

# Professional Digital Multimeter Models CA5205, CA5210, CA5220, CA5230 & CA5240



The AEMC® Instruments CA5000 Series are designed for the daily needs of professional electricians. For the safety of the user, these multi-meters meet the most demanding international standards: double insulation in accordance with EN 61010-1-III-2, 600V, Cat. III.

These tough, reliable and economical Digital Multimeters (DMMs) feature a large backlit display, clear push-button functions, large rotary range selector and dedicated push buttons. The compact, handheld size along with the rugged, shockproof rubber holster makes this unit ideal for toolboxes and pockets.

Model CA5205 has a 2000-count display that is average sensing and provides 1% accuracy of Reading. Models CA5210, CA5220 and CA5230 have a 4000-count display are average sensing and provide 1% accuracy (Models CA5210 and CA5220), and 0.25% accuracy (Model CA5230) of Reading.

## Features

- Tough, reliable, economical, professional DMMs in choice of 2000-, 4000- and 40,000-count models
- Automatic AC/DC selection (Model CA5205)
- Large backlit display
- Clear pushbutton functions
- Large rotary range selector and dedicated push buttons
- Rugged, safety yellow, shockproof Multistand™ rubber holster for lead and probe storage
- Safety rated to EN 61010, 600V, Cat. III for protection against spikes and over-voltage
- Accurate average sensing or TRMS models for your linear loads and distorted signals
- Complete line of accessories including leads and industry's largest selection of current probes

## Applications

- Installation, repair or maintenance of industrial equipment
- Electrical field testing
- Troubleshooting failures and poor performance



Model CA5205 measuring resistance in a relay cabinet.

# Specifications

MODELS	CA5205 <sup>(3)</sup>	CA5210 <sup>(4)</sup>	CA5220	CA5230	CA5240
<b>DC VOLTAGE</b>					
Measurement Range <sup>(1)</sup>	5 Ranges: 200mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V
Resolution	0.1mV to 1V	0.1mV to 1V	0.1mV to 1V	0.1mV to 1V	10 $\mu$ V to 100mV
Basic Accuracy*	$\pm 1\%$ of Reading $\pm 1$ ct	$\pm 1\%$ of Reading $\pm 1$ ct	$\pm 1\%$ of Reading $\pm 1$ ct	$\pm 0.25\%$ of Reading $\pm 1$ ct	$\pm 0.1\%$ of Reading $\pm 3$ cts
Input Impedance <sup>(2)</sup>	3M $\Omega$	10M $\Omega$	10M $\Omega$	10M $\Omega$	3M $\Omega$
<b>AC VOLTAGE</b>					
Measurement Range <sup>(1)</sup>	5 Ranges: 200mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V	5 Ranges: 400mV to 600V
Resolution	0.1mV to 1V	0.1mV to 1V	0.1mV to 1V	0.1mV to 1V	10 $\mu$ V to 100mV
Basic Accuracy*	$\pm 1\%$ of Reading $\pm 5$ cts	$\pm 1.5\%$ of Reading $\pm 1$ ct	$\pm 1.5\%$ of Reading $\pm 1$ ct	$\pm 1\%$ of Reading $\pm 3$ cts	$\pm 1.5\%$ of Reading $\pm 20$ cts
Input Impedance <sup>(2)</sup>	3M $\Omega$	10M $\Omega$	10M $\Omega$	10M $\Omega$	3M $\Omega$
<b>DC CURRENT</b>					
Measurement Range <sup>(1)</sup>	–	–	3 Ranges: 40mA to 10A	3 Ranges: 40mA to 10A	3 Ranges: 40mA to 10A
Resolution	–	–	10 $\mu$ A to 10mA	10 $\mu$ A to 10mA	1 $\mu$ A to 1mA
Basic Accuracy*	–	–	$\pm 1.5\%$ of Reading $\pm 2$ cts	$\pm 1.2\%$ of Reading $\pm 5$ cts	$\pm 0.5\%$ of Reading $\pm 10$ cts
<b>AC CURRENT</b>					
Measurement Range <sup>(1)</sup>	–	–	3 Ranges: 40mA to 10A	3 Ranges: 40mA to 10A	3 Ranges: 40mA to 10A
Resolution	–	–	10 $\mu$ A to 10mA	10 $\mu$ A to 10mA	1 $\mu$ A to 1mA
Basic Accuracy*	–	–	$\pm 1.5\%$ of Reading $\pm 2$ cts	$\pm 0.8\%$ of Reading $\pm 4$ cts	$\pm 0.9\%$ of Reading $\pm 5$ cts
<b>RESISTANCE</b>					
Measurement Range	6 Ranges: 200 $\Omega$ to 20M $\Omega$	6 Ranges: 400 $\Omega$ to 40M $\Omega$	6 Ranges: 400 $\Omega$ to 40M $\Omega$	6 Ranges: 400 $\Omega$ to 40M $\Omega$	6 Ranges: 400 $\Omega$ to 40M $\Omega$
Resolution	0.1 $\Omega$ to 10k $\Omega$	0.1 $\Omega$ to 10k $\Omega$	0.1 $\Omega$ to 10k $\Omega$	0.1 $\Omega$ to 10k $\Omega$	0.1 $\Omega$ to 10k $\Omega$
Basic Accuracy*	$\pm 1.5\%$ of Reading $\pm 5$ cts	$\pm 1.5\%$ of Reading $\pm 3$ cts	$\pm 1.5\%$ of Reading $\pm 3$ cts	$\pm 0.5\%$ of Reading $\pm 3$ cts	$\pm 0.2\%$ of Reading $\pm 3$ cts
<b>CONTINUITY</b>					
Beeper Activation	$\leq 700\Omega$	$\leq 40\Omega$	$< 40\Omega$	$< 40\Omega$	$< 40\Omega$
<b>DIODE</b>					
Resolution	1mV	1mV	1mV	1mV	1mV
Basic Accuracy*	$\pm 2\%$ of Reading $\pm 15$ mV	$\pm 2\%$ of Reading $\pm 15$ mV	$\pm 2\%$ of Reading $\pm 15$ mV	$\pm 1\%$ of Reading $\pm 2$ cts	$\pm 1\%$ of Reading $\pm 10$ cts
<b>CAPACITANCE</b>					
Measurement Range	–	5 ranges: 4nF to 40 $\mu$ F	5 ranges: 4nF to 40 $\mu$ F	5 ranges: 4nF to 40 $\mu$ F	5 ranges: 4nF to 40 $\mu$ F
Basic Accuracy*	–	$\pm 5\%$ of Reading $\pm 10$ cts	$\pm 5\%$ of Reading $\pm 10$ cts	$\pm 1.5\%$ of Reading $\pm 4$ cts	$\pm 1.5\%$ of Reading $\pm 5$ cts
<b>FREQUENCY</b>					
Measurement Range	–	–	5 Ranges: 10Hz to 400kHz	5 Ranges: 100Hz to 400kHz	5 Ranges: 100Hz to 400kHz
Basic Accuracy*	–	–	$\pm 0.1\%$ of Reading $\pm 2$ cts	$\pm 0.1\%$ of Reading $\pm 20$ cts	$\pm 0.1\%$ of Reading $\pm 10$ cts
<b>GENERAL</b>					
Digital Display	2000-count	4000-count	4000-count	4000-count	40,000-count
Analog Bargraph	–	40-segment	40-segment	40-segment	40-segment
Power Supply	2 "AA" Batteries 1.5V			1 Battery 9V	
Dimensions	7.0 x 2.5 x 1.7" (177 x 64 x 42mm)				
Weight	0.7 lb (350g)				
<b>ENVIRONMENTAL</b>					
Operating Temperature	32° to 122°F (-10° to 60°C)				
Storage Temperature	-4° to 140°F (-40° to 70°C)				
<b>SAFETY</b>					
Safety Rating	EN 61010, 600V, Cat III				
CE Mark	Yes				

