

## Operating Instructions

# CA60

## mA Current Clamp



***Essential for alarm installers, the ACT CA60 will register low mA current readings without the need for disconnecting circuit wires. Used with your own multimeter it will measure milliamps as well as amps.***

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## **mA Current Clamp Operation**

The AC/DC mA Current Clamp is a transducer which will allow your multimeter to measure low electrical and/or electronic current up to 60 Amperes AC/DC, with a frequency response up to 20kHz. When measuring current with this clamp, there is no need to break a circuit or to affect the isolation.

The extended measurement jaws allow performing measurements in a narrow space. When measuring DC current, a simple operating push button is designed for zero adjustment. The clamp adapter is applicable to leakage detection or monitoring.

### ***How to take DCmA Alarm Current Readings***

1. Plug clamp leads into multimeter COM and DC Voltage sockets and switch on
2. Switch multimeter to DC mV range
3. Switch clamp to 1mV/10mA range
4. Hold clamp steadily over the wire
5. Press clamp ZERO button until meter reads zero
6. Close clamp jaw over the negative DC wire to PIR/KEYPAD/LIM.  
Example: 1.5mV=15mA, 15.0mV=150mA
7. For DC Amps, switch clamp to 10mV/100mA range, press ZERO and close jaw over negative DC wire. Example: 15.0mV=1.50Amps

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## **mA Current Clamp Operation**

### ***Application Procedures***

1. Insert the BLACK banana plug into the COM jack and the RED banana plug into the V $\Omega$  jack of any multimeter with a minimum input impedance of 10k ohms.
2. Set the power switch from 'OFF' to the desired range, 1mV/10mA or 1mV/100mA. The GREEN LED will light to indicate that the clamp is switched on.
3. For current measurements below 2A, set the unit to 1mV/10mV range and set the multimeter to 200mVAC range for AC current measurements, or 200mVDC range for DC current measurements. If the measured current exceeds 2A, set the unit to 1mV/100mA range.
4. When performing DC current measurements, always push the zero adjustment button on the clamp until the multimeter reads zero.
5. Clamp the jaws around the current - carrying conductor and interpret the reading according to Step 3 above.
6. When 1mV/10mA range of clamp until is selected, multiply the reading displayed on the multimeter by '10' for interpreting the measured current value in mA. For example, if the multimeter reads 10mV, the measured current is  $10 \times 10 = 100\text{mA}$ . When 1mV/100mA range is selected, multiply the reading displayed on the multimeter by '100' for interpreting the measured current value in mA. For example, if the multimeter reads 5mV, the measured current is  $5 \times 100 = 500\text{mA}$ .

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## **mA Current Clamp Operation**

### ***Application Notes***

1. In the case of DC current, the output is positive when the current flows from the upsde to the underside of the clamp. The RED banana plug end is positive.
2. In the case of DC current measurement, a hysteresis effect can occur so that it is impossible to zero the clamp properly. To eliminate this effect, open and close the jaws several times and push zero adjustment button

### ***Operator Safety***

1. Do not clamp around conductors with voltages equal to or exceeding 300VDC or 240V rms AC.
2. To avoid physical injury, measurements on bare conductors or conductors with cracked or frayed insulators are forbidden.

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## **mA Current Clamp Specifications**

Range	0 ~ 60 Amp DC or AC current
Jaw Size	9mm conductor jaw opening
Transformer Ratio	10:1, 100:1
Output	1mV/10mA or 1mV/100mA conversion
Frequency Response	To 20KHz
Accuracy	DC A: $\pm 1.5\%$ ACA: $\pm 2\%$ (40Hz - 2KHz) AC A: $\pm 4\%$ (2K - 10KHz) AC A: $\pm 6\%$ (10K - 20KHz)
Low Battery Indicator	RED LED Lighting
Operating Temperature	0°C to 50°C , 70% R.H.
Storage Temperature	-20°C to +70°C , 80% R.H.
Battery Type	9V DC, NEDA 1604, 6F22.006P
Battery Life	100 hours typical with alkaline
Weight	250g
Dimensions	195(H) x 70(W) x 33(D)mm
Output	Coil cable with straight banana plug