



# AMPROBE®

ACD-16 Pro & ACD-16 TRMS Pro

1000A Data-Logging Clamp-on Multimeters



*Need the perfect tool to troubleshoot a system? The ACD-16's provide a full range of measurements, enhanced with data logging capabilities, to catch what the eye can't see. Double the efficiency, with an optional PC interface kit.*

- TRMS & Backlight Screen (ACD-16 TRMS Pro only)
- Measurements: AC/DC Voltage up to 600V, AC Current up to 1000A, Resistance, Frequency and Temperature
- Data-logging 5400 points
- Optional PC interface capability (RS-232 KIT2)
- Audible continuity
- 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, thermocouple, test leads, batteries (installed) and user manual included
- Voltage overload protection for all functions up to 600V AC/DC
- Safety CAT III 600V

| FEATURES         | ACD-16 Pro                         | ACD-16 TRMS Pro | ACCURACY                                    |
|------------------|------------------------------------|-----------------|---|
| TRMS Measurement | N/A                                | Yes             |   |
| AC Current       | 40.0 / 400.0 / 1000 A              |                 | +/- (1.0% Rdg + 5 LSD) @ 50 and 60Hz        |
| DC Voltage       | 600.0V                             |                 | +/- (0.5% Rdg + 5 LSD)                      |
| AC Voltage       | 600.0V                             |                 | +/- (1.0% Rdg + 5 LSD) @ 50 / 60 Hz         |
| Resistance       | 999.9 Ohms                         |                 | +/- (1.0% Rdg + 6 LSD)                      |
| Frequency        | 5.00Hz to 500.0Hz                  |                 | +/- (0.5% Rdg + 4 LSD)                      |
| Temperature      | -58 F to 572 F<br>(-50 C to 300 C) |                 | +/- (2.0% Rdg + 6F)<br>+/- (2.0 % Rdg + 3C) |

| OPTIONAL ACCESSORIES  | PART NUMBER                |
|---|----------------------------|
| PC Interface kit (PC connection cable with software)                  | RS-232 KIT2                |
| Line splitter (Energizer)   | A47L                       |
| 5000A Clamp-on Current Transformer (50 to 1)                          | CT50-1                     |
| 3000A Clamp-on Current Transformer (50 to 1)                          | CT50-2                     |
| Dual input Thermocouple adapter with two thermocouples -50°F to 600°F | DKTA-620 and two of TPK-56 |
| Alligator Clips (For test leads)                                      | VRC-320                    |

| REPLACEMENT PARTS  | PART NUMBER  |
|--|--|
| <i>(supplied with product)</i>   |  |
| Test leads with set of alligator clips (alligator clips are not supplied with product) | MTL-90B  |
| Thermocouple   | TPK-59   |
| Carrying case  | SV-U   |
| Instruction Manual   | <a href="http://www.AMPROBE.com">www.AMPROBE.com</a> |



# AMPROBE®

## ACD-16 Pro & ACD-16 TRMS Pro

### 1000A Data-Logging Clamp-on Multimeters

#### GENERAL SPECIFICATIONS

**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:** -20°C to 60°C, < 80% R.H. (with battery removed)

**Temperature Coefficient:** nominal 0.15 x (specified accuracy)/ °C @ (0°C -18°C or 28°C -40°C), or otherwise specified

**Sensing:** Average sensing for model; True RMS sensing for model

**Safety:** Meets IEC61010-2-032(1994), EN61010-2-032(1995), UL3111-2-032(1999). Category III 600 Volts AC & DC

**Transient protection:** 6.5kV (1.2/50µs 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:** Total Accuracy = Specified Accuracy + 45 digits Performance above 3V/m is not specified

**Overload Protections :**

**ACA Clamp-on jaws:** AC 1000A 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:**

**Voltage & ACA functions:** 3.5mA typical

**Ohm & Temperature functions:** 4mA typical

**APO Timing:** Idle for 16 minutes

**APO Consumption:** 10µA typical

**Dimension:** L224mm X W78mm X H40mm

**Weight:** 224 gm approx

**Jaw opening & Conductor diameter:** 45mm max

**Special features:** Display Backlight (ACD-16 TRMS) Auto-Hold; Display Hold; On screen stand-alone Hi-Lo logging (5400 minutes) at sampling speed of faster than: 20 per second for Voltage & ACA functions 4 per second for Ohm & Temperature functions 2 per second for Hz function