(1) Use on frequency: 0 to 60Hz

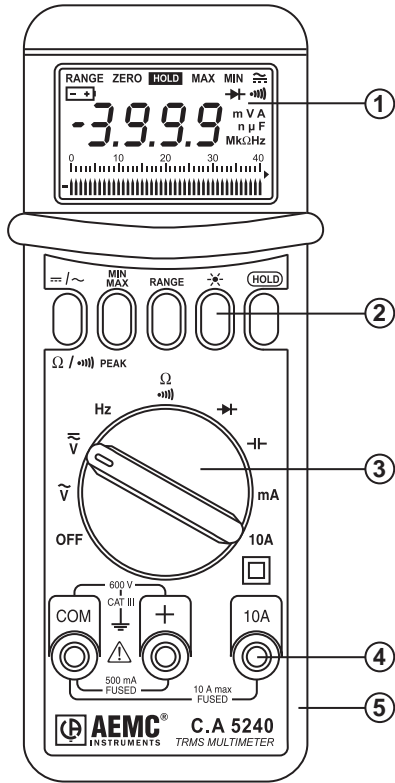
(2) For the CA5210/CA5220, on position V elec: base impedance 270k $\Omega$

(3) Automatic recognition of DC or AC

(4) Additional function "ADP": input 0 to 400mVdc for accessories

\* Accuracy dependent on range

# Construction



1. LCD display
2. Control buttons
3. Rotary range selector switch
4. Safety terminals (4mm)
5. Safety yellow shockproof rubber holster

Model CA5240



Test Leads included with CA5000 Series

ORDERING INFORMATION	CATALOG NO.
DMM Model CA5205 (2000-count, Average Sensing, 1% Accuracy) . . . . .	Cat. #2116.73
DMM Model CA5210 (4000-count, Average Sensing, 1% Accuracy) . . . . .	Cat. #2116.74
DMM Model CA5220 (4000-count, Average Sensing, 1% Accuracy) . . . . .	Cat. #2116.75
DMM Model CA5230 (4000-count, TRMS, 0.25% Accuracy) . . . . .	Cat. #2116.76
DMM Model CA5240 (40,000-count, TRMS, 0.1% Accuracy) . . . . .	Cat. #2116.77

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