

AMPROBE®

Data Sheet

33XR-A
Digital Multimeter

Manual ranging digital multimeter with temperature and capacitance for field service technicians.

- Frequency to 40 MHz, temperature to 1832 °F, capacitance to 4000 µF
- Input warning tone when test leads are in wrong jack
- 1000 V/750 V DC/AC
- 10 Amps AC/DC, fully safety fused
- Resistance to 4 MΩ
- Continuity beeper
- Min/Max, Relative, Peak and Data Hold
- Auto power off to save battery life
- Separate door for easy battery and fuse access
- Magne-Grip™ Holster with magnetic hanging strap
- One-year warranty



33XR-A

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.

(note: $500 MSLP limit)

CAT II 1000V CAT III 600V c UL us CE N10140

AMPROBE®

33XR-A Digital Multimeter

Data Sheet

General Specifications

Manual Ranging	
Display:	3-3/4 digit LCD, 3999 counts with 41-segment analog bar graph
Display Update Rate:	2/sec, nominal
Power Battery:	9 V NEDA 1604, JIS 006P, IEC 6F22
Battery Life:	300 hrs typical (alkaline)
Operating Temperature:	0 °C to 45 °C at < 70 % R.H.
Storage Temperature:	-20 °C to 60 °C, 0 to 80 % R.H. with battery removed from meter
Dimensions:	196 x 92 x 60 mm (7.7" x 3.5" x 2.3")
Weight:	400 gr (0.9 lb) without holster, including battery

Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing)

Function	Range	Accuracy
DC Voltage		
Ranges	400 mV, 4 V, 40 V, 400 V, 1000 V	± (0.7 % rdg + 1 dgt)
Resolution	100 µV	
Input Impedance	10 MΩ	
AC Voltage (45 Hz to 500 Hz)		
Ranges	400 mV, 4 V, 40 V, 400 V, 750 V	
Accuracy	4 V Range: 200 Hz to 500 Hz	± (2.0 % rdg + 4 dgts)
	All other ranges	± (1.5 % rdg + 4 dgts)
Resolution	100 µV	
Input Impedance	10 MΩ	
DC Current		
Ranges	400 µA, 4 mA, 40 mA, 300 mA, 10 A	
Accuracy	400 µA to 300 mA ranges	± (1.0 % rdg + 1 dgt)
	10 A range	± (2.0 % rdg + 3 dgts)
Resolution	0.1 µA	
Voltage Burden	400 µA range: 1 mV/µA	
	4 mA range: 100 mV/1 mA	
	40 mA range: 12 mV/1 mA	
	300 mA range: 4 mV/1 mA	
	10 A range: 100 mV/1 A	
AC Current (45 Hz to 500 Hz)		
Ranges	400 µA, 4 mA, 40 mA, 300 mA, 10 A	
Accuracy	400 µA to 300 mA ranges	± (1.5 % rdg + 4 dgts)
	10 A range	± (2.5 % rdg + 4 dgts)
Resolution	0.1 µA	
Voltage Burden	**See DC Current**	
Resistance		
Ranges	400 Ω, 40 kΩ, 4 MΩ	
Accuracy	400 Ω and 40 kΩ ranges	± (1.0 % rdg + 4 dgts)
	4 MΩ range	± (1.2 % rdg + 4 dgts)
Resolution	100 mΩ	
Open Circuit Voltage	400 Ω range: 3.0 V DC	
	All other ranges: 0.5 V DC typical	

33XR-A Digital Multimeter

Data Sheet

Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing), cont.

Function	Range	Accuracy
Capacitance		
Ranges	4 µF, 40 µF, 400 µF, 4000 µF	
Accuracy	4 µF range	± (5.0 % rdg + 10 dgts)
	40 µF, 400 µF ranges	± (5.0 % rdg + 5 dgts)
	4000 µF range	± (5.0 % rdg + 15 dgts)
Resolution	0.1 µF	
Test Voltage	< 3.0 V	
Test Frequency	10 Hz	
Input Protection µA/mA input:	0.315 A/1000 V fast blow ceramic fuse 6.3 x 32 mm	
Temperature		
Ranges	-20 °C to 1000 °C, -4 °F to 1832 °F	
Accuracy	-20 °C to 10 °C	± (2.0 % rdg + 4 °C)
	10 °C to 200 °C	± (1.0 % rdg + 3 °C)
	200 °C to 1000 °C	± (3.0 % rdg + 2 °C)
	-4 °F to 50 °F	± (2.0 % rdg + 8 °F)
	50 °F to 400 °F	± (1.0 % rdg + 6 °F)
	400 °F to 1832 °F	± (3.0 % rdg + 4 °F)
Resolution	1 °C, 1 °F	
Frequency (autoranging)		
Ranges	4 kHz, 40 kHz, 400 kHz, 4 MHz, 40 MHz	± (0.1 % rdg + 3 dgts)
Resolution	1 Hz	
Sensitivity	10 Hz to 4 MHz: > 1.5 V AC RMS	
	4 MHz to 40 MHz: > 2 V AC RMS, < 5 V AC RMS	
Min Pulse Width	> 25 ns	
Duty Cycle Limits	> 30 % and < 70 %	
Continuity		
Audible Indication	< 35 Ω	
Response Time	100 ms	
Diode Test		
Test Current	1.0 mA (approximate)	± (1.5 % rdg + 3 dgts)
Resolution	1 mV	
Open Circuit Volts	3.0 V DC typical	
Peak Hold		
AC Volts Accuracy	40 V to 750 V	± (3.0 % rdg + 60 dgts)
AC Current Accuracy		± (3.0 % rdg + 60 dgts)
Response Time	> 1 ms	
Overload Protection		
AC/DC Voltage	400 mV range: 1000 V DC or 750 V AC RMS 15 sec	
	All other ranges: 1000 V DC or 750 V AC RMS	
AC/DC Current	uA/mA input: 0.315 A /1000 V fast-blow ceramic (6.3 x 32 mm)	
	10 A input: 10 A /1000 V fast-blow ceramic (10 x 38 mm)	
	(10 A for 4 minutes maximum followed by a 12 minute cooling period)	
Resistance	1000 V DC OR 750 V AC RMS	
Continuity	1000 V DC OR 750 V AC RMS	
Diode Test	1000 V DC OR 750 V AC RMS	
Capacitance	0.315 A /1000 V fast-blow ceramic (6.3 x 32 mm)	
Temperature	1000 V DC OR 750 V AC RMS	
Frequency	1000 V DC OR 750 V AC RMS	

AMPROBE®

33XR-A Digital Multimeter

Data Sheet



Included Accessories
Test leads with threaded alligator clips (TL36A), 9 V battery (installed), Magne-Grip™ Holster with magnetic hanging strap, temperature adapter (TA-1), Type K thermocouple probe (TP255A), spare fuse, users manual

Optional Accessories

VC221B	Padded Vinyl Carry Case
DL248D	Deluxe Test Lead Kit
DC205C	Heavy Duty Case
HV231-10A	High Voltage Probe
TP254A	High Temperature Probe

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

©2007 Amprobe Test Tools. All rights reserved.
9/2007 3128703 Rev A