

# CLAMP-ON METERS

Complete Line of Multi-Purpose Clamp-On Meters



**Dependable • Accurate  
Rugged • Affordable  
Safe • Easy to Use**

Rugged and professional, our complete line of Clamp-On meters are designed and manufactured to the highest safety standards offering the most comprehensive set of measurement parameters available including:

AC and DC Voltage, AC and DC Current, Resistance, Continuity, Frequency, Diode Testing, InRush Current, Power Measurement (Real, Reactive and Apparent), THD, Crest Factor, Min/Max and Peak Capture, Phase Rotation, Temperature and more.

Data logging and wireless communication to a PC or Android™ application are available on several models. AEMC® Instruments provides a solution to all your electrical measurement needs!

*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](http://www.aemc.com)**

 **AEMC®**  
INSTRUMENTS  
CHAUVIN ARNOUX GROUP

# Clamp-On Meters

## 200, 400, and 600 Series

### Feature Rich Clamp-On Meters

A clamp-on meter is the ideal tool for any work in the field. It is simple to use and groups all the necessary functions in a single, compact solution. AEMC® Instruments proudly presents advanced, dependable, and safe clamp-on meters. Leveraging cutting-edge technology, these meters guarantee top-notch quality while ensuring user-friendly simplicity.

### Performance

All the clamps in the 200, 400, 600 Series benefit from a fast 12-bit TRMS digital acquisition system offering high measurement accuracy. Thanks to their large bandwidth and high crest factor, these clamps provide accurate measurements whatever the signal type.

### Ergonomics

The entire range is designed for one-handed use, even when wearing safety gloves. For maximum efficiency, each measurement corresponds to a specific switch position. The *1 key, 1 function* concept makes it even easier to use. In addition, all the clamps are equipped with automatic detection of the type of signal (AC or DC) on currents, voltages, and power values.

### New Standard for Safety

Safety rated at 1000 V CAT IV / 1500 V CAT III (*model dependent*), our clamp-on meters are safe to operate in all electrical environments. Rated at IP54 (*model dependent*), our meters are rugged enough for the most demanding work environments and will withstand both dust and water spray, guaranteeing its safety level over time.

### True InRush® Function

**A feature exclusive to AEMC® Instruments**, True InRush® function provides the unique ability to measure power-up events from devices on a network that is already energized. Unlike other instruments which only measure the inrush when the installation is first powered up, our power clamp-on meters measure all types of inrush, even those due to load increases on an installation which is already up and running.

### Power Measurements

Power measurements are available for Watts, VARs and VA, including Min and Max tracking. The Power Clamp-On Models, 205, 407, 606 and 607 all have the unique capability to display single- and three-phase power measurements.

### Harmonic Analysis

Harmonic analysis on individual harmonics is available up to the 25<sup>th</sup> harmonic of either 50 or 60 Hz fundamental and up to the 7<sup>th</sup> harmonic on a 400 Hz fundamental (*model dependent*).

### Data Logging

Data logging is a standard feature in Models 407 and 607. Up to 1000 measurements can be stored from any of the function positions. Max, Min and present values are stored each time. Storage rate is programmable from 1 per second to 1 every 600 seconds. Communication to the PC is wireless via Bluetooth. Graphing and analysis of the data is accomplished by a comprehensive software package called DataView®.

## CONSTRUCTION

Jaw assembly  
**200 Series:**  
 1.3 in (34 mm)  
**400 Series:**  
 1.9 in (48 mm)  
**600 Series:**  
 2.4 in (60 mm)

Lever for jaw opening/closing

Function buttons:

- Hold
- Harmonics
- Backlight
- Min/Max
- Frequency
- Record\*

COM (Black) - input jack

Shockproof protective band, casing offers excellent resistance to falls

Rotary range selector switch molded for excellent handling even when wearing safety gloves

Backlit LCD display

**200 Series:**  
 (1.1 x 1.7) in  
 (28 x 48) mm  
**400 & 600 series:**  
 (1.6 x 1.9) in  
 (41 x 43.5) mm

Positive (Red) + input jack



\*Note: Record/Bluetooth communication available with Models 407 and 607 only.



**200 Series**

**Dimension:**  
 (8.7 x 3 x 1.6) in  
 (222 x 78 x 42) mm

**Weight:**  
 0.86 lb (340 g)  
 with batteries



**400 Series**

**Dimension:**  
 (10.7 x 3.6 x 1.6) in  
 (272 x 92 x 41) mm

**Weight:**  
 1.32 lb (600 g)  
 with batteries



**600 Series**

**Dimension:**  
 (11.6 x 4.4 x 1.6) in  
 (296 x 111 x 41) mm

**Weight:**  
 1.4 lb (640 g)  
 with batteries

# Power Clamp-On Meters

## Model 205



### Compact size, powerful performance

The Clamp-On Meter Model 205 stands out as an exceptional electrical measuring device, equipped with a multitude of advanced features. This powerful device is designed to meet the needs of professionals in the electrical industry and offers accurate and reliable measurements of power, power factor, current, voltage, frequency, continuity, and resistance. It also has the function of phase order indication.

With its advanced True InRush® technology, this meter is capable of measuring overcurrent and inrush current with unmatched precision.

The Model 205 is designed for one-handed use for maximum efficiency. Each measurement corresponds to a specific switch position. It's easy to use even when wearing safety gloves. This compact and rugged meter can operate in demanding work environments.

Safety rated at 600 V CAT IV means operators have the assurance of working in total safety and in compliance with the applicable standards.



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### APPLICATIONS

- ▶ AC or DC motor testing
- ▶ Industrial installations
- ▶ Power plant troubleshooting
- ▶ Low voltage locations
- ▶ Commercial, industrial, and residential troubleshooting
- ▶ Commissioning of air-conditioning and heating systems
- ▶ Electrical testing for vehicles

### PRODUCT INCLUDES

**Model 205:** Set of (2) 5 ft (1.5 m) needle tip color-coded leads with 4 mm right angle plug, soft carrying case, (1) 9 V battery and user manual.

