

AMPROBE®

Data Sheet

HD110C Heavy-Duty Digital Multimeter

Key features:

- Measures 1500 VDC
- CAT IV 1000 V
- IP67 Rated
- Magne-GripTM holster with magnetic hanging strap
- No hassle warranty

No waiting.



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.

- 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















HD110C Technical Specifications

Data Sheet

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		
DC Volts				
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 μ S/50 μ S) 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.			
AC Volts (45 Hz to 2 kHz)				
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 ΜΩ			
OL Protection	1500 V dc/1000 V ac rms			
Transient Protection	12 kV impulse (1.2 μ S/50 μ S) 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.			
DC Current				
Ranges	200 μ A, 2 mA, 20 mA, 200 mA, 2 A			
Resolution	0.1 μΑ			
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

DC Current (cont.) Voltage Burden					
Voltage Burden 2					
3	250 mV max. (1 mV/1 μ A on 200 μ 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)				
	A Input (F 2 A/1500 V, size 8 x 65 mm IR fast blow ceramic) (FP 700)				
AC Current (45 Hz to 1 kHz)					
	200 μA, 2 mA, 20 mA, 200 mA, 2 A				
Resolution	0.1 μΑ				
	200 μA to 20 mA	±(0.8 % rdg+4 dgts)			
2	200 mA to 2 A	±(1.2 % rdg+4 dgts)			
	250 mV max. (1 V on 2 A range)				
OL Protection s	same as DC Current				
Resistance					
Ranges 2	200 Ω , 2 k Ω , 20 k Ω , 200 k Ω , 2 M Ω , 20 M Ω				
Resolution	0.1 Ω				
Accuracy 2	200 Ω	±(0.5 % rdg+4 dgts)			
-	2 kΩ to 200 kΩ	±(0.3 %rdg+2 dgts)			
-	2 ΜΩ	±(1.0 % rdg+4 dgts)			
	20 ΜΩ	±(2.0 %rdg+4 dgts			
OL Protection 1	1500 V dc/1000 V ac rms				
Open Circuit Voltage 2	200 Ω range	3.0 V dc typical			
a	all other ranges	0.3 V dc typical.			
Diode/Continuity Test					
Test Current 1	1m A dc typical				
	3.0 V dc Typical				
Diode Accuracy ±	±(1.5 % rdg+2 dgts)				
	<50 Ω ± 25 Ω				
Response Time <	<100 msec				
OL Protection 1	1500 V dc/1000 V ac rms				



Data Sheet



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

website: www.Amprobe.com email: info@amprobe.com 6920 Seaway Blvd. Everett, WA 98203

Amprobe® Test Tools Europe

P.O. Box 1186 5602 BD Eindhoven The Netherlands

tel: 877-AMPROBE

@2007 Amprobe Test Tools. All rights reserved. 3/2007 PN: 1646323 Rev C

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

AMPROBE: