

ACD-14-PRO Dual Display 600 A TRMS Clamp Multimeter

Test Voltage and Amperage Simultaneously

The ACD-14-PRO offers a complete range of measuring functions for both HVAC and electrical applications. This modern clamp meter features a large backlit LCD dual display and is capable of simultaneously displaying voltage and amps. The ACD-14-PRO is packed with features including TRMS, low pass filter, in-rush current, frequency, resistance, capacitance, temperature, DC micro-amps, Amp-Tip and non-contact voltage detection.

The Amp-Tip function allows for precise measurement of current down to the tenth of an amp for reliable, accurate current measurement of both large and small diameter wires. The low pass filter allows measurement of current and voltage on variable frequency drives (motors with speed controlled by frequency). The meter features a rubber over-mold enclosure that provides extra durability and is safety rated to CAT III 600 V.

ACD-14-PRO Features

- **Large LCD with dual display** that can display voltage and amps concurrently
- **True-RMS** for accurate voltage measurements in noisy environments
- **Low pass filter** for current and voltage measurements on variable frequency drives
- **Amp-Tip function** for precise low current measurement down to 0.1 amp
- **HVAC applications** with temperature, DC micro-amps and capacitance
- **In-rush current**
- **Temperature**
- **Non-contact voltage detection (NCV)**
- **Audible continuity and diode test**
- **Data hold**
- **Auto ranging**
- **Auto power off**
- **Low battery indicator**
- **Safety rated CAT III 600 V**



ACD-14-PRO
Dual Display 600 A TRMS Clamp
Multimeter

ACD-14-PRO Key Applications



The Amprobe ACD-14-PRO features low profile jaws to test in tight spaces with TRMS for accurate measurements.



The Amprobe ACD-14-PRO can test and display voltage and current measurements simultaneously with the large backlit LCD dual display, for voltage drop tests and other applications.

Voltage drop test - dual display allows user to view voltage and current simultaneously to assess voltage drop for current changing from zero to a maximum value.

Voltage drop test is required by National Electrical Code (NEC) to ensure normal operation and efficiency. It defines the maximum percentage of the voltage drop between maximum voltage at zero current and minimum voltage at maximum current. This assures that electrical equipment and motors are working within specified voltage to avoid potential damage to electrical components.

Functions for core HVAC applications: Temperature measurement (with included thermocouple), capacitance for start-up and run capacitors, and DC micro-amps for flame sensors testing.

Accurate measurement of current, voltage and frequency on all electrical systems including distorted, non-sinusoidal signals (True-RMS function).

Amp-Tip is a small wire guide that is built into the tip of the main clamp meter jaws. It allows for precise measurement of low-current down to the tenth of an amp on small diameter wires, to provide reliable, accurate measurements.

Testing variable frequency drives with low pass filter.

Variable frequency drives are energy efficient motors where speed is controlled by frequency. These motor drives generate high frequency noise, which may cause standard meters to provide erroneous readings when measuring voltage and current. The low pass filter will remove this noise and provide accurate measurements.

Capacitance measurement for start and run motor capacitors.

Resistance and continuity functions to verify quality of electrical connections and to check if motor and transformer coils are working properly.

In-rush current measurement to verify maximum current surge during motor start-up. Too high of in-rush current can cause gradual damage of components and may cause fuses or circuit breakers to trip.

DC micro-amps output for measurement of flame sensors.

Test the proper operation of the flame sensor safety system in gas appliances. A broken sensor in a gas appliance will prevent the safety valve from opening and the appliance will not work.

All Amprobe tools, including the Amprobe ACD-14-PRO, are rigorously tested for safety, accuracy, reliability, and ruggedness in our state-of-the-art test lab. In addition, Amprobe products that measure electricity are listed by a 3rd party safety lab, either UL or CSA. This system assures that Amprobe products meet or exceed safety regulations and will perform in a tough, professional environment for many years to come.





ACD-14-PRO Dual Display

Detailed Specifications

Features	ACD-14-PRO
	600 A TRMS Clamp Multimeter
Safety Rating	CAT III 600 V
AC Voltage (with Digital Low-Pass Filter and True-RMS)	Range: 0.0 to 600.0 V Accuracy: $\pm 1.0\% + 5\text{LSD}$ (50 to 60 Hz)
DC Voltage	Range: 0.0 to 600.0 V Accuracy: $\pm 1.0\% + 5\text{LSD}$
AC Current (True-RMS)	Range: 0.00 to 600.0 A Accuracy: $\pm 1.8\% + 5\text{LSD}$ (50 to <100 Hz) $\pm 2.0\% + 5\text{LSD}$ (100 to 400 Hz)
Precise Low Current AC (Amp-Tip)	Range: 0.00 to 60.00 A Accuracy: $\pm 1.5\% + 5\text{LSD}$ (50 to 60 Hz)
DC Micro amps	Range: 0.0 to 2000 μA Accuracy: $\pm 1.0\% + 5\text{LSD}$
Frequency	Range: 5.00 to 999.9 Hz Accuracy: $\pm 1.0\% + 5\text{LSD}$ (600 V range)
Resistance	Range: 0.0 Ω to 60.00 k Ω Accuracy: $\pm 1.0\% + 5\text{LSD}$ Range: > 60.00 k Ω to 6000 k Ω Accuracy: $\pm 1.2\% + 5\text{LSD}$
Capacitance	Range: 200.0 μF , 2500 μF Accuracy: $\pm (2.0\% + 4\text{LSD})$
Diode Test	Range: 0.0 to 3.000 V Accuracy: $\pm (1.5\% + 5\text{LSD})$
Continuity Beeper	ON $\leq 10\ \Omega$ OFF > 250 Ω
Temperature* (Type K thermocouple) *K-type thermocouple accuracy tolerances not included	Range: -40.0 to 752 $^{\circ}\text{F}$, -40.0 to 400 $^{\circ}\text{C}$ Accuracy: $\pm 1.0\% + 1.5\ ^{\circ}\text{F}$ (-40.0 to 99.9 $^{\circ}\text{F}$) $\pm 1.0\% + 2\ ^{\circ}\text{F}$ (100 to 752 $^{\circ}\text{F}$) $\pm 1.0\% + 0.8\ ^{\circ}\text{C}$ (-40.0 to 99.9 $^{\circ}\text{C}$) $\pm 1.0\% + 1\ ^{\circ}\text{C}$ (100 to 400 $^{\circ}\text{C}$)
Non-Contact Voltage	10 to 550 V, 50/60 Hz
Jaw Opening	1.18 in (30 mm)
Dual Display	•
True-RMS	•
Low Pass Filter	•
Autoranging	•
Inrush Current	•
Data Hold	•
Backlight	•
Auto Power Off	•
Low Battery Indication	•
General Specifications	
Polarity	Automatic
Update Rate	5 per second nominal
Operating Temperature	32 to 104 $^{\circ}\text{F}$ (0 to 40 $^{\circ}\text{C}$)
Relative Humidity	80 %RH up to 88 $^{\circ}\text{F}$ (31 $^{\circ}\text{C}$) decreasing linearly to 50 %RH at 104 $^{\circ}\text{F}$ (40 $^{\circ}\text{C}$)
Operating Altitude	6,562 ft (0 to 2000 m)
Pollution Degree	2
Storage Temperature	-4 $^{\circ}\text{F}$ to 140 $^{\circ}\text{F}$ (-20 $^{\circ}\text{C}$ to 60 $^{\circ}\text{C}$), < 80 % RH
Temperature Coefficient	Nominal 0.15 x (specified accuracy)/ $^{\circ}\text{C}$ @ (0 $^{\circ}\text{C}$ to 18 $^{\circ}\text{C}$ or 28 $^{\circ}\text{C}$ to 40 $^{\circ}\text{C}$)
Battery	Two AAA 1.5 V battery
EMC	Meets EN 61326-1
Safety Compliance	UL/IEC/EN 61010-1 ed. 3.0, UL/IEC/EN 61010-2-033 ed. 1.0, CAN/CSA C22.2 NO. 61010-1 ed. 3.0, UL/IEC/EN 61010-2-032 ed. 3.0 & IEC/EN 61010-031 ed. 1.1
Certification	• • •
Dimensions (L x W x H):	8.62 x 3.03 x 1.46 in (219 x 77 x 37 mm)
Weight:	approx. 0.46 lb (208 g)

Accessories included: User manual, Test leads, Carrying case, Batteries AAA (2), Banana plug K-type thermocouple