

# AC/DC Current Probe Model MR411



The AEMC® MR Series AC/DC Probes are professional AC/DC current probes designed to extend current measuring capabilities of DMMs, oscilloscopes and other instruments. They are built to the latest safety and performance standards, including the CE Mark and UL approval. Two different hook-shaped jaws are offered, both permitting the user to “pry” or “hook” onto cables (will accept 2 x 500MCM) or even onto small bus bars.

The MR Series probes use Hall effect technology and measure AC and DC current. The electronics and batteries are self-contained in the handles. The output of the AC/DC probes is 1mV/A and 10mV/A. The Model MR411 measures to 400Aac/600Adc. The Model MR411 has two ranges and an auto-zero push button (patent pending) for quick DC zeroing.

There is no output filtering — True RMS with DC component measurements are possible. Phase shift is excellent, making the MR Series of current probes well suited for power and power quality applications.

## Features

- Measurement range of 400Aac/600Adc
- Measurement range of 1000Aac/1500Adc
- Distinct jaw shapes to be used for hooking or prying around the conductor
- Auto-zero push button
- Conforms to EN 61010, 600V, Cat. III safety standard
- Low phase shift for power measurements
- mV output signals
- Designed for DMMs, recorders, oscilloscopes, power and harmonic meters
- Double Insulation
- CE Mark

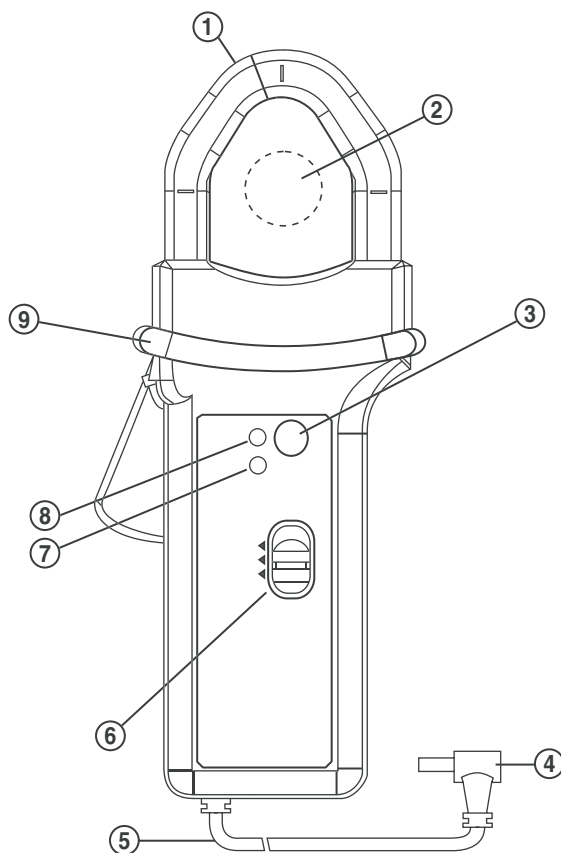
## Applications

- DC motors
- Batteries
- Automobile engine testing
- Power measuring quality analysis
- Power load monitoring

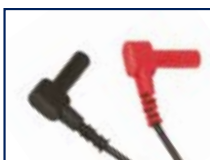
## Specifications

MODEL	MR411
<b>ELECTRICAL</b>	
Nominal Range	400A <sub>AC</sub> /600A <sub>DC</sub>
Measurement Range	0.2 to 600A
Output Signal	60A: 10mV/A 600A: 1mV/A
Accuracy (60A Range) 0.5 to 40A	1.5% of Reading $\pm$ 0.5A
40 to 60A <sub>DC</sub> only	1.5% of Reading
Phase Shift (60A Range) 10 to 20A	45 to 65Hz: $\leq 3.5^\circ$
20 to 40A	$\leq 3^\circ$
Accuracy (600A <sub>DC</sub> Range) 0.5 to 100A	1.5% of Reading $\pm$ 1A
100 to 400A only	2.0% of Reading
400 to 600A <sub>DC</sub> only	2.5% of Reading
Phase Shift (600A Range) 10 to 100A	$\leq 3^\circ$
100 to 400A	$\leq 2.5^\circ$
Overload	1000A <sub>AC</sub> and 1500A <sub>DC</sub> continuous up to 1kHz
Frequency Range	DC to 10kHz @ -3dB
Load Impedance	>100k $\Omega$ /100pF
Working/Common Mode Voltage	600V <sub>rms</sub>
Battery	9V Alkaline (Approx. 50 hours life)
Output Termination	5 ft Lead
<b>MECHANICAL</b>	
Operating Temperature	14° to 131°F (-10° to 55°C)
Storage Temperature	-40° to 176°F (-40° to 70°C)
Operating Relative Humidity	10 to 35°C 90% $\pm$ 5% RH (without condensation), 40 to 55°C 70% $\pm$ 5% RH (without condensation)
Zero Adjustment	Auto-zero
Jaw Opening	1.2" (31mm)
Maximum Conductor Size	One 1.18" (30mm) or two 0.95" (24mm) or two bus bars 1.2 x 0.4" (31.5 x 10mm)
Dimensions	8.8 x 3.82 x 1.73" (224 x 97 x 44mm)
Weight	15 oz (440g)
Polycarbonate Material	Handles: Polycarbonate + ABS, Gray, UL94 V0. Jaws: Polycarbonate, Red, UL94 V0
<b>SAFETY</b>	
Electrical	EN 61010-2-32
Double Insulation <input type="checkbox"/>	Yes
CE Mark	Yes

Note: Reference conditions: 18°C to 28°C, 20 to 75% RH, external magnetic field <40A/m, no DC component, no external current carrying conductor, test sample centered, 1M $\Omega$   $\leq$  100pF load, zero adjustment (DC only) DC to 65Hz, battery voltage 9V  $\pm$  0.1V.



- |   |  |
|---|--|
| 1. Jaws                                 | 7. Green light (on when battery voltage $\geq 6.5V$ )  |
| 2. Conductor                            | 8. Red light (overrange and incorrect zero adjustment) |
| 3. Automatic zero DC button             | 9. Protective non-slip guard                           |
| 4. Safety banana plug $\varnothing$ 4mm |  |
| 5. Lead, 5 ft (1.5m)                    |  |
| 6. Range selection switch:              |  |
| • On/Off                                |  |
| • 600A (1mV/A)                          |  |
| • 60A (10mV/A)                          |  |



**Leads:**  
Double/reinforced  
5 ft (1.5m) lead  
with safety 4mm  
banana plug

## ORDERING INFORMATION

## CATALOG NO.

**AC/DC Current Probe Model MR411** (Lead – 10mA/A – 60A max & 1mV/A – 600A max) . . . . . **Cat. #1200.68**

Includes a user manual

### Accessories (Optional)

Banana plug adaptor (to nonrecessed plug) . . . . . Cat. #1017.45

Adapter – Banana (Female) – BNC (Male) (XM-BB) . . . . . Cat. #2118.46

## **Contact Us**

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