



## 38XR-A Digital Multimeter

True RMS digital multimeter with optical PC interface for engineers designing and troubleshooting industrial automation and control systems.

### 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)

- Frequency to 10 MHz, capacitance to 400  $\mu$ F, temperature to 2372  $^{\circ}$ F
- Duty cycle, dBm and 4 to 20 mA loop current test
- 1000 V/750 V DC/AC True RMS, AC + DC input
- 10 Amps AC/DC, fully safety fused
- Resistance to 40 M $\Omega$
- Continuity beeper
- Min/Max, Average, Relative, Peak, and Data Hold
- Bright blue backlight
- Auto power off to save battery life
- Separate door for easy battery and fuse access
- Magne-Grip™ Holster with magnetic hanging strap
- CAT IV 600V rated
- Three-year warranty



38XR-A



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## Data Sheet

### General Specifications

<b>Autoranging</b>	
<b>Display:</b>	4-3/4 digit LCD, 10,000 counts with 41-segment analog bar graph
<b>Display Update Rate:</b>	2/sec, nominal
<b>Power Battery:</b>	9 V NEDA 1604, JIS 006P, IEC 6F22
<b>Battery Life:</b>	150 hrs typical (alkaline) frequent use of backlight will decrease battery life; Operating Temperature: 0 °C to 45 °C at < 70% R.H.
<b>Storage Temperature:</b>	-20 °C to 60 °C, 0 to 80 % R.H. with battery removed from meter
<b>Temperature Coefficient:</b>	0.1 x (specified accuracy) per °C (0 °C to 18 °C, 28 °C to 45 °C)
<b>Altitude:</b>	2000 m (6562 ft)
<b>Dimensions:</b>	196mm x 96mm x 60 mm (7.8" x 3.55" x 2.4")
<b>Weight:</b>	400 gr (1 lb) without holster, including battery

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

Function	Range	Accuracy
<b>DC Voltage</b>		
<b>Ranges</b>	1000 mV, 10 V, 100 V, 1000 V	± (0.25 % rdg + 5 dgt)
<b>Resolution</b>	100 µV	
<b>AC Voltage (45 Hz to 2 kHz) True RMS</b>		
<b>Ranges</b>	1000 mV, 10 V, 100 V, 750 V	
<b>Accuracy</b>	750 V range:	45 to 1 kHz: ± (2.0 % rdg + 10 dgts)
	All other ranges, 45 to 500 Hz:	± (1.2 % rdg + 10 dgts)
	All other ranges, 500 to 2 kHz:	± (2.0 % rdg + 10 dgts)
<b>AC coupled True RMS specified from 5% to 100 % of range</b>		
<b>AC + DC Voltage (45 Hz to 2 kHz)</b>		
<b>Ranges</b>	1000 mV, 10 V, 100 V, 750 V	
<b>Accuracy</b>	750 V range: 45 to 1 kHz:	± (2.5 % rdg + 10 dgts)
	All other ranges, 45 to 500 Hz:	± (1.5 % rdg + 10 dgts)
	All other ranges, 500 to 2 kHz:	± (2.5 % rdg + 10 dgts)
<b>Resolution</b>	100 µV	
<b>DC coupled True RMS specified from 5 % to 100 % of range</b>		
<b>DC Current</b>		
<b>Ranges</b>	100 µA, 1000 µA, 10 mA, 100 mA, 400 mA, 10 A	
	Accuracy 100 µA range:	± (0.5 % rdg + 10 dgt)
	1000 µA to 400 mA ranges:	± (0.5 % rdg + 5 dgts)
	10 A range:	±(1.5 % rdg + 10 dgt)
<b>Resolution</b>	0.01 µA	
<b>AC Current (True RMS) ( AC + DC) (45 Hz – 1kHz)</b>		
<b>Ranges</b>	100 µA, 1000 µA, 10 mA, 100 mA, 400 mA, 10 A	
<b>Accuracy</b>	100 µA to 100 mA ranges:	± (1.5 % rdg + 20 dgts)
	400 mA range:	± (2.0 % rdg + 10 dgts)
	10 A range:	± (2.5 % rdg + 20 dgts)
<b>Resolution</b>	0.01 µA	
<b>AC coupled True RMS specified from 5 % to 100 % of range</b>		
<b>AC + DC Accuracy</b>	<b>100 µA to 400 mA ranges:</b>	± (2.0 % rdg + 20 dgts)
	10 A range:	± (3.0 % rdg + 20 dgts)
<b>AC + DC: AC coupled True RMS specified from 10 % to 100 % of range</b>		
<b>Resistance</b>		
<b>Ranges</b>	1000 Ω, 10 kΩ, 100 kΩ, 1000 kΩ, 10 MΩ, 40 MΩ	
<b>Accuracy</b>	1000 Ω to 1000 kΩ ranges:	± (0.5 % rdg + 8 dgts)
	10 MΩ range:	± (1.0 % rdg + 10 dgts)
	40 MΩ range:	± (2.0 % rdg + 10 dgts)
<b>Resolution</b>	100 mΩ	

Function	Range	Accuracy
<b>Capacitance</b>		
Ranges	40 nF, 400 nF, 4 µF, 40 µF, 400 µF	
Accuracy	40 nF, 400 µF ranges:	± (3.0 % rdg + 10 dgts)
	400 nF to 40 µF ranges:	± (3.0 % rdg + 5 dgts)
Resolution	0.01 nF	
<b>Temperature</b>		
Ranges	-20 °C to 1300 °C, -4 °F to 2372 °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 1300 °C:	± (2.0 % 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 2372 °F:	± (2.0 % rdg + 4 °F)
Resolution	1 °C, 1 °F	
<b>Frequency</b>		
Ranges	100 Hz, 1000 Hz, 10 kHz, 100 kHz, 1000 kHz, 10 MHz	± (0.1% rdg + 5 dgts)
Resolution	0.01 Hz	
<b>Duty Cycle</b>		
Ranges	0 to 90 %	
Accuracy	5 V logic:	± (2.0% rdg + 10 dgts)
Resolution	0.01 %	
Frequency Range	0 % to 10 %: 40 Hz to 990 Hz	
	10 % to 90 %: 40 Hz to 20 kHz	
<b>4 - 20 mA DC Current Test</b>		
Range	0 – 100 %	± (0.5 % + 5 dgts)
Resolution	0.01 %	
<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	0.5 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)
AC Current	1000 mV, 10 V ranges: unspecified	± (3.0 + 200 dgts)
<b>Overload Protection</b>		
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 x 32 mm	
	10A input: F10 A /1000V fast-blow ceramic 10 x 38 mm	

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### Included Accessories

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

### Optional Accessories

VC221B	Padded Vinyl Carry Case
DL248D	Deluxe Test Lead Kit
DC207C	Heavy Duty Case
HV231-10A	High Voltage Probe
TP254A	High Temperature Probe
38-SWA	RS232 Cable and Software

### Amprobe® Test Tools

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