CURRENT PROBES

Models SL306 & SL361

TOTAL FLEXIBILITY
Compatible with AEMC® and non-AEMC® instruments!

AC/DC CURRENT PROBES

- Precision measurement without circuit interruption
- The unique long, narrow shape was designed to conveniently access hard-to-reach places
- **Model SL306**
  - Can measure currents from 5 mA to 80 A
  - Compatible with many milli-volt measuring instruments featuring banana inputs
- **Model SL361**
  - Can measure currents from 100 mA to 100 A peak
  - Compatible with oscilloscopes and meters with BNC inputs
- Powered by a standard 9 V battery or an optional 5 V USB adapter

Our products are backed by over 130 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.

Technical Hotline: (800) 343-1391
www.aemc.com

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

AC/DC Current Probes
Model SL306 & SL361

Precision AC/DC Current Measurement Without Circuit Interruption

The **Model SL306** is a versatile probe designed to measure currents from 5 mA to 80 Adc or 60 Aac, without the need to break the circuit in which the currents flow. The probe outputs a voltage proportional to the current present in the circuit. It's ideal for use with multimeters, wattmeters, recorders, and other instruments equipped with banana inputs.

The **Model SL361** is compatible with oscilloscopes and meters with BNC inputs, providing accurate measurement and analysis of complex AC and DC signals up to 100 A peak. With a high degree of sensitivity and a wide measurement range starting at 100 mA, it's ideal for capturing both low-level and high-energy waveform disturbances with confidence and clarity.

Both models are equipped with key usability features, including a DC zero button, range overload indicator, power supply indicator, and automatic standby mode to extend battery life. Powered by a standard 9 V battery or an optional 5 V micro-USB input, and housed in a compact, ergonomic design, these probes are built for versatility — ***ideal for accessing tight spaces and adapting to a range of measurements.***

Model SL306

Model SL361

FEATURES

- **Compatibility with multiple instruments** *(including non-AEMC® instruments)*
  - » SL306 is compatible with meters featuring banana inputs
  - » SL361 is compatible with oscilloscopes with BNC inputs
  - » Optional adapters allow either probe to be used across different terminal types (*as long as other compatibility specs are met—see next page)*
- **Compact and portable design** makes it easy to access hard-to-reach spaces
- Automatic standby mode after 10 minutes of inactivity to **prolong battery life** *(can be disabled)*
- **Overload indicator that prevents damage** to the device when the current exceeds the measurement capacity
- Wide jaw opening of up to 0.46 in (11.8 mm) in diameter **accommodates large conductors**
- DC zero adjustment function to **eliminate offset errors** before each measurement
- 9 V battery or external 5 V power via micro-USB *(up to 80 hours with alkaline battery)*
- Safety standard 600 V CAT III and 300 V CAT IV
- **Precise measurements** with low uncertainty, accuracy of ±2% for 2 A range and ±4% for 80 A range *(Model SL306)*
- **Bandwidth of up to 100 kHz**, allowing for accurate measurement of high-frequency signals *(Model SL361)*

*The **Model SL306**, designed for higher sensitivity in low current measurements, is compatible with multimeters, loggers, and data processors, while the **Model SL361** can be connected directly to an oscilloscope.*

