

**Data Sheet** 



# **ACD-14 PLUS 600A Clamp-On Multimeter** with Dual Display

The ACD-14 PLUS is the professionals' choice for both **HVAC** and Electrical applications due to its complete set of measuring features. Its dual displays allows viewing amperage and voltage simultaneously. The ACD-14 PLUS meter offers thinner jaws over standard clamp meters. Allowing access to tight measurement areas and still accommodating conductors up to 28 mm. Both meters also measure Capacitance and Frequency. Very versatile clamp multimeters to support all your daily measurement needs.

# No hassle warranty

No waiting.

### No shipping charges.



(note: \$500 MSLP limit)

- Dual Displays Permits simultaneous reading of Amperage & Voltage
- AC Current to 600A
- New thin jaws, 5mm thinner than others to access tight measurement spaces
- Micro Amps measurement for testing Flame Sensors
- Capacitance to 3000 µF
- Temperature with Type-K Thermocouple probe
- AC and DC Voltage to 600V
- Resistance to  $40M\Omega$
- Continuity Buzzer
- Frequency measurement
- Diode test
- Hold and Maximum reading functions
- In rush current
- Accommodates conductors up to 28 mm (1.1") in diameter
- Auto ranging
- Auto power off and low battery indication
- Rubber over-molded case













### **ACD-14 PLUS 600A Clamp-On Multimeter with Dual Display**

**Data Sheet** 

# **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 PLUS   |
| 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 PLUS  |
| 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 PLUS: 0.8μA typical except 25μA typical for temperature function   |
| Safety:                              | CE EN61010-1, EN61010-2-032 - Pollution Degree 2  |
| Transient Protection:                | 6.5kV (1.2/50μs surge) for all models   |
| E.M.C.:                              | Meets EN61326   |
| Overload Protections:<br>RMS         | ACA Clamp-on jaws: AC 600A RMS continuous "+" & "COM" terminals (all functions): 600VDC/VAC                                   |
| 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 &<br>Conductor diameter: | 28 (1.1") 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=1kΩ                                   |
|                        | Input Impedance:       | 10M $\Omega$ , 30pF nominal (1000M $\Omega$ for 400.0mV range) |
| AC Voltage [50Hz 5     | 00Hz] Average sensing  |  |
|                        | 4.000V, 40.00V, 400.0V | ± (1.5% rdg + 5 digits)  |
|                        | 600V                   | ± (2.0% rdg + 5 digits)  |
|                        | CMRR:                  | >60dB @ DC to 60Hz, Rs=1k $\Omega$                             |
|                        | Input Impedance:       | 10MΩ, 30pF nominal   |
| AC Current (Clamp-o    | n) [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.       |  |





# ACD-14 PLUS 600A Clamp-On Multimeter with Dual Display

**Data Sheet** 

Electrical Specification Accuracy (23 °C ± 5 °C & < 75% R.H.), cont.

| Function   | Range                            |   | Accuracy  |  |
|--|----------------------------------|---|---|--|
| Max/Hold (AC Current only)                                       | Specified accuracy ± 50 digits f | Specified accuracy ± 50 digits for changes > 25ms in duration |   |  |
| Ohms   |                                  |   |   |  |
|  | 400.0Ω                           |   | ± (0.8% rdg + 8 digits)                         |  |
|  | 4.000kΩ, 40.00kΩ, 400.0kΩ        |   | ± (0.6% rdg + 4 digits)                         |  |
|  | 4.000ΜΩ                          |   | ± (1.0% rdg + 4 digits)                         |  |
|  | 40.00ΜΩ                          |   | ± (2.0% rdg + 4 digits)                         |  |
| Open Circuit Voltage:  | 0.4VDC typical                   |   |   |  |
| Audible Continuity Tester  | Audible threshold: between 10    | $\Omega$ and 120 $\Omega$ .                                   |   |  |
| Capacitance  |                                  |   |   |  |
| -  | 500.0nF, 5.000μF, 50.00μF,       |   |   |  |
|  | 500.0μF, 3000μF*                 |   | ± (3.5% rdg + 6 digits)***                      |  |
| *Additional 50.00nF range accur                                  | racy is not specified            |   |   |  |
| **Accuracies with film capacitor                                 | <u> </u>                         |   |   |  |
| ***Specified with battery voltage warning voltage of approximate |                                  | full battery). Accı   | rracy decreases gradually to 12% at low battery |  |
| 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                                  |  |
| 400.0μΑ  | ± (2.0% rdg + 5 digits)          |   | 2.8mV/μA  |  |
| 2000μΑ   | ± (1.5% rdg + 5 digits )         |   | 2.8mV/µA  |  |
| Frequency ( Voltage input or                                     | nly)                             |   | ·   |  |
| Volts  | Range                            | Sensitivity   | Accuracy  |  |
| 400.0mV  | 10Hz to 2kHz                     | 300mV   | ± (0.5% rdg + 4 digits                          |  |
| 4.000V   | 5Hz to 40kHz                     | 4V  | ± (0.5% rdg + 4 digits)                         |  |
| 40.00V   | 5Hz to 100kHz                    | 28V   | ± (0.5% rdg + 4 digits)                         |  |
| 400.0V   | 5Hz to 100kHz                    | 100V  | ± (0.5% rdg + 4 digits)                         |  |
| 600V   | 5Hz to 5kHz                      | 500V  | ± (0.5% rdg + 4 digits)                         |  |
| Diode Tester   |                                  |   | . 3 3 7   |  |
| Open Circuit Voltage   | Test Current (Typical)           |   |   |  |
| < 1.6 VDC  | 0.25mA                           |   |   |  |
| Temperature (Type-K Thermo                                       | ocouple)                         |   |   |  |
|  | Range                            |   | Accuracy*                                       |  |
|  | -20°C to 300°C                   |   | ± (2% rdg + 3 °C)                               |  |
|  | 301 °C ~ 537 °C                  |   | ± (3% rdg + 3 °C)                               |  |
|  | -4°F to 572°F                    |   | ± (2% rdg + 6 °F)                               |  |
|  | 573 °F ~ 999 °F                  |   | ± (3% rdg + 6 °F)                               |  |
| *Type-K thermocouple range &                                     |                                  |   | · · · · · · · · · · · · · · · · · · ·           |  |



### **ACD-14 PLUS 600A Clamp-On Multimeter with Dual Display**

**Data Sheet** 

#### **Included Accessories**

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

### **Optional Accessories**

ELS2A Line splitter

ACF-3000AK 3000A AC Flexible Clamp-On Attachment

TA-1A Temperature Adapter

TL36A Heavy Duty Test Leads with Threaded Alligator Clips





### **Amprobe® Test Tools**

website: www.Amprobe.com email: info@amprobe.com

Everett, WA 98203 Tel: 877-AMPROBE

### **Amprobe® Test Tools Europe**

In den Engematten 14 79286 Glottertal, Germany Tel.: +49 (0) 7684 8009 - 0

©2008 Amprobe Test Tools. All rights reserved. 1/2008 3128489 Rev A