### ORDERING INFORMATION

**Power Clamp-On Meter Model 205** CAT. #2139.40  
(TRMS, 1000 V<sub>AC</sub>/DC, 600 A<sub>AC</sub>/900 A<sub>DC</sub>, Ohms, Continuity, Phase Rotation, Power, THD)

### FEATURES

- ▶ UL94 V1 flame retardant self-extinguishing
- ▶ 6000-count blue electroluminescent backlit display
- ▶ Measures up to 1000 V<sub>AC</sub> (1400 V peak), 1000 V<sub>DC</sub> and AC+DC with resolution to 10 mV
- ▶ Measures W, VA, var and PF for single- and three-phase balanced systems
- ▶ Measures frequency to 20 kHz with 0.1 Hz resolution
- ▶ Auto selects AC or DC measurement voltage
- ▶ True InRush® current measurement with 100 mS capture
- ▶ Jaw opening up to: 1.34 in (34 mm)

MODEL	205 TRMS
<b>ELECTRICAL</b>	
Current AC (rms)	600 A
Current DC	900 A
Current AC+DC	900 A
Voltage AC (rms)	1000 V
Voltage DC	1000 V
Voltage AC+DC	1000 V
Ohms	60 kΩ
Continuity (Buzzer)	Yes (< 40 Ω)
Diode Test	Yes
Total Harmonic Distortion	Yes
Single- and 3-Phase Real Power (AC, DC, AC/DC)*	(600 / 1000) kW
Single- and 3-Phase Reactive Power (AC, DC, AC/DC)*	(600 / 1000) kvar
Single- and 3-Phase Apparent Power (AC, DC, AC/DC)*	(600 / 1000) kVA
Voltage Frequency	20 kHz
Current Frequency	(3 / 2 / 1) kHz
Power Factor	Yes
THD-r / THD-f	Yes / Yes
Phase Rotation	Yes (2 wire)
Auto AC/DC	Yes (V & A)
Auto Power OFF	Yes
Hold Button	Yes
Backlight Button	Yes
Min/Max Button	Yes
True InRush® Function	Yes
Relative Function	Yes
Peak ± Function	Yes
Hz Button	Yes

# Clamp-On Meters

## Model 404



### Functionality for solar/photovoltaic (PV) applications with an exceptional AC voltage and DC voltage capability of up to 1200 V<sub>AC</sub>/1700 V<sub>DC</sub>

The Clamp-On Meter Model 404 is a reliable and versatile meter that combines a range of functions for efficient and professional measurements. This powerful tool can measure temperature, current, voltage, frequency, continuity with a buzzer, resistance, and perform a diode test.

With an adapter function, you can easily use it with external transducers or measurement devices. This function makes it possible to connect any adapter or sensor that converts a measured electrical or physical quantity into a voltage (either DC or AC). The meter is also equipped with True InRush® technology, allowing you to measure inrush current and overcurrent with utmost precision.

Additionally, with the advanced capability of handling up to 1200 V<sub>AC</sub>/1700 V<sub>DC</sub>, the Model 606 is an ideal choice for solar/photovoltaic (PV) applications.

The Clamp-On Meter Model 404 offers fast and accurate electrical measurements. It is user-friendly and efficient, making it the perfect choice for any commercial or residential project.

MODELS	404
<b>ELECTRICAL</b>	
Current AC ( <i>rms</i> )	1000 A
Current DC	1500 A
Voltage AC ( <i>rms</i> )	1200 V
Voltage DC	1700 V
Ohms	0.1 Ω to 99.99 kΩ
Continuity ( <i>Buzzer</i> )	Yes (< 40 Ω)
Diode Test	Yes
Temperature ( <i>int., ext., °C, °F</i> )	Yes
Voltage Frequency	20 kHz
Current Frequency	1,000 Hz
Current Probe Adapter Function ( <i>AC / DC</i> )	Yes
Auto AC / DC	Yes (V & A)
Auto Power OFF	Yes
Hold Button	Yes
Backlight Button	Yes
Min / Max Button	Yes
True InRush® Function	Yes
Relative Function	Yes
Hz Button	Yes

## FEATURES

- ▶ 1000 V CAT IV / 1500 V CAT III safety rated
- ▶ UL94 V1 flame retardant self-extinguishing
- ▶ Large, 10,000-count blue electroluminescent backlit display
- ▶ 1700 V<sub>DC</sub> / 1200 V<sub>AC</sub> measurements
- ▶ Temperature measurement
- ▶ K-thermocouple with 4 mm integrated adapter
- ▶ Adapter function
- ▶ Auto selects AC or DC measurement voltage
- ▶ True InRush® current measurement with 100 mS capture
- ▶ Jaw opening up to: 1.90 in (48 mm)



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## APPLICATIONS

- ▶ Photovoltaic (PV)
- ▶ Solar panel and inverter testing
- ▶ Solar commissioning
- ▶ Low and medium power low voltage locations
- ▶ Electrical maintenance
- ▶ Automotive test troubleshooting
- ▶ Railways
- ▶ Lift/elevator technicians
- ▶ Other lift or transport equipment specialists

## PRODUCT INCLUDES

**Model 404:** Set of (2) color-coded silicone insulated test leads, test probes and alligator clips, K-thermocouple with 4 mm integrated adapter, soft carrying case, (4) 1.5 V AA batteries, and user manual.

## ORDERING INFORMATION

**Clamp-On Meter Model 404**  
(TRMS, 1200 V<sub>AC</sub> / 1700 V<sub>DC</sub>, 1000 A<sub>AC</sub>/1500 A<sub>DC</sub>, Ohms, Continuity, Temperature)

CAT. #2139.22

# Power Clamp-On Meters

## Model 606



### A power meter with a wide range of functions, including solar/photovoltaic (PV) testing capabilities

The Clamp-on Meter Model 606 is a top-of-the-line electrical measuring instrument that boasts an impressive range of functions. Among its many capabilities, the meter is equipped to measure power, harmonic distortion, current, voltage, resistance, and frequency, as well as perform diode and continuity tests.

The advanced True InRush® technology enables measurement of inrush current and overcurrent. With a boost in AC voltage and DC voltage capability of up to 1200 V<sub>AC</sub>/1700 V<sub>DC</sub>, the Model 606 offers enhanced functionality for solar/photovoltaic (PV) purposes.

