual before using the meter
⧈	Meter is protected by Reinforced or Double Insulation
CE	Complies with EU directives
	Indicates this equipment should for disposal be seperated as Waste Electrical and Electrical Equipment according to the EU directive 2002/96/EG
	Indicates item is a Type A Current sensor and that application around removal from HAZARDOUS LIVE conductors is permissible

CONTENTS **Page**

INTRODUCTION

The LH41A current clamp meter has been designed for reliable and accurate non-intrusive measurement of DC and AC currents using advanced Hall Effect technology.

Measurement features include:

- Non - intrusive AC and DC current measurement
- 1mA resolution
- Average responding, RMS calibrated
- Autoranging/ Autozeroing
- Data Hold
- Low battery indicator
- Auto Power Off

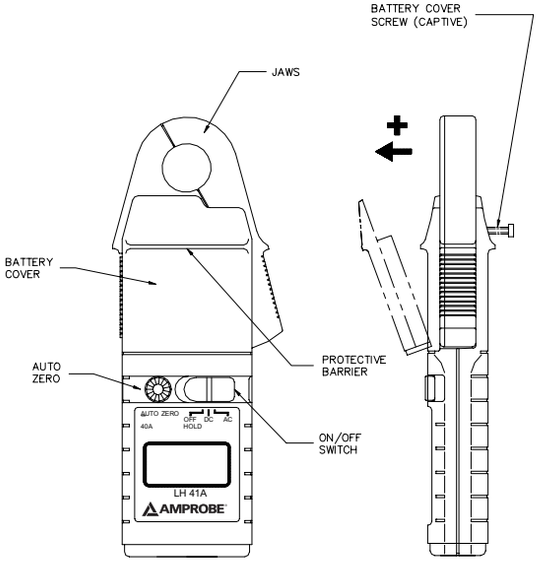

Fig. 1

SPECIFICATIONS

2.1 Electrical Data

(All accuracies stated at 23°C ± 1°C)

LH41A

Measuring Range	0 - 40 A DC or AC pk
Autoranging	4A / 40A
Resolution	1 mA in 4 A range
	10 mA in 40 A range
Accuracy	
Basic Accuracy	± 1.3% + 5 digits
Temperature coefficient	± 0.05% of rdg / °C
Frequency range	DC in DC
	40 Hz to 400 Hz in AC
Overload capacity	150 A
Dielectric strength	3.7 kV RMS. 50 Hz 60s

(EN61010-2-032 Cat III, 300V Pollution Degree 2)

2.2 General Data

Operating temperature	0°C to + 50°C
Storage temperature with	
Battery removed	- 20°C to + 60°C
Power supply	9 V, Alkaline battery
	PP3, NEDA 1604 or
	IEC6LR61
Battery life	15 hours dependent
	duty cycle
Display	4000 count
Characters	10 mm high

Mechanical

LH41A

Dimensions	184 x 71 x 31 mm (7.2 x 2.8 x 1.2 in.)
Max. jaw capacity	19 mm ø cable
Max. jaw opening	20 mm (.78 in.)
Weight	235 g (1.2 Lb)

OPERATING INSTRUCTIONS

Refer to Fig. 1 for the main operating features of the meter.

3.1 Switch On

Move the switch from the OFF / HOLD position to either DC or AC to select the required mode of operation.

3.2 Zero Adjustment

When in DC mode the display zero may change due to thermal shifts and other environmental conditions. An auto zero adjustment is provided. Proceed as follows to perform the adjustment:

- Ensure that the instrument is away from the current carrying conductor and that the jaws are closed during the adjustment cycle.
- Select the DC position of the power switch.
- Use the auto zero button to zero the display if necessary.

The auto zero button can be used to null the effects of the earth's magnetic field on DC measurements.

3.3 Current Measurement

Select as required the DC or AC measurement option using the power switch.

If necessary adjust the DC display to read zero as described in section 3.2. Clamp the jaws of the instrument around the conductor ensuring a good contact between the closing faces of the jaws.

Observe and take measurements as required. Positive output indicates that the current flow is in the direction shown by the arrow on the instrument.

3.4 Data Hold

To activate the data hold, turn the power switch to the OFF / HOLD position. The data will be held on the display for approximately 10 seconds.

3.5 Auto Power Off

The meter will power down automatically after approximately 8 minutes of inactivity.

SAFETY

This product conforms to the latest directives concerning safety and electromagnetic compatibility.

- European Low Voltage Directives 73/23/EEC and 93/68/EEC
- European EMC Directives 89/336/EEC and 93/68/EEC

Safety Standards

BSEN61010-1: 2001. General Requirements.
Safety requirements for electrical equipment for measurement, control and laboratory use.

BSEN61010-2-032: 2002. Particular requirements for hand held current clamps for electrical measurement and test.

EMC Standards

RF Susceptibility

EN50082-1: 1992 3V/m Residential, Commercial and Light Industry

RF Emissions

EN50081-1: 1992 Residential, Commercial and Light Industry

FCC Part 15 Class B

This product is designed to be safe under the following conditions:

- indoor use
- altitude up to 2000m
- temperature 0°C to +50°C
- maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 40% relative humidity at 50°C.

Use of the meter on **uninsulated conductors** is limited to 300V RMS or DC and frequencies below 1kHz.

This meter complies with the requirements of the above safety standard for 300V Cat III Pollution degree 2

Safety in its use is the responsibility of the operator who must be a suitably qualified or authorised person.

Users of this equipment and or their employees are reminded that Health and Safety Legislation require them to carry out valid risk assessments of all electrical work so as to identify potential sources of electrical danger and risk of electrical injury such as from inadvertent short circuits.

Do not use the instrument if any part of it appears to be damaged or if a malfunction of the instrument is suspected.

When using the instrument ensure that your fingers are behind the **protective barrier** see Fig. 1

Clean the case periodically by wiping it with a damp cloth and detergent. Do not use abrasive cleaners or solvents. Do not immerse the instrument in liquids.

BATTERY REPLACEMENT

SAFETY WARNING

Before removing the battery cover, make sure that the instrument is removed from any live electrical circuit.

When the Low Battery symbol is illuminated in the display the minimum operating battery voltage has been reached. Refer to Fig.1. and use the following procedure to replace the battery.

Unclamp the meter from the conductor, turn it off using the OFF / Hold power switch. Loosen the captive screw which secures the battery cover. Lift the cover through 30° and pull it clear of the instrument body as shown in Fig1. The battery is then accessible. Replace the battery and re-fit the battery cover and fasten the screw.

Replacement with other than the specified type of battery will invalidate the warranty. Fit only Type 9 V PP3, Alkaline (MN1604).