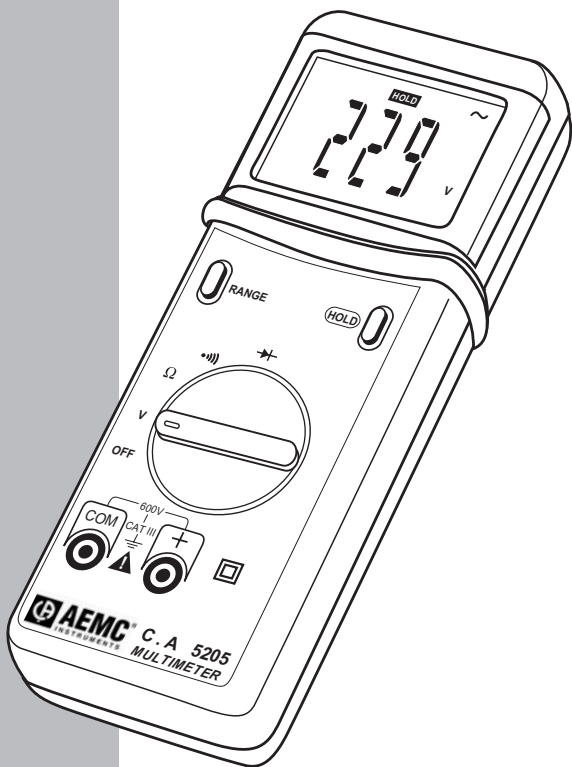


■ MULTIMETER

Digital Multimeter Model C.A 5205



ENGLISH

User manual

Meaning of the symbol

Warning ! Please refer to the User's Manual before using the instrument.

In this User's Manual, the instructions preceded by the above symbol, should they not be carried out as shown, can result in a physical accident or damage the instrument and the installations.

Meaning of the symbol

This device is protected by a double insulation or by a reinforced insulation. No linking is required from the protection earth terminal to ensure the electrical security.

Thank you for purchasing a C.A 5205 Multimeter. To get the best service from this instrument :

- read this user's manual carefully,
- respect the safety precautions detailed.



SAFETY PRECAUTIONS



- Never use on voltage to earth circuits above 600 V, with a voltage surge category of over III, that is to say, fixed industrial and domestic installations (ref. IEC 664-1).
- To be used indoors in environments with a maximum pollution degree of 2 (ref. IEC 664-1), a temperature between 0 and 50°C and relative humidity below 70%.
- Use accessories which conform to safety standards (IEC 1010-2-031), with a minimum voltage of 600 V and a voltage surge of category III.
- Never open the multimeter case before disconnecting from any electrical source.
- Never connect up to a circuit to be measured if the multimeter case is not closed correctly.
- Before any measurements are taken, ensure the leads and switch are in the correct positions.
- Never measure resistances on a circuit with the power switched on.

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1 - PRESENTATION

The C.A 5205 is designed for the daily needs of professionals in electricity.

- 2000 counts
- Automatic recognition of AC and DC
- Automatic or manual range selection

Various measurement accessories broaden the scope of application or provide the multimeter with new functions.

See the list of accessories and references on the “To Order ” page (Documentation upon request).

Note: Always use accessories suitable for the voltage and the voltage surge category of the circuit to be measured (as per IEC 1010).

2 - DESCRIPTION

① LIQUID CRYSTAL DISPLAY

■ 2000 measurement counts (height of digits 0.65")

Rate : 2 measurements / second

■  : low battery indication

■ Overload indication : the 1 on the left flashes

② CONTROL BUTTONS

HOLD Hold button freezes the measurement on display

RANGE

Range selection : Press the range button to change from automatic mode to manual mode. The automatic mode is selected when the instrument is switched on.

Note : The 200 mV AC range is only accessible on manual.

Press 3 times on the RANGE button to access this range.

③ FUNCTION SELECTOR SWITCH

OFF Off position

V DC and AC voltages up to 600 V

 Continuity sound test for a resistance $R < 700 \Omega$

Ω Resistances up to 20 M Ω .

④ TERMINALS

Ø 4 mm safety terminals

■ COM : common, black

■ + : red

3 - DC AND AC VOLTAGE

■ Connect the leads to the multimeter and connect it in parallel to the circuit to be tested.

■ Place the selector switch on the voltmeter function V. Automatic selection of the range and the DC or AC mode; read the value measured.

■ Freeze the value, if necessary, by pressing the HOLD button.

V DC and AC (1)	200 mV	2 V	20 V	200 V	600 V
Resolution	0.1 mV	1 mV	10 mV	100 mV	1 V
Impedance	3 M Ω				
Accuracy	on DC : $\pm 1\%$ reading ± 1 count on AC : $\pm 1\%$ reading ± 5 counts				
Permitted overload	600 V rms and 900 V peak				

(1) Use on frequency : 40 Hz to 500 Hz

Min. threshold on V AC : 25 mV from 40 Hz to 100 Hz and 300 mV from 100 Hz to 500 Hz

Min. threshold on V DC : 10 mV

4 - RESISTANCE



Never test a resistance on a live circuit

- Connect the leads to the multimeter and to the circuit or the component to be tested.
- Place the selector switch on the ohmmeter function Ω
- Automatic range selection : read the measured value
- Freeze the value, if necessary, by pressing the HOLD button.