Professional, powerful and dependable, count on the Clamp-On Meter Model 606 for your electrical measurement needs.

## APPLICATIONS

- ▶ Photovoltaic (PV)
- ▶ Solar panel and inverter testing
- ▶ Solar commissioning
- ▶ High power low voltage locations
- ▶ Electricity power distribution
- ▶ Industrial maintenance, inspection, monitoring, and troubleshooting



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## PRODUCT INCLUDES

**Model 606:** Set of (2) color-coded silicone insulated test leads, test probes and alligator clips, soft carrying case, (4) 1.5 V AA batteries, and user manual.

## ORDERING INFORMATION

**Power Clamp-On Meter Model 606** CAT. #2139.62  
 (TRMS, 1200 V<sub>AC</sub> / 1700 V<sub>DC</sub>, 2000 A<sub>AC</sub>/3000 A<sub>DC</sub>, Ohms, Continuity, Energy, Power, THD)

## FEATURES

- ▶ 1000 V CAT IV / 1500 V CAT III safety rated
- ▶ UL94 V1 flame retardant self-extinguishing
- ▶ Large 10,000-count blue electroluminescent backlit display
- ▶ 1700 V<sub>DC</sub> / 1200 V<sub>AC</sub> measurements
- ▶ Measures W, VA, var and PF for single- and three-phase balanced systems
- ▶ Phase rotation order indication
- ▶ Auto selects AC or DC measurement voltage
- ▶ True InRush® current measurement with 100 mS capture
- ▶ Jaw opening up to: 2.36 in (60 mm)

MODELS	606
<b>ELECTRICAL</b>	
Current AC (rms)	2000 A
Current DC	3000 A
Current AC+DC	3000 A Peak
Voltage AC (rms)	1200 V
Voltage DC	1700 V
Voltage AC+DC	1700 V Peak
Ohms	0.1 Ω to 99.99 kΩ
Continuity (Buzzer)	Yes (< 40 Ω)
Diode Test	Yes
THD	Yes
Single- and 3-Phase Real Power (AC, DC, AC / DC)*	2400 kW
Single- and 3-Phase Reactive Power (AC, DC, AC / DC)*	2400 kvar
Single- and 3-Phase Apparent Power (AC, DC, AC / DC)*	2400 kVA
Voltage Frequency	20 kHz
Current Frequency	1000 Hz
Power Factor	Yes
THD-r / THD-f	Yes
Phase Rotation	Yes
Auto AC / DC	Yes (V & A)
Auto Power OFF	Yes
Hold Button	Yes
Backlight Button	Yes
Min / Max Button	Yes
True InRush® Function	Yes
Relative Function	Yes
Peak ± Function	Yes
Hz Button	Yes

# Power Clamp-On Meters Models 407 & 607

**Featuring DataView® software, Bluetooth connectivity, and also available with Android™ mobile application**

The Clamp-On Meters Models 407 and 607 are ideal for low-voltage, high-power systems in electricity production and distribution. They offer highly accurate measurements, regardless of the type of signal, thanks to their large bandwidth and high crest factor. The backlit 10,000-count display is large and easy to read. With each rotary switch position corresponding to a single function, the Models 407 and 607 are incredibly user-friendly.

Along with unique functions such as True InRush®, power measurements, and harmonic analysis, the Models 407 and 607 include DataView® software. With DataView®, you can easily keep track of and analyze all your data. It can display waveforms, trend graphs, harmonic spectrums, text summaries, transients, event logs and stored alarms. You can easily print reports using standard or custom templates you design.

Bluetooth connectivity allows you to quickly and easily connect your device to other Bluetooth-enabled devices, giving you more flexibility and control. In addition, having an Android™ application available means that you can easily access and control your device from your smartphone or tablet, making it even more convenient to use.

**DataView®**



**True InRush®**



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MODEL 407

MODEL 607

## FEATURES

- ▶ 1000 V CAT IV Rated
- ▶ UL 94 VI flame retardant self-extinguishing
- ▶ IP54 Rated
- ▶ Large, 10,000-count blue electroluminescent backlit display
- ▶ Measures up to 1000 V<sub>AC</sub> (1400 V peak), 1000 V<sub>DC</sub> and AC+DC with resolution to 10 mV
- ▶ Measures up to 2000 A<sub>AC</sub> and 3000 A<sub>DC</sub> (Model 607)
- ▶ Measures W, VA, var and PF for 1  $\Phi$  and 3  $\Phi$  balanced systems
- ▶ Measures single- and three-phase power (real, reactive and apparent) up to 2 MW with resolution to 1 W
- ▶ Measures frequency to 20 kHz with 0.1 Hz resolution
- ▶ Auto selects AC or DC measurement
- ▶ True InRush® current measurement with 100 mS capture
- ▶ Measures harmonics up to the 25<sup>th</sup>
- ▶ Records up to 1000 measurements
- ▶ Bluetooth communication (communicates up to 30 ft)
- ▶ Includes FREE DataView® software for download and report generation
- ▶ Jaw opening up to:  
400 series: 1.89 in (48 mm)  
600 series: 2.36 in (60 mm)

## APPLICATIONS

- ▶ Electricity power distribution
- ▶ Electrical maintenance
- ▶ Industrial maintenance
- ▶ Power plant troubleshooting
- ▶ Safety lighting system maintenance
- ▶ Automotive test troubleshooting
- ▶ AC or DC motor testing
- ▶ Electrical testing and troubleshooting on non-linear loads, such as adjustable speed drives and computers



