



Data Sheet

# HD110C

## Heavy-Duty Digital Multimeter

### Key features:

- Measures 1500 VDC
- CAT IV 1000 V
- IP67 Rated
- Magne-Grip™ holster with magnetic hanging strap

- Highest voltage capability, measuring to 1500 V dc and 1000 V ac
- CAT IV 1000 V rated
- Special sealing for environment and water resistance. IP67 rated
- Constructed with drop-resistant housing and PCB mounting
- Magne-Grip™ holster, frees both hands for work
- Includes high voltage test leads with threaded alligator clips

The HD110C is designed for professional use in harsh environments. The meter is unusually rugged and reliable in everyday heavy use applications. The meter is made using waterproof construction to prevent dirt, grime and moisture from entering the case and causing inaccurate readings or damaging shorts.

Built of tough, fire-retardant thermoplastic resistant to grease and chemical spills, with all sensitive components shock-mounted for a drop resistant to at least eight feet.

HD110C has an extended voltage measurement capability of 1500 V dc and 1000 V ac, unmatched by any other line of digital multimeters. The extended voltage ranges can withstand transients up to 12 kV.



HD110C

## No hassle warranty

*No waiting.*

*No shipping charges.*



Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.





## HD110C Technical Specifications

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### General Specifications

Display	3-1/2 digit LCD, 1999 counts, with annunciators and menu features
Polarity Indication	Automatic
Input overload indication	1
Low Battery Indication	; < 50 hours battery life remain, accuracy is no longer guaranteed
Display Update Rate	2.5/sec, nominal
Oper. Temp.	0 °C to +50 °C, (< 75 % R.H.)
Storage Temp	-20 °C to 60 °C, 0 to 80 % RH, battery removed
Temperature coefficient	0.1 x (spec. accuracy)/°C (0 ° to 18 °C and 28° to 50 °C) all functions and ranges except for mVDC 0.3 x (spec. accuracy)/°C (0 ° to 18 °C and 28° to 50 °C) for mVDC
Altitude	Up to 2000 m — indoor use
Fuse	F 2 A/1500 V fuse (8 mm x 65 mm), I.R. 30 kA – Amprobe® p/n FP700
Power	Standard 9 V battery, NEDA 1604, JIS 006P, IEC 6F22
Auto Power-Down	Meter powers down after approx. 30 min. of inactivity.
Battery Life	250 hours typical with carbon-zinc, 500 hours typical with alkaline
Dimensions, with holster (H x W x D)	200 x 102 x 59 mm (7.9 in x 4.0 in x 2.3 in)
Weight (incl. battery)	642 g (20 oz)
Accessories	Heavy Duty CAT IV 1000 V Test leads with threaded alligator clips (TL1500), battery (in instrument), hex wrench in holster, Magne-Grip flex strap and User Manual
Case material	Flame retardant, high-impact thermoplastic
Safety	Meets EN 61010-1 CAT IV 1000 V (1500 V DC max) Class II, EN 60529:IP67
EMC	Meets EN 61326-1

### Electrical Specifications *(Accuracies at 23 °C ± 5 °C, <75 % RH non-condensing, guaranteed for one year.)*

Function	Range	Accuracy
<b>DC Volts</b>		
Ranges	200 mV, 2 V, 20 V, 200 V, 1500 V	
Resolution	0.1 mV	
Accuracy	All ranges	±(0.1 % rdg+2 dgts)
Input Impedance	10 MΩ	
OL Protection	1500 V dc/1000 V ac rms	
Transient Protection	12 kV impulse (1.2 μS/50 μS) based on EN 61010-1:2001 impulse requirement for at CAT IV 1000 V product. This product should not be used in installations where transients exceed 12 kV.	
<b>AC Volts (45 Hz to 2 kHz)</b>		
Ranges	200 mV, 2 V, 20 V, 200 V, 1000 V	
Resolution	0.1 mV	
Accuracy	200 mV to 200 V (45-500 Hz)	±(0.8 % rdg+4 dgts)
	200 mV to 200 V (500 Hz-2 kHz)	±(1.5 % rdg+5 dgts)
	1000 V (50-60 Hz)	±(0.8 % rdg+4 dgts)
	1000 V (60-500 Hz)	±(1.5 % rdg+5 dgts)
Input Impedance	10 MΩ	
OL Protection	1500 V dc/1000 V ac rms	
Transient Protection	12 kV impulse (1.2 μS/50 μS) based on EN 61010-1:2001 impulse requirement for at CAT IV 1000 V product. This product should not be used in installations where transients exceed 12 kV.	
<b>DC Current</b>		
Ranges	200 μA, 2 mA, 20 mA, 200 mA, 2 A	
Resolution	0.1 μA	
Accuracy	200 μA to 20 mA	±(0.5 % rdg+2 dgts)
	200 mA to 2 A	±(1.0 % rdg+2 dgts)