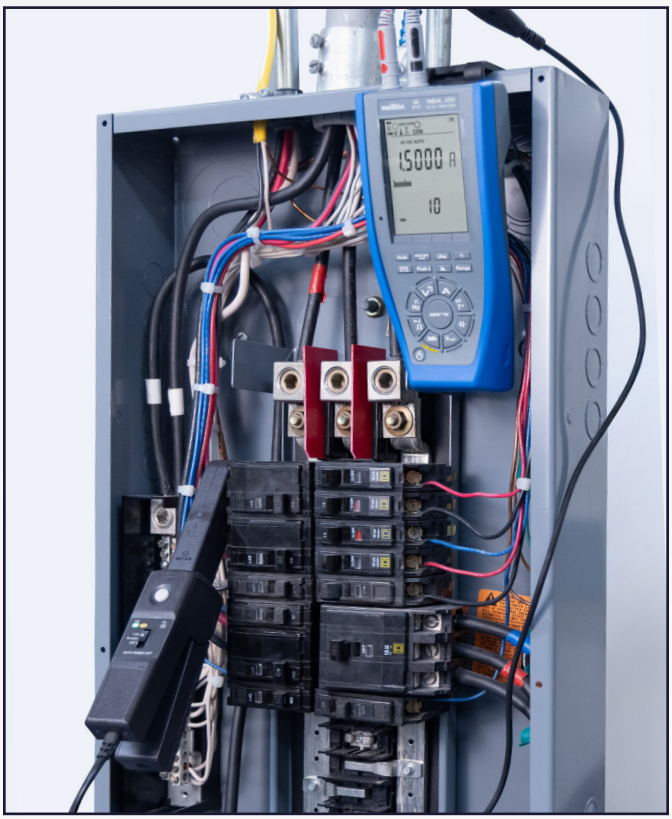
APPLICATIONS

The AC/DC Current Probes **Models SL306 and SL361** measure current in both AC and DC applications, serving as essential tools in industries focused on electrical testing and troubleshooting. They are suitable for:

- Testing and calibration services
- Electric utilities
- Maintenance engineers in industrial and commercial facilities
- Motor diagnostics

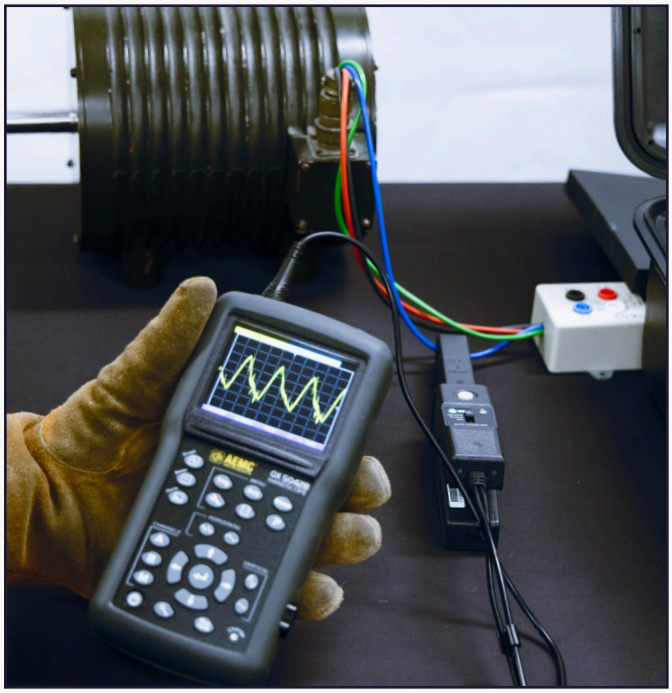
The probes' high frequency response and ability to measure small and large currents make them ideal for Research & Development labs in sectors such as:

- Automotive
- Aerospace and defense for advanced electrical system testing
- Academic and private research institutions conducting experiments in power electronics and signal analysis



The Model SL306 seamlessly pairs with multimeter Model MTX 3291 to measure current directly within the electrical panel.

*Accurate AC/DC measurement from multimeters to oscilloscopes—**even on non-AEMC® instruments!***



The Model SL361 current probe is connected to the oscilloscope Model OX5042B for monitoring and analyzing electrical signals.