MODELS	407 TRMS	607 TRMS
<b>ELECTRICAL</b>		
Current AC (rms)	1000 A	2000 A
Current DC	1500 A	3000 A
Current AC+DC	1500 A Peak	3000 A Peak
Voltage AC (rms)	1000 V	
Voltage DC	1000 V	
Voltage AC+DC	1400 V Peak	
Ohms	0.1 $\Omega$ to 99.99 k $\Omega$	
Continuity (Buzzer)	Yes (< 40 $\Omega$ )	
Total Harmonic Distortion	Yes	
Individual Harmonics (to 25 <sup>th</sup> )	Yes	
Single- and 3-Phase Real Power (AC, DC, AC / DC)*	1000 kW	3000 kW
Single- and 3-Phase Reactive Power (AC, DC, AC / DC)*	1000 kvar	2000 kvar
Single- and 3-Phase Apparent Power (AC, DC, AC / DC)*	1000 kVA	2000 kVA
Voltage Frequency	20 kHz	
Current Frequency	2 kHz	2 kHz
Power Factor	Yes	
THD-r / THD-f	Yes / Yes	
Auto AC / DC	Yes (V & A)	
Auto Power OFF	Yes	
Hold Button	Yes	
Backlight Button	Yes	
Min / Max Button	Yes	
True InRush® Function	Yes	
Peak $\pm$ Function	Yes	
Harmonics Function	Yes	
Rec (Record) Function	Yes	
Wireless BT (Bluetooth®) Function	Yes	
Record (Recordings)	1000	
Hz Button	Yes	

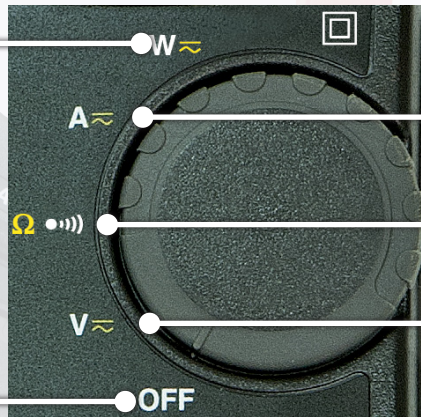


Android™ application on a smartphone and tablet

# Power Clamp-On Meters Models 407 & 607

## ROTARY SWITCH

Power measurements (W, var, VA) AC, DC, AC+DC  
Power factor (PF), displacement power factor (DPF), and Energy Calculation



AC, DC, AC+DC current measurement (A)

Continuity test Resistance measurement Ω

AC, DC, AC+DC voltage measurement (V)

OFF mode – Turns the meter off

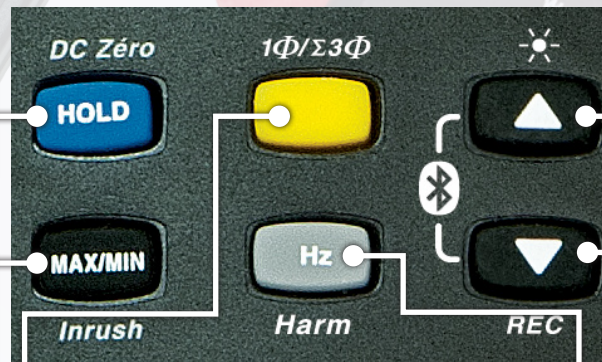
MODELS 407 & 607

## FUNCTION BUTTONS

Holds the last value on the display  
Zero correction A<sub>DC</sub>/A<sub>AC+DC</sub>/W<sub>DC</sub>/W<sub>AC+DC</sub>

Enables/disables the MAX/MIN/PEAK mode  
Enables/disables the True InRush<sup>®</sup> mode in A

Selects the type of measurement and configuration functions (AC, DC, AC+DC)  
Selection of single-phase or 3-phase measurement



Scrolls up the orders of harmonics or of pages of results in W, MAX/MIN/PEAK  
Enables/disables display backlighting

Scrolls down the orders of harmonics or of pages of results in W, MAX/MIN/PEAK  
Enables/disables recording of current data in memory  
(Combination of both arrow buttons enables/disables Bluetooth wireless transfer)

Measures frequency (Hz), total harmonic distortion (THD), and orders of harmonics  
Enables/disables the energy metering mode

MODELS 407 & 607

## PRODUCT INCLUDES

**Models 407 & 607:** Hard carrying case, set of (2) color-coded silicone test leads, test probes and alligator clips, Bluetooth USB adapter, (4) 1.5 V AA batteries, safety information sheet, and USB drive supplied with DataView<sup>®</sup> software and user manual.

## ORDERING INFORMATION

**Power Clamp-On Meter Model 407**  
(TRMS, 1000 V<sub>AC</sub>/DC, 1000 A<sub>AC</sub>/1500 A<sub>DC</sub>, Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)

CAT. #2139.51

**Power Clamp-On Meter Model 607**  
(TRMS, 2000 A<sub>AC</sub>/3000 A<sub>DC</sub>, Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)

CAT. #2139.61



# Clamp-On Meters

## Model 505



### Small compact size clamp-on meter that fits comfortably in a tool bag

The Clamp-On Meter Model 505 is an exceptional and professional instrument designed for general-purpose use. Its strong mechanical case design, quality materials, full ranges, and compliance with international safety and quality standards ensure an unparalleled level of reliability.

The Model 505 is auto-ranging, and it measures AC and DC voltage, AC and DC current, resistance, and continuity with precision.

The comprehensive user interface symbols on the large and complete 4000-count LCD display, including a low battery indicator, make it an extremely user-friendly tool. It also features a Data Hold function that freezes the measurement, allowing for easier and more accurate reading. The Model 505 is compact and ergonomically designed for comfortable one-handed operation in tight spaces. The hooked jaw design makes it easy to maneuver in crowded wiring and breaker panels, providing you with more flexibility and convenience.



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## APPLICATIONS

- ▶ AC or DC motor testing
- ▶ Power plant troubleshooting
- ▶ Production test on large machine electrical cabinets
- ▶ Power panel, junction box, and battery bank monitoring

## PRODUCT INCLUDES

**Model 505:** Soft carrying case, set of (2) color-coded (red and black) test leads with probe tips, (2) 1.5 V AAA batteries and user manual.

