

ACD-14 Plus

Digital Clamp-On Multimeter

- Dual Displays – Permits simultaneous reading of Amperage & Voltage
- Micro Amps measurement for testing Flame Sensors
- Capacitance to 3000 μ F
- Temperature with Type-K Thermocouple
- AC and DC Voltage to 600V
- AC Current to 400A
- Resistance to 40MW
- Continuity Buzzer
- Frequency measurement
- Diode test
- Hold and Maximum reading functions
- In rush current
- Accommodates conductors up to 26mm (1.02") in diameter
- Auto ranging
- Auto power off and low battery indication
- Rubber over-molded case
- Overload protected
- Safety: CE, cULus, CAT III 600V

General Specifications

Display:	3-3/4 digits 4000 counts, dual LCD displays
Update Rate:	3 per second nominal
Polarity:	Automatic
Low Battery Indication:	Below approx. 2.4V
Operating Temperature:	0°C to 40°C (32°F to 104°F)
Relative Humidity:	Maximum relative humidity 80% for temperatures up to 31°C (88°F) decreasing linearly to 50% relative humidity at 40°C (104°F)
Altitude:	Indoor operation below 2000m (6,562 ft)
Storage Temperature:	-20°C to 60°C (-4°F to 140°F), < 80% R.H. (with battery removed)
Temperature Coefficient:	Nominal 0.15 x (specified accuracy)/°F @ 0°C - 18°C or 28°C - 40°C (32°F - 64°F or 82°F - 104°F), or otherwise specified
Sensing:	Average sensing for ACD-14 FX
Power Supply:	Two 3V alkaline button batteries (ANSI/NEDA-5004LC, IEC-CR2032).
Battery Life:	95 hours approx. (in DCV mode)
Power Consumption:	2.5 mA typical for ACD-14 FX
Low Battery Indication:	Below approx. 2.4V (battery symbol appears in upper right)
Auto Power Off:	After being idle for 30 minutes
APO Consumption:	ACD-14 FX: 0.8 μ A typical except 25 μ A typical for temperature function
Safety:	CE EN61010-1, EN61010-2-032 - Pollution Degree 2
Transient Protection:	6.5kV (1.2/50 μ s surge) for all models
E.M.C.:	Meets EN61326
Other Function Ranges:	Total Accuracy = Specified Accuracy + 45 digits Performance above 3V/m is not specified
Overload Protections:	ACA Clamp-on jaws: AC 600A RMS continuous "+" & "COM" terminals (all functions): 600VDC/VAC RMS
Dimension:	L190mm X W 63mm X H 32mm (L 7.48" X W 2.48" X H 1.25")
Weight:	204 g (0.450 lb approx.)
Jaw opening & Conductor diameter:	26mm (1.02") max

Electrical Specifications:

23°C ± 5°C (73°F ± 9°F) & < 75% R.H.

Function	Range	Accuracy
DC Voltage	400.0 mV	± (0.3% rdg + 4 digits)
	4.000V, 40.00V, 400.0V	± (0.5% rdg + 3 digits)
	600V	± (1.0% rdg + 4 digits)
	NMRR: >50dB @ 50/60Hz	
	CMRR: >120dB @ DC, 50/60Hz, Rs=1kW	
Input Impedance:	10MW, 30pF nominal (1000MW for 400.0mV range)	

AC Voltage [50Hz -- 500Hz]

	4.000V, 40.00V, 400.0V	± (1.5% rdg + 5 digits)
	600V	± (2.0% rdg + 5 digits)
	CMRR: >60dB @ DC to 60Hz, Rs=1kW	
	10MW, 30pF nominal	
Input Impedance:		
Average sensing		

AC Current (Clamp-on) [50Hz / 60Hz]

40.00A	± (1.5% rdg + 8 digits)
400.0A	± (1.5% rdg + 8 digits)
600A	± (1.5% rdg + 8 digits)*

*Accuracy specified to 600A continuous.

Average sensing

Max/Hold (AC Current only) Specified accuracy ± 50 digits for changes > 25ms in duration

Ohms

400.0W	± (0.8% rdg + 8 digits)
4.000kW, 40.00kW, 400.0kW	± (0.6% rdg + 4 digits)
4.000MW	± (1.0% rdg + 4 digits)
40.00MW	± (2.0% rdg + 4 digits)

Open Circuit Voltage: 0.4VDC typical

Audible Continuity Tester Audible threshold: between 10W and 120W.

Capacitance

500.0nF, 5.000µF, 50.00µF, 500.0µF, 3000µF*	± (3.5% rdg + 6 digits)***
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*Additional 50.00nF range accuracy is not specified

**Accuracies with film capacitor or better

***Specified with battery voltage above 2.8V (approximately half full battery). Accuracy decreases gradually to 12% at low battery warning voltage of approximately 2.4V

DC µA

Range	Accuracy	Burden Voltage
400.0µA	± (2.0% rdg + 4 digits)	2.8mV/µA
2000µA	± (1.2% rdg + 3 digits)	2.8mV/µA

AC µA (50Hz - 500Hz)

Range	Accuracy	Burden Voltage
400.0µA	± (2.0% rdg + 5 digits)	2.8mV/µA
2000µA	± (1.5% rdg + 5 digits)	2.8mV/µA

Frequency (Voltage input only)

Volts	Range	Sensitivity	Accuracy
400.0mV	10Hz -- 2kHz	300mV	± (0.5% rdg + 4 digits)
4.000V	5Hz -- 40kHz	4V	± (0.5% rdg + 4 digits)
40.00V	5Hz -- 100kHz	28V	± (0.5% rdg + 4 digits)
400.0V	5Hz -- 100kHz	100V	± (0.5% rdg + 4 digits)
600V	5Hz -- 5kHz	500V	± (0.5% rdg + 4 digits)

Diode Tester

Open Circuit Voltage
< 1.6 VDC

Test Current (Typical)
0.25mA

Temperature (Type-K Thermocouple)

Range
-20°C to 300°C
301 °C ~ 537 °C
-4°F to 572°F
573 °F ~ 999 °F

Accuracy*
± (2% rdg + 3 °C)
± (3% rdg + 3 °C)
± (2% rdg + 6 °F)
± (3% rdg + 6 °F)

*Type-K thermocouple range & accuracy not included

Included Accessories

Test Leads, Carrying Case, Bead Type-K Thermocouple with
banana plug, Users Manual

Optional Accessories

ELS2	Line splitter
ACF-3000AK	3000A AC Flexible Clamp-On Attachment
TMA-K	Temperature Adapter
TL36A	Industry Test Leads with Threaded Alligator Clips