COMPATIBILITY

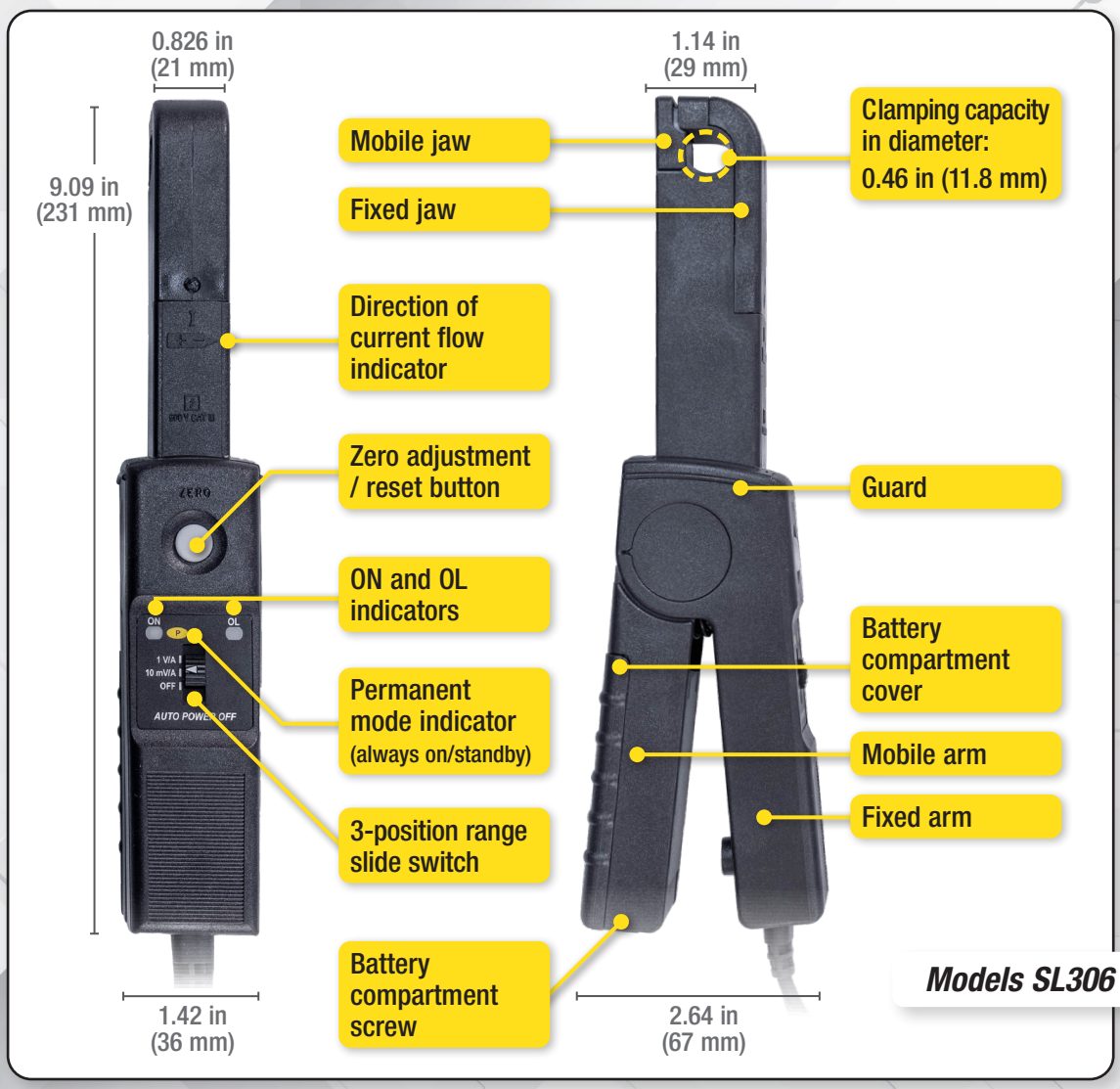
Model SL306 can be used with instruments having banana input. Specifically, it is compatible with any digital multimeter, current logger, or other voltage-measuring instrument that has the following features:

- Range and resolution capable of displaying 1 mV of input
- Voltmeter accuracy (uncertainty) of 0.75 % or better to take full advantage of the accuracy of the probe
- Minimum input impedance of >1 MΩ

Model SL361 is compatible with any analog or digital oscilloscope or other voltage-measuring instrument which has the following features:

- BNC input connector
- Range capable of displaying (0.2 to 0.5) V per division
- Minimum input impedance of >1 MΩ

Models SL306 & SL361
User Interface & Output Termination



Models SL306 & SL361

Model SL306

Model SL361

Models SL306 & SL361
Instrument Indicators

ON Indicator

- **Off:** Instrument off
- **Lighted green:** Instrument on
- **Blinking green:** The battery will have to be replaced in less than 4 hours
- **Lighted orange:** Permanent operation *(auto off deactivated)*

OFF Indicator

- **Off:** The measurement is correct
- **Lighted red:** The measurement exceeds the range
- **Lighted red for 3 seconds:** The zero adjustment is in progress

3 s

How does the Model SL306 compare to its predecessor, the Model SL206?

The **Model SL306** offers significant improvements in measurement range, which improves sensitivity, frequency response, noise performance, and usability compared to the Model SL206, making it a more advanced probe for users requiring precise and low-current measurements.

...and the Model SL361 compare to its predecessor, the Model SL261?

The **Model SL361** has an edge in flexibility with its USB power capability and auto-standby features. Both are excellent for current measurement, offering similar measurement range, but the Model SL361 might be more convenient for users needing extended operation without frequent battery changes.

Models SL306 & SL361
Specifications

600 V CAT III

Models SL306 and SL361 *share similar mechanical dimensions and clamping capacity. The* ***Model SL306*** *has two male banana plugs, while the* ***Model SL361*** *has a male BNC connector.*

MODELS	SL306	SL361
ELECTRICAL		
Nominal Range	1.5 A_{AC} | 2 A_{DC}; 60 A_{AC} | 80 A_{DC}	10 A_{PEAK}; 100 A_{PEAK}
Measurement Range	5 mA to 1.5 A_{AC} | 2 A_{DC} 50 mA to 60 A_{AC} | 80 A_{DC}	100 mA to 100 A_{peak}
Bandwidth	20 kHz (-3 dB) *(depending on current value)*	100 kHz (-3 dB) *(depending on current value)*
Output Signal	1 V/A (2 A range) 10 mV/A (80 A range)	100 mV/A (10 A range) 10 mV/A (100 A range)
Phase Shift (DC to 65 Hz)		
1 mV/mA Range	< 1 °	-
10 mV/mA Range	< 1 °	< 1 °
100 mV/mA Range	-	< 1.5 °
Load Impedance	≥ 1 MΩ and ≤ 100 pF	
Common Mode Voltage (600 V max) with AC measurement (max)	600 V at 50/60 Hz: ≤ 1 mA/100	600 V at 50/60 Hz: ≤ 1 mA/100 V at 400 Hz: ≤ 7 mA/100 V
MECHANICAL		
Power Supply	9 V alkaline battery or 5 V_{DC} via micro-USB *(up to 80 hours with alkaline battery)*	
Output Termination	4.9 ft (1.5 m) two-wire cable terminated by (2) male banana plugs	6.5 ft (2 m) coaxial cable terminated by (1) insulated BNC plug
Maximum Conductor Ø Size	Ø.46 in (11.8 mm)	
Dimensions	(9.09 x 1.42 x 2.64) in (231 x 36 x 67) mm	
Weight	11.6 oz (330 g) with battery	
ENVIRONMENTAL		
Operating Relative Humidity	(0 to 85) % RH with a linear decrease above 95 °F (35 °C)	
Operating Temperature	(14 to 122) °F (-10 to 50) °C	
Storage Temperature	(-22 to 176) °F (-30 to 80) °C	
SAFETY		
Electrical	IEC 61010-1, IEC 61010-2-032, 600 V CAT III, 300 V CAT IV	
Ingress Protection	IP20	
UL Approval	Yes	

Consult factory for NIST Calibration prices.