## ORDERING INFORMATION

**Clamp-On Meter Model 505** CAT. #2139.82  
(TRMS, AC/DC, 400 Aac/dc, 600 Vac/dc, Ohms, Continuity)  
RATED 600 V CAT III

## FEATURES

- ▶ Compact size - fits into your pocket
- ▶ 400 Aac or 400 Aac/dc current measurements
- ▶ 600 Vac/dc volts measurements
- ▶ Resistance measurements to 600 Ω
- ▶ Continuity with beeper below 35 Ω
- ▶ Hold function to freeze readings
- ▶ Push-button for easy A/c zeroing
- ▶ Large, easy-to-read 6000-count LCD display
- ▶ 42-segment analog bargraph

MODEL	505
<b>ELECTRICAL</b>	
<b>AC Current (Auto-Ranging)</b>	(0.05 to 400) A
<b>Resolution</b>	(0.01 and 0.1) A
<b>AC Voltage (Auto-Ranging)</b>	(0.5 to 600) V
<b>Resolution</b>	(0.1 and 1) V
<b>Input Impedance</b>	10 MΩ
<b>DC Current (Auto-Ranging)</b>	(0.10 to 400) A
<b>Resolution</b>	(0.01 and 0.1) A
<b>DC Voltage (Auto-Ranging)</b>	(0.2 to 600) V
<b>Resolution</b>	(0.1 and 1) V
<b>Input Impedance</b>	10 MΩ
<b>Resistance</b>	(0.2 to 600) Ω
<b>Max Test Voltage</b>	1.5 Vdc
<b>Continuity</b>	< 35 Ω
<b>Max Test Voltage</b>	1.5 Vdc
<b>Zero Mode / Delta Function</b>	Yes
<b>Peak + / - Function</b>	Yes / No
<b>MECHANICAL</b>	
<b>Dimensions</b>	(7.83 x 2.95 x 1.42) in (199 x 75 x 36) mm
<b>Weight</b>	8.57 oz. (243 g) with batteries
<b>Jaw Opening</b>	1.18 in (30 mm)
<b>Power Supply</b>	(2) AAA, IEC LR3 (included)
<b>Battery Life</b>	40 h
<b>ENVIRONMENTAL</b>	
<b>Operating Temperature</b>	(32 to 104) °F (0 to 40) °C
<b>Storage Temperature</b>	(14 to 140) °F (-10 to 60) °C
<b>Operating Humidity</b>	< 70 %
<b>Pollution Degree</b>	2
<b>SAFETY</b>	
<b>Safety Standards</b>	EN / IEC 61010 to 600 V CAT III

# Clamp-On Meters

## Model 514

300 V CAT IV	600 V CAT III	TRMS	CE	
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**Full ranges and compliance to international safety and quality standards ensure a professional and reliable tool**



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The Clamp-On Meter Model 514 is a reliable meter that meets the toughest standards. It is built into a rugged mechanical case and is designed using quality polycarbonate materials. This meter offers a complete set of measurement ranges including AC Amps, AC Volts, DC Volts, Ohms, Continuity with beeper, Frequency from V or A, and Diode Test function. It also uses Hall Effect sensor technology that provides both DC and AC current measurements to 1000 A.

The tapered and hooked jaw design facilitates maneuvering in crowded wiring and breaker panels, making it easy to select conductors. It is designed for comfortable, one-handed operation and features a large LCD screen with easy-to-read symbols. The Model 514 is a True RMS clamp-on that provides RMS measurements for today's non-linear electrical environments.

## FEATURES

- ▶ Standard size, full function clamp-on meter
- ▶ 1000 A<sub>AC</sub> or 1000 A<sub>AC</sub>/DC current measurements
- ▶ 750 V<sub>AC</sub> or 1000 V<sub>DC</sub> volt measurements
- ▶ TRMS measurements
- ▶ Resistance measurements to 4000 Ω
- ▶ Continuity with beeper below 40 Ω
- ▶ Frequency measurements from V and A
- ▶ Diode test
- ▶ 1 ms peak function for fast capture of signals
- ▶ Hold function to freeze readings
- ▶ Push-button for easy A<sub>DC</sub> zeroing
- ▶ Large, easy-to-read, 4000-count LCD display
- ▶ 42-segment analog bargraph
- ▶ Jaw opening up to: 1.58 in (40 mm)

MODEL	TRMS 514
<b>ELECTRICAL</b>	
AC Current (Auto-Ranging)	(0.05 to 1000) Arms
Resolution	(0.01, 0.1 and 1) A
AC Voltage (Auto-Ranging)	(0.5 to 750) Vrms
Resolution	0.1 V and 1 Vrms
Input Impedance	10 MΩ
DC Current (Auto-Ranging)	(1 to 1000) A
Resolution	(0.01, 0.1 and 1) A
DC Voltage (Auto-Ranging)	(0.2 to 1000) V
Resolution	(0.1 and 1) V
Input Impedance	10 MΩ
Resistance	(0.2 to 4000) Ω
Max Test Voltage	3 V <sub>DC</sub>
Diode Test	1.7 mA
Open Circuit Voltage	3 V <sub>DC</sub>
Continuity	< 40 Ω
Max Test Voltage	3 V <sub>DC</sub>
<b>FREQUENCY (AUTO-RANGING)</b>	
CURRENT INPUT Range 4 kHz	1 Hz Resolution 10 Hz Resolution
Min Input Signal	
4 kHz	2 Arms
10 kHz	5 Arms
VOLTAGE INPUT Range 4 kHz	1 Hz Resolution 10 Hz Resolution
Min Input Signal	
4 kHz	5 Vrms
10 kHz	10 Vrms
Power Supply	9 V Alkaline battery (included)
<b>ENVIRONMENTAL</b>	
Operating Temperature	*(-14 to 122) °F (-25 to 50) °C, 80 % RH, non-condensing

\*Note: If Model 514 is to be used below 32 °F (0 °C), we suggest that the battery be replaced to ensure proper results.

## APPLICATIONS

- ▶ Commercial, industrial, and residential troubleshooting
- ▶ Electrical maintenance
- ▶ Electricity distribution

## PRODUCT INCLUDES

**Model 514:** Soft carrying case, pair of test leads (red/black with probe tips), (1) 9 V battery and a user manual.

## ORDERING INFORMATION

**Clamp-On Meter Model 514** CAT. #2117.70  
(AC/DC, TRMS, 1000 A<sub>AC</sub>/DC, 750 V<sub>AC</sub>/1000 V<sub>DC</sub>, Hz, Ohms, Continuity)

# Clamp-On Meters

## Model CM605

600 V  
CAT II

300 V  
CAT III

CE



### For general industrial monitoring and troubleshooting

The Multifunction Clamp-on Meter Model CM605 is a versatile device that is capable of measuring both AC/DC voltage up to 600 V and AC/DC current up to 100 Amps.

