



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 μ F
- 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 M Ω
- 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)



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 | 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 |

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