



# AMPROBE®

## ACD-15 Pro & ACD-15 TRMS Pro 2000A Digital Clamp-on Multimeters



**Wide range of measuring features built into one, professional meter. The TRMS version with backlight display, improves performance and reliability.**

- TRMS & Backlight Screen (ACD-15 TRMS Pro only)
- Measurements: AC/DC Voltage up to 600V, AC Current up to 2000A, Resistance, Frequency and Capacitance
- Non-contact Voltage Level Detection
- Diode Test
- Audible continuity
- Auto-check feature automatically selects DCV, ACV or Resistance (W)
- Auto and manual ranging
- Auto power off
- Automatic polarity
- Low battery indication
- Data hold
- Large, easy to read LCD display
- Accommodates conductors up to 1.77" (45mm) in diameter
- Carrying case, test leads, batteries (installed) and manual included
- Voltage overload protection for all functions up to 600V AC/DC
- Safety CAT III 600V

FEATURES	ACD-15	ACD-15 TRMS	ACCURACY
TRMS Measurement	N/A	Yes	
AC Current	400.0 / 2000 A		+/- (1.5% Rdg + 5 LSD) @ 50 and 60Hz
AC/DC Voltage	6.000 / 60.00 / 600V		+/- (2.0% Rdg + 5 LSD) @ DC & 50 / 60 Hz**
Resistance	6.000 / 60.00 / 600.0 kOhms 6.000 MOhms		+/- (1.0% Rdg + 4 LSD) @ 60.00 to 600.0 kOhms ranges**
Frequency	10Hz to 1kHz		0.5%+4d
Capacitance	100.0, 1000 nF 10.00, 100.0, 2000 _F		3.5%+5d
Non-contact Voltage	15V to 85V - 40V to 130V -- 60V to 210V --- 90V to 300V ---- Above 120V -----		

\*\*For other ranges see website (<http://www.AMPROBE.com>)

OPTIONAL ACCESSORIES	PART NUMBER
Line splitter (Energizer)	A47L
5000A Clamp-on Current Transformer (50 to 1)	CT50-1
3000A Clamp-on Current Transformer (50 to 1)	CT50-2
3000A AC Flexible Clamp-On Attachment	ACF-3000AK
Temperature Adapter	TMA-K
Alligator Clips (For test leads)	VRC-320

REPLACEMENT PARTS	PART NUMBER
(supplied with product)	
Test leads with set of alligator clips (alligator clips are not supplied with product)	MTL-90B
Carrying case	SV-U
Instruction Manual	<a href="http://www.AMPROBE.com">www.AMPROBE.com</a>

**[www.AMPROBE.com](http://www.AMPROBE.com)**



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### GENERAL SPECIFICATIONS

**Display:** 3-5/6 digits 6000 counts LCD display  
**Update Rate:** 5 per second nominal  
**Polarity:** Automatic  
**Low Battery:** Below approx. 2.4V  
**Operating Temperature:** 0°C to 40°C  
**Relative Humidity:** Maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 40°C  
**Altitude:** Operating below 2000m  
**Storage Temperature:** -20OC to 60OC, < 80% R.H. (with battery removed)  
**Temperature Coefficient:** nominal 0.15 x (specified accuracy)/OC @(0OC -18OC or 28OC -40OC), or otherwise specified  
**Sensing:** Average sensing for ACD-15 PRO; True RMS sensing for ACD-15 TRMS PRO  
**Safety:** Meets IEC61010-2-032(1994), EN61010-2-032(1995), UL3111-2-032(1999). Category III 600 Volts AC & DC  
**Transient Protection:** 6.5kV (1/250µs surge) for all models  
**Pollution Degree:** 2  
**E.M.C.:** Meets EN61326(1997, 1998/A1), EN61000-4-2(1995), and EN61000-4-3(1996)  
**In an RF field of 3V/m:** Capacitance function is not specified. Total Accuracy = Specified Accuracy + 45 digits  
**Performance above 3V/m** is not specified  
**Overload Protections:** ACA Clamp-on jaws: AC 2000A rms continuous + & COM terminals (all functions): 600VDC/VAC RMS  
**Power Supply:** standard 1.5V AAA Size (NEDA 24A or IEC LR03) battery X 2  
**Power Consumption:** 2.2mA typical for ACD-15 PRO; 2.8mA typical for ACD-15 TRMS PRO  
**APO Timing:** Idle for 3 minutes  
**APO Consumption:** 40µA typical on all model functions except that 230µA typical on ACD-15 TRMS PRO voltage & current functions  
**Dimension:** L224mm X W78mm X H40mm  
**Weight:** 220 gm approx  
**Jaw opening & Conductor Diameter:** 45mm max  
**Accessories:** Test leads (pair), batteries installed, user's manual, & soft carrying pouch  
**Electrical Specifications:** Accuracy is ±(% reading digits + number of digits) or otherwise specified, at 23 OC ±5 OC & less than 75% R.H. True RMS Model ACD-15 TRMS PRO ACV & ACA clamp-on accuracies are specified from 5% to 100% of range or otherwise specified. Maximum Crest Factor are as specified below, and with frequency specifications, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms.