Ω	200 Ω	2 k Ω	20 k Ω	200 k Ω	2 M Ω	20 M Ω
Resolution	0.1 Ω	1 Ω	10 Ω	100 Ω	1 k Ω	10 k Ω
Accuracy	$\pm 1.5\%$ rdg ± 5 counts	$\pm 1.5\%$ rdg ± 3 counts	$\pm 3\%$ rdg ± 5 counts			
Voltage on open circuit	≤ 0.5 V					
Protection	500 V rms and 750 V peak					

5 - CONTINUITY BEEPER

- Place the selector switch on the function
- Continuous audible beep emitted for a resistance $R \leq 700 \Omega$

6 - DIODE TEST



Never test a diode on a live circuit

- Connect the leads to the multimeter and to the terminals of the component to be tested. With this function, it is possible to test, besides classic diodes, LED's or any other semiconductor in which the junction corresponds to a direct voltage less than 3V.


- Place the selector switch on the \rightarrow function :
 - in forward direction the display gives the value of the junction in V (resolution 1 mV)
 - accuracy : $\pm 2\%$ rdg ± 15 mV
 - open circuit voltage : 1.5V typical
 - short circuit current : 0.4 mA
 - in reverse direction the display indicates the open circuit voltage, around 2V.
- Freeze the value, if necessary, by pressing the HOLD button.
- Protection : idem Resistances

7- GENERAL SPECIFICATIONS

7-1 Dimensions and weight

- 2.5" x 7" x 1.7" (64 x 177 x 42 mm)
- 12.3 ounces (350 g)

7-2 Power supply

- Two batteries 1.5 V (type R6)
- Battery life : 300 h with R6 batteries
500 h with alkaline battery LR 6
- Low battery indication : 

Note : The voltage of the batteries is indicated approximately on the diode function on open circuit.

7-3 Buzzer

- Continuous beep for the continuity test
- Intermittent beep each time the switch or buttons are pressed, and for the overload indication.

7-4 Climatic conditions

- Temperature
 - Use : 0°C to +50°C
 - Storage: -20°C to +60°C
- Relative humidity
 - Use : ≤ 70 % RH
 - Storage : ≤ 90 % RH (up to 45°C)
- Altitude : use < 2000 m

7-5 Conformity with international standards

7-5-1 Electrical safety (IEC 1010-1)

- Double insulation : 
- Installation category : III
- Degree of pollution : 2
- Assigned voltage : 600V

Note : This multimeter, of overvoltage category III satisfies the severe requirements of reliability and availability corresponding to industrial and domestic permanent installations (IEC 664-1).

7-5-2 Electromagnetic compatibility : conforms to CE
■ Emission (EN 50081-1) ■ Immunity (EN 50082-1)

7-5-3 Mechanical protection

■ Degree of watertightness (IEC 529) : protection index IP 40

8 - TO ORDER

Use the designations and references below.

C.A 5205 Cat# 2116.73

Supplied with its shockproof case, a pair of leads with probes attached, two 1.5V "AA" batteries and this user's manual

Accessories and spares

■ AC current probe model MN 251 (200 A AC) Cat# 2115.77

■ AC current probe model MD 303 (500 A AC) Cat# 1201.21

■ AC current probe model SR 652 (1000 A AC) Cat# 2113.46

■ AC/DC current probe

model MR 410 (400 A AC / 600 A DC) Cat# 1200.70

■ AmpFLEX model 1000-24-1-1(1000 A AC) Cat# 2112.39

■ Replacement leads Cat# 2118.66

■ Soft carrying case Cat# 2118.65

■ Replacement shockproof case Cat# 2980.15

9 - WARRANTY

Our guarantee is applicable for three years after the date on which the equipment is made available (copy available on request).

10 - MAINTENANCE



For maintenance, use only specified spare parts.

The manufacturer will not be held responsible for any accident occurring following a repair done other than by its After Sales Service or approved repairers.

10-1 Replacing the batteries



The multimeter must be disconnected from any electrical source.

■ Place the selector switch on the " OFF " position.

■ Unscrew the tool release screws and remove the lower half of the case.

■ Replace the dead batteries by two " AA " 1.5V batteries (type LR6 or R6)

■ Refit the lower half of the case

10-2 Storage

If the multimeter is not put into service for a time exceeding 60 days, remove the batteries and store them separately.

10-3 Cleaning



The multimeter must be disconnected from any electrical source.

To clean the case, use a cloth slightly moistened with soapy water. Rinse with a damp cloth. Then, dry rapidly with a cloth or in a hot air stream.

10-4 Repair and calibration

To guarantee that your instrument complies with the factory specifications, we recommend that the Model C.A 5205 be submitted to our factory service center at one-year intervals for recalibration, or as required by other standards.

For instrument repair and/or calibration, please call our factory, toll-free, at (800) 945-AEMC (800-945-2362) :

CHAUVIN ARNOUX, Inc.
d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
Tel : (800) 954-2362
(603) 749-6434
Fax : (603) 742-2346

(Or contact your authorised distributor)

Estimates for repairs, normal recalibration, and and calibration traceable to N.I.S.T. are available upon request. Overseas customers must receive written authorisation before returning any instrument.

10-5 Technical and Sales Assistance

If you are experiencing any technical problems, or require any assistance with the proper use or application of this instrument, please call our technical hotline :

CHAUVIN ARNOUX, Inc.
d.b.a. AEMC® Instruments
200 Foxborough Blvd.
Foxborough, MA 02035 USA
Tel : (800) 343-1391
(508) 698-2115
Fax : (508) 698-2118

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