Models SL306 & SL361
Ordering Information

PRODUCT INCLUDES

AC/DC Current Probe Model SL306
(1.5 Aac, 2 Adc, 1 mV/mA (1 V/A) & 60 Aac, 80 Adc, 10 mV/A, Lead). . . **Cat. #2153.08**
Includes (1) 9 V (6LR61) alkaline battery and a user manual.

AC/DC Current Probe Model SL361
(10 Apeak, 100 mV/A & 100 Apeak, 10 mV/A, BNC) . . . . . **Cat. #2153.09**
Includes (1) 9 V (6LR61) alkaline battery and a user manual.

ACCESSORIES & REPLACEMENT PARTS

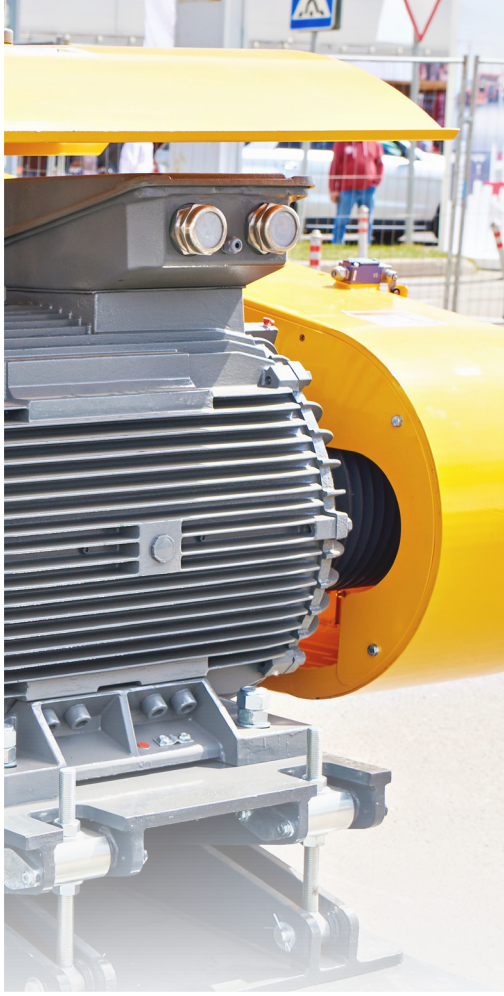
Adapter - US Wall Plug to USB . . . . . Cat. #2153.78
Cable - 6 ft USB Type A to Type B Micro . . . . . Cat. #2138.66
Adapter - Banana (Female) to BNC (Male) (XM-BB) 600 V CAT III
(Model SL306 only). . . . . Cat. #2118.46
Adapter - BNC (Female) to 4 mm Banana (Male) 600 V CAT III
(Model SL361 only). . . . . Cat. #2119.94


Cat. #2153.78


Cat. #2138.66


Cat. #2118.46
(Model SL306 only)


Cat. #2119.94
(Model SL361only)



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United States & Canada

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
Tel (603) 749-6434

Customer Support
Place orders, obtain prices and delivery options
(800) 343-1391
customerservice@aemc.com

Sales & Marketing Department
sales@aemc.com
marketing@aemc.com

United States & Canada (continued)

Repair & Calibration Service
repair@aemc.com

Technical & Product Application Support
(800) 343-1391
techsupport@aemc.com

South America, Central America, Mexico & the Caribbean

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
export@aemc.com

Australia & New Zealand

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
export@aemc.com

All other countries

Chauvin Arnoux®
12-16 Rue Sarah Bernhardt
92600 Asnières-Sur-Seine, FR
Tel +1 33 1 44 85 45 85
info@chauvin-arnoux.com
www.chauvin-arnoux.com

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