



ACD-14 FX Digital Clamp-On Multimeter

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 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: 0.8µA 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 |
| Other Function Ranges: | Total Accuracy = Specified Accuracy + 45 digits Performance above 3V/m is not specified |
| Overload Protections: | ACA Clamp-on jaws: AC 400A 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) & less than 75% R.H. |

Specifications

| 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: 10MΩ, 30pF nominal (1000MΩ 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=1kΩ Input Impedance: 10MΩ, 30pF nominal | | |



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Specifications, cont.

| Function | Range | Accuracy | | |
|--|---|-------------------------------|-----------------------|-----------------------|
| ACA Current (Clamp-on) | | | | |
| | 50Hz / 60Hz | | | |
| | 40.00A | ± 1.9% rdg + 8 digits | | |
| | 400.0A | ± 1.9% rdg + 8 digits* | | |
| | 600A** | ± 1.9% rdg + 8 digits | | |
| *Accuracy specified to 350A continuous, and 400A for 60-second max with 5 minutes cool down interval. | | | | |
| **Added range to indicate instantaneous over-range current values TRMS model ACD-14 TRMS FX accuracy is specified from 10% to 100% of range. | | | | |
| Max Hold (where applicable) | Specified accuracy ± 50 digits for changes > 25ms in duration | | | |
| Audible Continuity Tester | Audible threshold: between 10W and 120W. | | | |
| Ohms | | | | |
| | 400.0Ω | ± 0.8% rdg + 6 digits | | |
| | 4.000kΩ, 40.00kΩ, 400.0kΩ | ± 0.6% rdg + 4 digits | | |
| | 4.000MΩ | ± 1.0% rdg + 4 digits | | |
| | 40.00MΩ | ± 2.0% rdg + 4 digits | | |
| Open Circuit Voltage: 0.4VDC typical | | | | |
| Capacitance | | | | |
| | 500.0nF, 5.000μF, 50.00μF, 500.0μF, 3000μF* | ± 3.5% rdg*** + 6 digits | | |
| *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 | ± 1.5% 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 | |
| Hz Frequency | | | | |
| Volts | 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 |
| Amps | 400.0μA | 10Hz -- 30kHz | 500μA | ± 0.5% rdg + 4 digits |
| | 2000μA | 10Hz -- 30kHz | 500μA | ± 0.5% rdg + 4 digits |
| Diode Tester | | | | |
| | Open Circuit Voltage | Test Current (Typical) | | |
| | < 1.6 VDC | 0.25mA | | |
| Type-K Temperature | | | | |
| | Range | Accuracy* | | |
| | -20°C to 300°C | ± 2% rdg + 3°C | | |
| | -4°F to 572°F | ± 2% rdg + 6°F | | |
| *Type-K thermocouple range & accuracy not included | | | | |