

# 37XR

True RMS digital multimeter with component and logic test for troubleshooting electronics at the bench or on the job site.



- Inductance to 40 H, frequency to 40 MHz, capacitance to 400  $\mu$ F, logic to 20 MHz
- Input warning tone when test leads are in wrong jack
- 10,000 count, 0.1 % accuracy
- 1000 V/750 V dc/ac True RMS
- 10 Amps ac/dc, fully safety fused
- Resistance to 40 M $\Omega$
- Continuity beeper
- Min/Max, Average, 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
- CAT III 600 V, CAT II 1000 V rated
- UL (cULus) listed
- Three-year warranty

## 37XR Specifications (at 23 °C $\pm$ 5 °C, <75 % R.H. non-condensing)

<b>DC Voltage</b>	
Ranges	1000 mV, 10 V, 100 V, 1000 V
Accuracy	all ranges $\pm$ (0.1 % rdg + 5 dgt)
Resolution	100 $\mu$ V
<b>AC Voltage (45 Hz to 2 kHz) True RMS</b>	
Ranges	1000 mV, 10 V, 100 V, 750 V
Accuracy	750 V range: 45 to 1 kHz: $\pm$ (2.0 % rdg + 10 dgts) All other ranges, 45 to 500 Hz: $\pm$ (1.2 % rdg + 10 dgts) All other ranges, 500 to 2 kHz: $\pm$ (2.0 % rdg + 10 dgts)
Resolution	100 $\mu$ V
AC coupled True RMS specified from 5 % to 100 % of range	
<b>DC Current</b>	
Ranges	100 $\mu$ A, 1000 $\mu$ A, 10 mA, 100 mA, 400 mA, 10 A
Accuracy	100 $\mu$ A range: $\pm$ (0.5 % rdg + 10 dgt) 1000 $\mu$ A to 400 mA ranges: $\pm$ (0.5 % rdg + 5 dgts) 10 A range: $\pm$ (1.5 % rdg + 10 dgt)
Resolution	0.01 $\mu$ A
<b>AC Current (45 Hz to 1 kHz) True RMS</b>	
Ranges	100 $\mu$ A, 1000 $\mu$ A, 10 mA, 100 mA, 400 mA, 10 A
Accuracy	100 $\mu$ A to 100 mA ranges: $\pm$ (1.5 % rdg + 10 dgts) 400 mA range: $\pm$ (2.0 % rdg + 10 dgts) 10 A range: $\pm$ (2.5 % rdg + 10 dgts)
Resolution	0.01 $\mu$ A
AC coupled True RMS specified from 5 % to 100 % of range	
<b>Resistance</b>	
Ranges	1000 $\Omega$ , 10 k $\Omega$ , 100 k $\Omega$ , 1000 k $\Omega$ , 10 M $\Omega$ , 40 M $\Omega$
Accuracy	1000 $\Omega$ to 1000 k $\Omega$ ranges: $\pm$ (0.5 % rdg + 8 dgts) 10 M $\Omega$ range: $\pm$ (1.0 % rdg + 10 dgts) 40 M $\Omega$ range: $\pm$ (2.0 % rdg + 10 dgts)
<b>Capacitance</b>	
Ranges	40 nF, 400 nF, 4 $\mu$ F, 40 $\mu$ F, 400 $\mu$ F
Accuracy	40 nF, 400 $\mu$ F ranges: $\pm$ (3.0 % rdg + 10 dgts) 400 nF to 40 $\mu$ F ranges: $\pm$ (3.0 % rdg + 5 dgts)
Resolution	0.01 nF
<b>Inductance</b>	
Ranges	4 mH, 40 mH, 400 mH, 4 H, 40 H
Accuracy	(for values of Q $\leq$ 7): $\pm$ (5.0 % rdg + 30 dgts)
Resolution	1 $\mu$ H
<b>Frequency</b>	
Ranges	100 Hz, 1000 Hz, 10 kHz, 100 kHz, 1000 kHz, 10 MHz
Accuracy	all ranges: $\pm$ (0.1 % rdg + 5 dgts)
Resolution	0.01 Hz
<b>Duty Cycle</b>	
Ranges	0 to 90 %
Accuracy	5V logic: $\pm$ (2.0 % rdg + 20 dgts)
Resolution	0.01 %
Frequency Range	0 % to 10 %: 40 Hz to 990 kHz 10 % to 90 %: 40 Hz to 20 kHz
<b>Logic Test</b>	
Logic Type	TTL, CMOS
Thresholds	Logic 1 (Hi): TTL 2.8 V $\pm$ 0.8 V, CMOS 4 V $\pm$ 1 V Logic 0 (Lo): TTL 0.8 V $\pm$ 0.5 V, CMOS 2 V $\pm$ 0.5 V
Frequency Response	20 MHz

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### 37XR Specifications (at 23 °C ± 5 °C, <75 % R.H. non-condensing)

<b>dBm</b>	
Ranges	-13 dBm to + 50 dBm
Accuracy	45 Hz to 5 kHz: ± (0.7 dB + 8 dgts)
	5 kHz to 10 kHz: ± (2.5 dB + 8 dgts)
Resolution	0.01 dBm
<b>Continuity</b>	
Audible Indication	< 40 Ω
<b>Diode Test</b>	
Test Current	1.0 mA (approximate)
Open Circuit Volts	3.0 V dc typical
<b>Peak</b>	
AC Volts Accuracy	100 V, 750 V ranges: ± (3.0 % + 200 dgts)
	1000 mV, 10 V ranges: unspecified
AC Current	± (3.0 % + 200 dgts)
	100 µA range: unspecified
<b>Overload Protection</b>	
AC/DC Voltage	All ranges: 1000 V dc or 750 V ac rms
AC/DC Current	µA/mA input: F0.5 A/1000 V fast-blow ceramic (6.3 x 32 mm)
	10 A input: F10 A/1000 V fast-blow ceramic (10 x 38 mm)
	(10 A for 4 minutes maximum followed by a 12 minute cooling period)

### General Specifications

**Autorange; Display:** 4-3/4 digit LCD, 10,000 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:** 150 hrs typical (alkaline) frequent use of backlight will decrease battery life; **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; **Temperature Coefficient:** 0.1 x (specified accuracy) per °C ( 0 °C to 18 °C , 28 °C to 45 °C); **Altitude:** (2000 m) 6562 ft; **Dimensions:** 7.75" x 3.55" x 2.4" (195 x 92 x 60 mm); **Weight (without holster, including battery):** 1 lb (400 gr)

#### Included Accessories

Test leads with threaded alligator clips (TL36), 9 V battery (installed), Magne-Grip™ Holster with magnetic hanging strap (H2-XR), spare fuse, operators manual

#### Features

Input lead warning; analog bar graph; Data Hold; Min/Max; Average; Relative; Peak; auto power off after 30 minutes typical; low battery indication; backlight; overrange indication; three-year warranty

#### Optional Accessories

VC221A Padded Vinyl Carry Case, DL248C Deluxe Test Lead Kit, DC205B Heavy Duty Case, HV231-10 High Voltage Probe, TP254 High Temperature Probe

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