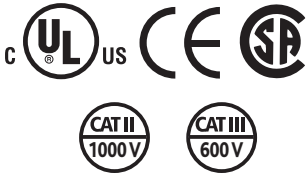


Data Sheet

37XR
Digital
Multimeter



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

- True RMS meter for electronics troubleshooting at the bench or job site. The highest accuracy meter in the XR series.

 - Autoranging 10,000 count with 0.1 % accuracy
 - LCR functions – inductance, capacitance and resistance
 - Frequency, duty cycle and logic test
 - Min/Max, Average, Relative, Peak, and Data Hold
- Bright blue backlight for dim environments
 - Magne-Grip™ holster with magnetic hanging strap
 - Auto power off to save battery life
 - Separate door for easy battery and fuse access
 - Three-year warranty

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

Function	Range	Accuracy
Voltage		
DC Voltage	1000 mV, 10 V, 100 V, 1000 V	± (0.1 % rdg + 5 dgt)
AC Voltage True RMS (45 Hz to 2 kHz)		
	1000 mV, 10 V, 100 V (45 Hz to 500 Hz)	± (1.2 % rdg + 10 dgts)
	1000 mV, 10 V, 100 V (500 Hz to 2 kHz)	± (2.0 % rdg + 10 dgts)
	750 V (45 Hz to 1 kHz)	± (2.0 % rdg + 10 dgts)
AC coupled True RMS specified from 5 % to 100 % of range		
Input Impedance	10 MΩ	
Resolution	100 μV	
Current		
DC Current	100 μA	± (0.5 % rdg + 10 dgt)
	1000 μA, 10 mA, 100 mA, 400 mA	± (0.5 % rdg + 5 dgts)
	10 A	± (1.5 % rdg + 10 dgt)
AC Current True RMS (45 Hz to 1 kHz)		
	100 μA, 1000 μA, 10 mA, 100 mA	± (1.5 % rdg + 10 dgts)
	400 mA	± (2.0 % rdg + 10 dgts)
	10 A	± (2.5 % rdg + 10 dgts)
AC coupled True RMS specified from 5 % to 100 % of range		
Resolution	0.01 μA	
Resistance	1000 Ω, 10 kΩ, 100 kΩ, 1000 kΩ	± (0.5 % rdg + 8 dgts)
	10 MΩ	± (1.0 % rdg + 10 dgts)
	40 MΩ	± (2.0 % rdg + 10 dgts)
Resolution	100 mΩ	
Capacitance	40 nF, 400 μF	± (3.0 % rdg + 10 dgts)
	400 nF, 4 μF, 40 μF	± (3.0 % rdg + 5 dgts)
Resolution	0.01 nF	
Inductance		
(for values of Q ≤ 7)	4 mH, 40 mH, 400 mH, 4 H, 40 H	± (5.0 % rdg + 30 dgts)
Resolution	1 μH	
Frequency	100 Hz, 1000 Hz, 10 kHz, 100 kHz, 1000 kHz, 10 MHz	± (0.1 % rdg + 5 dgts)
	0.01 Hz	
Duty Cycle	0 to 90 %	5 V logic: ± (2.0 % rdg + 20 dgts)
Resolution	0.01 %	
Frequency Range	0 % to 10 %: 40 Hz to 990 Hz	
	10 % to 90 %: 40 Hz to 20 kHz	



Specifications *cont.*

Function	Range	Accuracy
Logic Test		
Logic Type	TTL, CMOS	
Thresholds		
Logic 1 (Hi)	TTL 2.8 V ± 0.8 V, CMOS 4 V ± 1 V	
Logic 0 (Lo)	TTL 0.8 V ± 0.5 V, CMOS 2 V ± 0.5 V	
Frequency Response	20 MHz	
dBm		
	-13 dBm to +50 dBm (45 Hz to 5 kHz) ± (0.7 dB + 8 dgts)	
	-13 dBm to +50 dBm (5 kHz to 10 kHz) ± (2.5 dB + 8 dgts)	
Resolution	0.01 dBm	
Continuity		
Audible Indication	< 40 Ω	
Response Time	100 ms	
Diode Test		
Test Current	1.0 mA (approximate)	
Open Circuit Voltage	3.0 V dc typical	
Peak		
AC Volts Accuracy	100 V, 750 V 1000 mV, 10 V	± (3.0 + 200 dgts) unspecified
AC Current	1000 µA, 10 mA, 100 mA, 400 mA, 10 A 100 µA	± (3.0 + 200 dgts) unspecified
Overload Protection		
AC/DC Voltage	1000 V dc or 750 V ac rms	
AC/DC Current	µA/mA input: F0.5 A /1000 V fast-blow ceramic 6.3 mm x 32 mm 10 A input: F10 A /1000 V fast-blow ceramic 10 mm x 38 mm (10 A for 4 minutes maximum followed by a 12 minute cooling period)	
Resistance, Continuity, Diode Test, Inductance, Capacitance	All ranges: 1000 V dc or 750 V rms	



General Specifications

Display (Autoranging)	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	195 mm x 92 mm x 60 mm (7.75 in x 3.55 in x 2.4 in)
Weight (without holster, including battery)	450 g (1 lb)
Warranty	Three-year

Included Accessories

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

Optional Accessories

VC221A Padded Vinyl Carrying Case
DL248C Deluxe Test Lead Kit
DC205B Heavy Duty Carrying Case
HV231-10 High Voltage Probe
TP253A Temperature Converter