The CM605 is a good choice for both process and general industrial applications. It can detect milliamp process signals, as well as the higher currents up to 100 A associated with general industrial monitoring and troubleshooting.

For operator convenience, the Model CM605 can also hold the last reading in the display and capture the peak value at the time of the measurement.



## FEATURES

- ▶ 10,000-count LCD display
  - ▶ 100 A<sub>AC</sub>/DC Ammeter with low 10 A range (1 mA resolution)
  - ▶ 600 V<sub>AC</sub>/DC voltmeter
  - ▶ Analog output in A<sub>AC</sub>/DC to data loggers, etc
  - ▶ Auto-ranging and A<sub>DC</sub> zero push-button
  - ▶ Data HOLD and PEAK functions
  - ▶ Relative function to compare two measurements
  - ▶ Ohm range and continuity test with beeper
  - ▶ Auto Power OFF and low battery indicator
  - ▶ IEC/EN 61010 safety rated and CE mark
  - ▶ 600 Vrms overload protection
  - ▶ Tapered jaws for crowded wiring areas
- Jaw opening:  
0.60 in (15 mm)
- Cable diameter:  
0.45 in (12 mm)

MODEL	CM605
<b>ELECTRICAL</b>	
<b>AC Current</b>	
Measurement Ranges	2 Ranges: 10 A, 100 A
Frequency Range	(50 to 500) Hz
<b>DC Current (positive only)</b>	
Measurement Ranges	2 Ranges: 10 A, 100 A
<b>AC Volts</b>	
Measurement Ranges	600 Vrms
Frequency	(40 to 500) Hz
Input Impedance	10 MΩ
<b>DC Volts (positive only)</b>	
Measurement Ranges	600 V
Input Impedance	10 MΩ
<b>Resistance (Ohms)</b>	
Measurement Ranges	10 kΩ (9999 Ω)
Test Voltage	< 3.0 V <sub>DC</sub>
<b>Continuity</b>	
Measurement Ranges	Buzzer < 100 Ω ± 25 Ω
Resolution	1 Ω
Test Voltage	< 3.0 V <sub>DC</sub>
<b>Analog Output</b>	
Output	10 mV/A <sub>AC</sub> & A <sub>DC</sub> through front banana jacks
Frequency	(0 to 20) kHz @ ± 3 db
Output Impedance	3 kΩ, < 50 pF
<b>Other Functions</b>	
A <sub>DC</sub> Zero & Relative Function	One touch push button to Zero A <sub>DC</sub> , or other readings. Relative function to compare two measurements.
HOLD Function	Holds A & V measurements when pressed (HOLD button)
PEAK Function	Captures PEAK (1 ms) V or A measurement when activated (PEAK Button)
Auto-Ranging	AUTO displayed on LCD
Over Range	OL displayed on LCD for all measurements
Auto Power OFF	Auto Power OFF after approx. 10 m with Over-Ride
Low Battery	Low Battery indication on LCD
<b>MECHANICAL</b>	
Power Supply	(2) 1.5 V AAA (LR03) batteries (included)
Dimensions	(7.44 x 2.80 x 1.46) in (189 x 71 x 37) mm
Weight	6.5 oz (184 g)
<b>SAFETY</b>	
Safety Rating	IEC/EN 61010-1 and 2-032 600 V CAT II and 300 V CAT III Pollution Degree 2 Class 2

## PRODUCT INCLUDES

**Model CM605:** Soft carrying case, (2) color-coded (red/black) test leads with probe tips, (2) 1.5 V AAA batteries and user manual.

## ORDERING INFORMATION

Clamp-On Meter Model CM605  
(100 A<sub>AC</sub>/DC, Low Current)

CAT. #7000.02



Technical Assistance (800) 343-1391

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# Clamp-On Leakage Current Meter Model 566

**Designed to measure low AC currents, which are typically leakage currents in ground conductors**

The Clamp-on Meter Model 566 is designed to measure low AC currents. Low currents are measured in the 60 mA and 600 mA ranges. Note the high sensitivity of the probe: (1, 10, and 100)  $\mu$ A resolution when measuring mA. This is possible through special jaw construction and in particular critical shielding of the jaws. At low measurement levels, shielding out noise is critical for low sensitivity, accuracy and stability.

Leakage current may be measured on a ground conductor and through the vector sum on multiconductors. On a grounded system, clamp around the two or three conducting legs (*not the ground conductor*). The vector sum of the load currents will cancel out, leaving the leakage current measured.

You can also use the Model 566 as a standard clamp-on meter to 60 Arms, plus standard V<sub>AC</sub>, V<sub>DC</sub> ranges, resistance and continuity with a buzzer. In mA<sub>AC</sub> and A<sub>AC</sub>, the user can activate a low-pass filter (LPF) to ignore all currents other than (50/60) Hz. In this mode, only the fundamental signal is measured.

The Model 566 is ergonomic in design and fits well in the hand. Also, one hand operation is possible. The jaw size is compact yet designed to accommodate most known ground conductors up to 0.91 in (23 mm) in diameter.

