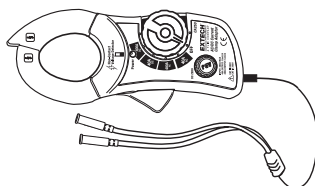


EXTECH[®] INSTRUMENTS User's Guide Model CA250 400A AC/DC Current Clamp-on MultiMeter Adaptor

A FLIR COMPANY

Introduction

Congratulations on your purchase of the Extech CA250 400 Amp AC/DC Clamp-On MultiMeter Adaptor. With this clamp adaptor, a current can be measured by simply clamping around a single conductor. The adaptor outputs an mV signal that is proportional to the measured current and displayed on a DMM. Careful use of this device will provide years of reliable service.



Specifications

Measurement Ranges	0 to 40 Amps AC/DC 0 to 400 Amps AC/DC
Adaptor Output	10mV/Amp on the 0 to 40A range 1mV/Amp on the 0 to 400A range
Frequency range	50/60Hz
Safety	EN61010-1 and IEC61010-1 2nd Edition (2001) to Category III 600V and Category IV 300V; Pollution Degree 2 in accordance with IEC 664 indoor use.
Standards	CE
Accuracy	0 to 40A $\pm (2.5\% + 0.1A)$ 0 to 400A $\pm (2.8\% + 0.5A)$
Jaw size	1.2" (30mm)
Operating Conditions	32 to 122°F (0 to 50°C) < 70% RH
Storage Conditions	-4 to 158°F (-20 to 70°C) < 80% RH
Battery	2 – 1.5V "AAA"
Dimensions/Weight	5.8 x 2.3 x 1.3" (146 x 60 x 32mm); 8oz. (226g)

Safety

Safety Symbols



This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.



This symbol indicates that double insulation is used.

WARNING: This indicates that a potentially hazardous condition which, if not avoided, could result in death or serious injury.

Safety Precautions

- WARNING:** Improper use of this meter can cause damage, shock, injury or death. Read and understand this manual before operating the meter.
- Inspect the condition of the test leads and the meter itself for any damage before operating the meter. Repair or replace any damage before use.
- Do not use on non-insulated conductors at voltages greater than 600VAC rms or DC.

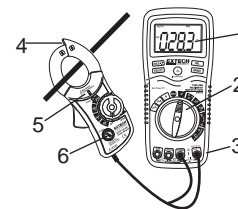
Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

Current Measurements

- Set the DMM to the **AC or DC mV** range or to the lowest voltage range.
- Connect the RED test lead to the DMM '+' Voltage terminal and the BLACK lead to the '-' COM terminal.
- Set the adaptor to the 40A (AC or DC) or the 400A (AC or DC) range.
- Press the Jaw Trigger to open the jaw and clamp around a single conductor.
- The unit will output an AC or DC voltage proportional to the measured current. (40A range:10mV/A, 400A range:1mV/A)
- Read the voltage on the DMM display and interpret as current.(direct mV to A on the 400A range, divide by 10 on the 40A range)

- Read mV
- Set to AC or DC mV
- Voltage Input
- NCV detector
- NCV indicator
- DC Zero adjust



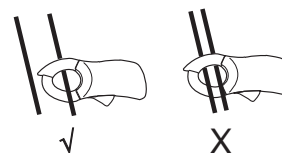
DC Zero

A hysteresis voltage may appear when the clamp is set to the DC position. With no conductor in the jaw, adjust the DC Zero adjust until the DMM display indicates zero. If the voltage is beyond the range of the zero adjust, snap the jaw open and shut several times to clear the hysteresis.

Note: DC current measurements are polarity sensitive. Reverse the conductor direction in the jaw to change the polarity.

Note: Do not apply voltage to the clamp adaptor's test leads

Note: Clamp a single conductor only, do not clamp the hot and neutral simultaneously.



Note: The clamp jaws must be fully closed for proper measurements. On large conductors or line splitters, make sure there is no gap between the upper and lower jaw.

Non-Contact AC Voltage Measurements

WARNING: Risk of Electrocution. Before use, always test the Voltage Detector on a known live circuit to verify proper operation

- Touch the probe tip to the hot conductor or hold next to the hot side of the electrical outlet.
- If AC voltage is present, the detector LED will illuminate.