## HD110C Technical Specifications (continued)

## Data Sheet

Function	Range	Accuracy
<b>DC Current (cont.)</b>		
Voltage Burden	250 mV max. (1 mV/1 $\mu$ A on 200 $\mu$ A Range) (100 mV/1 mA on 2 mA Range) (10 mV/1 mA on 20 mA Range) (1.5 mV/1 mA on 200 mA Range) (500 mV/1 A on 2 A Range)	
OL Protection	A Input (F 2 A/1500 V, size 8 x 65 mm IR fast blow ceramic) (FP 700)	
<b>AC Current (45 Hz to 1 kHz)</b>		
Ranges	200 $\mu$ A, 2 mA, 20 mA, 200 mA, 2 A	
Resolution	0.1 $\mu$ A	
Accuracy	200 $\mu$ A to 20 mA 200 mA to 2 A	$\pm(0.8 \% \text{ rdg}+4 \text{ dgts})$ $\pm(1.2 \% \text{ rdg}+4 \text{ dgts})$
Voltage Burden	250 mV max. (1 V on 2 A range)	
OL Protection	same as DC Current	
<b>Resistance</b>		
Ranges	200 $\Omega$ , 2 k $\Omega$ , 20 k $\Omega$ , 200 k $\Omega$ , 2 M $\Omega$ , 20 M $\Omega$	
Resolution	0.1 $\Omega$	
Accuracy	200 $\Omega$ 2 k $\Omega$ to 200 k $\Omega$ 2 M $\Omega$ 20 M $\Omega$	$\pm(0.5 \% \text{ rdg}+4 \text{ dgts})$ $\pm(0.3 \% \text{ rdg}+2 \text{ dgts})$ $\pm(1.0 \% \text{ rdg}+4 \text{ dgts})$ $\pm(2.0 \% \text{ rdg}+4 \text{ dgts})$
OL Protection	1500 V dc/1000 V ac rms	
Open Circuit Voltage	200 $\Omega$ range all other ranges	3.0 V dc typical 0.3 V dc typical.
<b>Diode/Continuity Test</b>		
Test Current	1m A dc typical	
Test/Open Circuit Voltage	3.0 V dc Typical	
Diode Accuracy	$\pm(1.5 \% \text{ rdg}+2 \text{ dgts})$	
Continuity Audible Threshold	<50 $\Omega \pm 25 \Omega$	
Response Time	<100 msec	
OL Protection	1500 V dc/1000 V ac rms	



### Included Accessories

Heavy Duty CAT IV 1000 V Test leads with threaded alligator clips (TL1500), battery (in instrument), hex wrench in holster, Magne-Grip flex strap and User Manual

### Optional Accessories

- |           |   |
|-----------|---|
| TL1500    | Cat IV 1000 V Test Leads with Alligator Clips                       |
| CT235A    | 1000 A ac/dc Clamp  |
| CT237A    | 200 A ac/dc Current Clamp   |
| CT238A    | 20 A ac/dc Current Clamp  |
| VC221B    | Padded Vinyl Case. Fits meter & holster.                            |
| DC205C    | Deluxe Hard-Shell Carry Case  |
| DC207C    | Large Deluxe Hard-Shell Carry Case with extra space for accessories |
| HV231-10A | High Voltage Probe  |
| FP700     | Replacement Fuse, 2 A/1500 V, pack of two                           |

### Amprobe® Test Tools

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