## APPLICATIONS

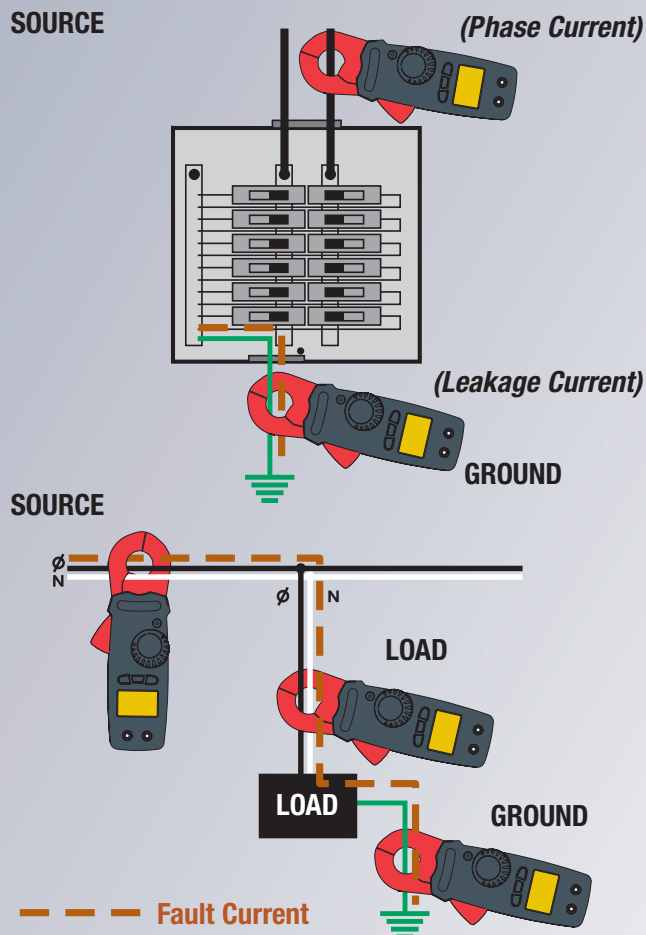
- ▶ Ground fault current measurement
- ▶ Electrical safety compliance testing
- ▶ Medical device safety testing
- ▶ General AC load monitoring
- ▶ Industrial troubleshooting
- ▶ Commercial and residential load monitoring



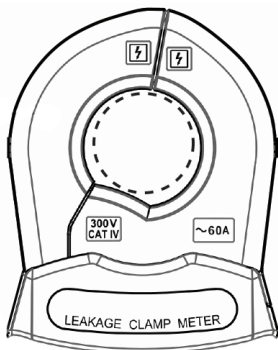
SCAN TO LEARN MORE

## FEATURES

- ▶ Check for leakage and locate insulation breakdowns on live circuits
- ▶ Measures leakage current down to 0.001 mA with up to 1  $\mu$ A resolution
- ▶ Measures current up to 60 Arms
- ▶ Measures up to 600 V<sub>AC/DC</sub>
- ▶ Measures Hz on either V or A inputs
- ▶ Measures resistance and continuity
- ▶ Hold feature freezes value
- ▶ MAX feature keeps track of highest measured in-rush value
- ▶ Zero button ideal for measuring relative values
- ▶ Low pass filter to isolate (50/60) Hz fundamental from harmonics
- ▶ Compatible with VDE 0404
- ▶ Backlight LCD display



On single phase systems, the Model 566 will measure leakage current at the source, the load, or the ground.

600 V  
CAT III

**Jaw opening:**  
0.91 in (23 mm)

MODEL	CM605
<b>ELECTRICAL</b>	
<b>AC Current</b>	
Measurement Ranges	2 Ranges: 10 A, 100 A
Frequency Range	(50 to 500) Hz
<b>DC Current (positive only)</b>	
Measurement Ranges	2 Ranges: 10 A, 100 A
<b>AC Volts</b>	
Measurement Ranges	600 Vrms
Frequency	(40 to 500) Hz
Input Impedance	10 M $\Omega$
<b>DC Volts (positive only)</b>	
Measurement Ranges	600 V
Input Impedance	10 M $\Omega$
<b>Resistance (Ohms)</b>	
Measurement Ranges	10 k $\Omega$ (9999 $\Omega$ )
Test Voltage	< 3.0 Vdc
<b>Continuity</b>	
Measurement Ranges	Buzzer < 100 $\Omega$ $\pm$ 25 $\Omega$
Resolution	1 $\Omega$
Test Voltage	< 3.0 Vdc
<b>Analog Output</b>	
Output	10 mV / Aac & Adc through front banana jacks
Frequency	(0 to 20) kHz @ $\pm$ 3 db
Output Impedance	3 k $\Omega$ , < 50 pF
<b>Other Functions</b>	
Abc Zero & Relative Function	One touch push button to Zero Abc, or other reading Relative function to compare two measurements
HOLD Function	Holds A & V measurements when pressed (HOLD button)
PEAK Function	Captures PEAK (1 ms) V or A measurement when activated (PEAK button)
Auto-Ranging	AUTO displayed on LCD
Over Range	OL displayed on LCD for all measurements
Auto Power OFF	Auto Power OFF after approx 10 m with Over-Ride
Low Battery	Low Battery indication on LCD
<b>MECHANICAL</b>	
Max. Cable Diameter	$\varnothing$ 0.45 in (12 mm)
Max. Jaw Opening	$\varnothing$ 0.60 in (15 mm)
Power Supply	(2) 1.5 V AAA (LR03) batteries (included)
Dimensions	(7.44 x 2.80 x 1.46) in (189 x 71 x 37) mm
Weight	6.5 oz (184 g)
<b>SAFETY</b>	
Safety Rating	IEC / EN 61010-1 and 2-032 – 600 V CAT II and 300 V CAT III – Pollution Degree 2 Class 2

## PRODUCT INCLUDES

**Model 566:** Soft carrying case, (2) color-coded (red/black) 5 ft test leads, (2) 1.5 V AAA (LR03) batteries and user manual.

## ORDERING INFORMATION

**TRMS Clamp-On Leakage Current Meter Model 566**  
(6/60/600 mA, 1/10/100 A, 600 Vac/dc, Hz, Ohms, Continuity)

**CAT. #2139.83**



Technical Assistance (800) 343-1391

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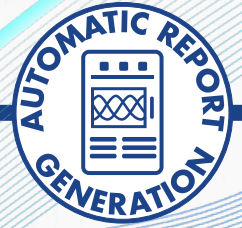
# Clamp-On Meters

