



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)





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### General Specifications

<b>Manual Ranging</b>	
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
<b>DC Voltage</b>		
Ranges	400 mV, 4 V, 40 V, 400 V, 1000 V	± (0.7 % rdg + 1 dgt)
Resolution	100 µV	
Input Impedance	10 MΩ	
<b>AC Voltage (45 Hz to 500 Hz)</b>		
Ranges	400 mV, 4 V, 40 V, 400 V, 750 V	
Accuracy	4 V Range: 200 Hz to 500 Hz All other ranges	± (2.0 % rdg + 4 dgts) ± (1.5 % rdg + 4 dgts)
Resolution	100 µV	
Input Impedance	10 MΩ	
<b>DC Current</b>		
Ranges	400 µA, 4 mA, 40 mA, 300 mA, 10 A	
Accuracy	400 µA to 300 mA ranges 10 A range	± (1.0 % rdg + 1 dgt) ± (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	
<b>AC Current (45 Hz to 500 Hz)</b>		
Ranges	400 µA, 4 mA, 40 mA, 300 mA, 10 A	
Accuracy	400 µA to 300 mA ranges 10 A range	± (1.5 % rdg + 4 dgts) ± (2.5 % rdg + 4 dgts)
Resolution	0.1 µA	
Voltage Burden	See DC Current	
<b>Resistance</b>		
Ranges	400 Ω, 40 kΩ, 4 MΩ	
Accuracy	400 Ω and 40 kΩ ranges 4 MΩ range	± (1.0 % rdg + 4 dgts) ± (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	



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

Function	Range	Accuracy
<b>Capacitance</b>		
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	
<b>Temperature</b>		
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	
<b>Frequency (autoranging)</b>		
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 %	
<b>Continuity</b>		
Audible Indication	< 35 Ω	
Response Time	100 ms	
<b>Diode Test</b>		
Test Current	1.0 mA (approximate)	± (1.5 % rdg + 3 dgts)
Resolution	1 mV	
Open Circuit Volts	3.0 V DC typical	
<b>Peak Hold</b>		
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	
<b>Overload Protection</b>		
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	µA/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	



### 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

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