Ohms	
RANGE	Accuracy <sup>1)</sup>
6.000kΩ <sup>2)</sup>	1.2% + 6d <sup>3)</sup>
60.00kΩ, 600.0kΩ	1.0% + 4d
6.000MΩ	2.0% + 4d
<b>Open Circuit Voltage:</b> 0.4VDC typical	
<sup>1)</sup> Cool down interval 2 minutes after over 50V measurements in Auto-VΩ position	
<sup>2)</sup> Beeper on while reading < 0.025kΩ	
<sup>3)</sup> Add 40d to specified accuracy while reading is	

DC Voltage	
RANGE	Accuracy
6.000V	0.5% + 3d
60.00V	1.0% + 5d
600.0V	2.0% + 5d
NMRR : >30dB @ 50/60Hz CMRR : >100dB @ DC, 50/60Hz, Rs=1kΩ <b>Hi-Z DCV Input Impedance:</b> 5MΩ, 90pF nominal <b>AutoCheck™ Lo-Z DCV input impedance:</b> Initially 1.6kΩ, 90pF nominal; Impedance increases significantly as display voltage increases from 50V (typical). Typical impedances vs display voltages for reference are: 15kΩ @ 100V   100kΩ @ 300V   210kΩ @ 600V <b>AutoCheck™ DCV Threshold:</b> > +1.5VDC or < -1.0VDC nominal	

600Ω with Continuity Beeper	
RANGE	Accuracy
600.0Ω	2.0%+8d <sup>1)</sup>
<b>Continuity Beeper Response:</b> < 100µs <b>Open Circuit Voltage:</b> 0.4VDC typical <b>Audible Threshold:</b> between 10Ω and 300Ω <sup>1)</sup> Add 40d to specified accuracy while reading is below 20% of range	

Frequency		
Voltage Range	Sensitivity (Sine RMS)	Range
6.000V	4V	10Hz ~ 30kHz
60.00V	30V	10Hz ~ 1kHz
600.0V	60V	10Hz ~ 1kHz
<b>Accuracy:</b> 0.5%+4d <b>Max display:</b> 9999 counts		

AC Voltage	
RANGE	Accuracy
<b>50Hz / 60Hz</b>	
6.000V, 60.00V	1.5% + 5d
600.0V	2.0% + 5d
<b>50Hz ~ 500Hz</b>	
6.000V, 60.00V	2.0% + 5d
600.0V	2.5% + 5d
CMRR: >60dB @ DC to 60Hz, Rs=1kΩ <b>Hi-Z ACV Input Impedance:</b> 5MΩ, 90pF nominal <b>AutoCheck™ Lo-Z ACV input impedance:</b> Initially 1.6kΩ, 90pF nominal; Impedance increases significantly as display voltage increases from 50V (typical). Typical impedances vs display voltages for reference are: 15kΩ @ 100V   100kΩ @ 300V   210kΩ @ 600V <b>AutoCheck™ ACV Threshold:</b> > 2VAC (50/60Hz) nominal. True RMS model ACD-15 TRMS PRO Crest < 1.6 : 1 at full scale & < 3.3 : 1 at half scale	

Diode Tester	
Open Circuit Voltage	Test Current
< 1.6 VDC	0.4mA (typical)
Audible Threshold: between 0.015V & 0.080V	

Capacitance	
Range	Accuracy <sup>1)</sup>
100.0nF <sup>2)</sup> , 1000nF, 10.00µF, 100.0µF, 2000µF	3.5%+5d <sup>3)</sup>
<sup>1)</sup> Accuracies with film capacitor or better <sup>2)</sup> Accuracy below 50nF is not specified <sup>3)</sup> 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	

Non-Contact EF-Detection	
Typical Voltage	Bar Graph Indication
15V TO 85V	-
40V TO 130V	--
60V TO 210V	---
90V TO 300V	----
ABOVE 120V	-----
<b>Indication:</b> Bar graph segments & audible beep tones proportional to the field strength <b>Detection Frequency:</b> 50/60Hz <b>Detection Antenna:</b> Top side of the stationary jaw <b>Probe-Contact EF-Detection:</b> For more precise indication of live wires, use the Red (+) probe for direct contact measurements	

ACA Current (Clamp-on)	
RANGE	Accuracy <sup>1) 2) 3)</sup>
<b>50Hz / 60Hz</b>	
400.0A, 2000A	1.5% + 5d
True RMS model ACD-15 TRMS PRO Crest Factor: < 2.0 : 1 at full scale & < 4.0 : 1 at half scale <sup>1)</sup> Add 8d to specified accuracy while reading is below 10% of range <sup>2)</sup> Induced error from adjacent current-carrying conductor: < 0.06A/A <sup>3)</sup> Specified accuracy is for measurements made at the jaw center. When the conductor is not positioned at the jaw center, position errors introduced are: Add 1% to specified accuracy for measurements made within jaw marking lines (away from jaw opening) Add 4% to specified accuracy for measurements made beyond jaw marking lines (toward jaws opening)	

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