## Comparison Chart

Models	CAT. Number	Type	AC Current	AC Voltage	DC Current	DC Voltage	Resistance ( $\Omega$ )	Continuity	Frequency (Hz)		Jaw Size	Dimensions
									Current	Voltage		
<b>205</b>	2139.40	AC / DC TRMS	600 A	1000 V	900 A	1000 V	60 k $\Omega$	< 40 $\Omega$	3 kHz	20 kHz	1.34 in (34 mm)	(8.7 x 3.1 x 1.65) in (221 x 79 x 42) mm
<b>404</b>	2139.22	AC / DC TRMS	1000 A	1200 V	1500 A	1700 V	100 k $\Omega$	< 40 $\Omega$	1,000 Hz	20 kHz	1.89 in (48 mm)	(10.7 x 3.6 x 1.6) in (272 x 91 x 41) mm
<b>407</b>	2139.51	AC / DC TRMS	1000 A	1000 V	1500 A	1000 V	100 k $\Omega$	< 40 $\Omega$	2 kHz	20 kHz	1.89 in (48 mm)	(10.7 x 3.6 x 1.6) in (272 x 91 x 41) mm
<b>606</b>	2139.62	AC / DC TRMS	2000 A	1200 V	3000 A	1700 V	100 k $\Omega$	< 40 $\Omega$	1 kHz	20 kHz	2.36 in (60 mm)	(11.6 x 4.4 x 1.6) in (296 x 111 x 41) mm
<b>607</b>	2139.61	AC / DC TRMS	2000 A	1000 V	3000 A	1000 V	100 k $\Omega$	< 40 $\Omega$	2 kHz	20 kHz	2.36 in (60 mm)	(11.6 x 4.4 x 1.6) in (296 x 111 x 41) mm
<b>505</b>	2139.82	AC / DC TRMS	400 A	600 V	400 A	600 V	600 $\Omega$	< 35 $\Omega$	400 Hz	400 Hz	1.18 in (30 mm)	(7.8 x 2.6 x 1.4) in (199 x 75 x 36) mm
<b>514</b>	2117.70	AC / DC TRMS	1000 A	750 V	1000 A	1000 V	4000 $\Omega$	< 40 $\Omega$	10 kHz	10 kHz	1.58 in (40 mm)	(9.5 x 2.6 x 1.4) in (241 x 66 x 35) mm
<b>566</b>	2139.83	AC TRMS	100 A	600 V	–	600 V	600 k $\Omega$	< 45 $\Omega$	500 Hz	500 Hz	0.91 in (23 mm)	(8.3 x 3.0 x 1.3) in (210 x 76 x 34) mm
<b>CM605</b>	7000.02	AC / DC	100 A	600 V	100 A	600 V	9999 $\Omega$	< 100 $\Omega$	500 Hz	500 Hz	0.60 in (15 mm)	(7.9 x 2.8 x 1.3) in (202 x 70 x 34) mm



# DataView®



## Data Analysis and Reporting Software

AEMC® Instruments developed our DataView® software interface for recording and displaying measurement data recorded on AEMC® Instruments devices and generates views for analysis and both custom and standard reports.

DataView® automatically identifies connected test instruments on a PC, opens their respective menus for direct data access to recorded data, and offers users quick access to preset reports with full safety compliance to current standards. You can also create and save custom reports and views.

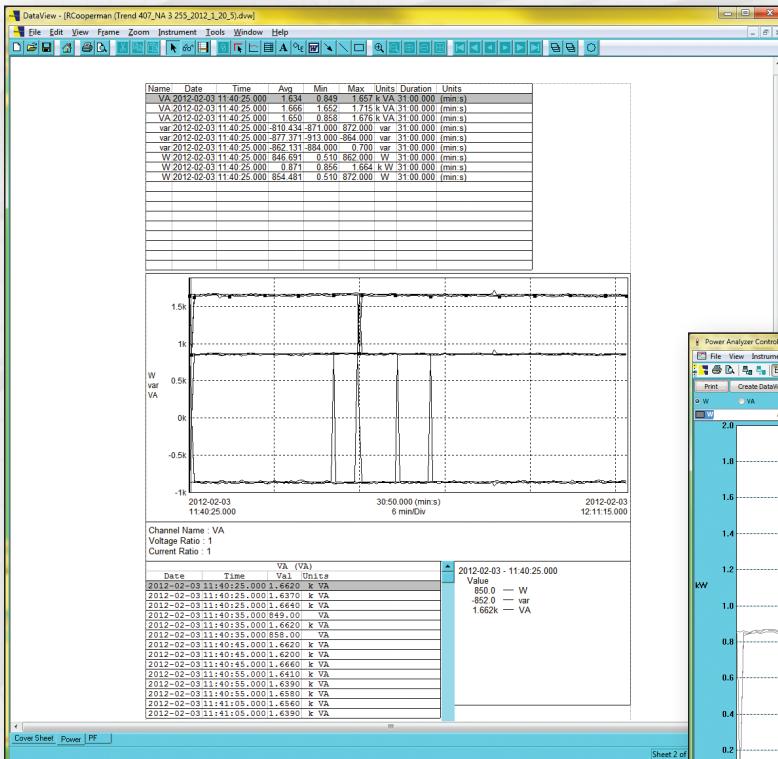
Additionally any future software upgrades are always free. This approach ensures users can easily learn and utilize the software, regardless of the AEMC® instrument being used.

## FEATURES

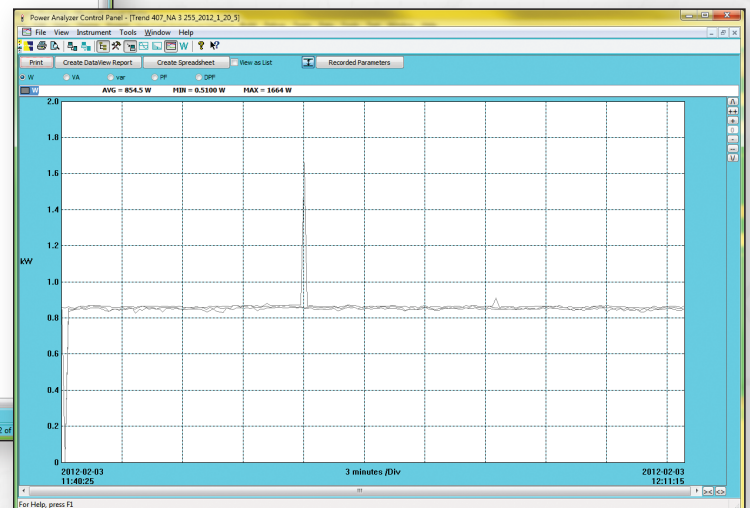
- ▶ Download and store recorded data
- ▶ Wireless Bluetooth communication
- ▶ Print reports using the included default templates or custom templates that you design



DataView® available on Models 407 & 607



Clean, easy-to-read report of test results



DataView® software report



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