**Accessories:** Test leads (MTL-90B), batteries installed, user's manual, TPK-59 banana plug type-K thermocouple & soft carrying pouch

**Optional accessories:** RS-232 KIT2 interface kit.

**Electrical Specifications:** Accuracy is ±(% reading digits + number of digits) or otherwise specified, at 23 °C ±5 °C & less than 75% R.H. True RMS Models ACD-16TRMS ACV & ACA clamp-on accuracies are specified from 5% to 100% of range or otherwise specified. Maximum Crest Factor are as specified below, & with frequency spectrums, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms. Fundamentals are specified at 50Hz and 60Hz.

| AC Voltage  |           |
|---|-----------|
| RANGE   | Accuracy  |
| <b>50Hz / 60Hz</b>  |           |
| 600.0V  | 1.0% + 5d |
| <b>45Hz ~ 500Hz</b>   |           |
| 600.0V  | 1.5% + 5d |
| <b>500Hz ~ 3.1kHz 9 (ACD-16 TRMS only)</b>  |           |
| 600.0V  | 2.5% + 5d |
| <b>CMRR:</b> >60dB @ DC to 60Hz, Rs=1kΩ   |           |
| <b>Input Impedance:</b> 2MΩ, 30pF nominal   |           |
| <b>True RMS models Crest Factor:</b><br>< 2.3 : 1 at full scale & < 4.6 : 1 at half scale |           |

| DC Voltage                                |           |
|---|-----------|
| RANGE                                     | Accuracy  |
| 600.0V                                    | 0.5% + 5d |
| <b>NMRR:</b> >50dB @ 50/60Hz              |           |
| <b>CMRR:</b> >120dB @ DC, 50/60Hz, Rs=1kΩ |           |
| <b>Input Impedance:</b> 2MΩ, 30pF nominal |           |

| Ohms  |           |
|---|-----------|
| RANGE   | Accuracy  |
| 999.9Ω  | 1.0% + 6d |
| <b>Open Circuit Voltage:</b> 0.4VDC typical     |           |
| <b>Audible Continuity Tester</b>                |           |
| <b>Audible threshold:</b> between 10Ω and 300Ω. |           |
| <b>Response time:</b> 250µs                     |           |

| Frequency                     |          |
|-------------------------------|----------|
| RANGE                         | Accuracy |
| 5.00Hz ~ 500.0Hz              | 0.5%+4d  |
| <b>Sensitivity (Sine RMS)</b> |          |
| 40A range: > 4A               |          |
| 400A range: > 40A             |          |
| 1000A range: > 400A           |          |
| 600V range: > 30V             |          |

| Temperature  |                        |
|--|------------------------|
| RANGE  | Accuracy <sup>1)</sup> |
| -50°C ~ 300°C  | 2.0% + 3°C             |
| -58°F ~ 572°F  | 2.0% + 6°F             |
| <sup>1)</sup> Add 3°C (or 6°F) to specified accuracy @ -20°C ~ -50°C (or @ -4°F ~ -58°F) |                        |
| Type-K thermocouple range & accuracy not included  |                        |

| ACA Current (Clamp-on)                      |                              |
|---|------------------------------|
| RANGE                                       | Accuracy <sup>1) 2) 3)</sup> |
| <b>50Hz / 60Hz</b>                          |                              |
| 40.00A, 400.0A, 1000A                       | 1.0% + 5d                    |
| <b>45Hz ~500Hz</b>                          |                              |
| 40.00A, 400.0A                              | 2.0% + 5d                    |
| 1000A                                       | 2.5% + 5d                    |
| <b>500Hz ~ 3.1kHz (ACD-16TRMS Pro only)</b> |                              |
| 40.00A, 400.0A                              | 2.0% + 5d                    |
| 1000A                                       | 2.5% + 5d                    |

**True RMS models Crest Factor:**  
< 2.5 : 1 at full scale & < 5.0 : 1 at half scale for 40.00A & 400.0A ranges

< 1.4 : 1 at full scale & < 2.8 : 1 at half scale for 1000A range

<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)