50,000-Count TRMS Digital Multimeter Models MX53III, MX54III, MX55III & MX56III

The Models MX53III, MX54III, MX55III and MX56III are hand-held professional digital multimeters that measure up to the toughest standards. They are built into a rugged housing which provides a separate battery and fuse compartment to isolate the DMM's electronics from contamination. These meters offer a complete set of measurement ranges and are in compliance with international safety and quality standards to ensure a professional and reliable measuring tool.

These True RMS (AC or AC + DC) meters provide accurate measurements of non-sinusoidal waveforms. They all measure AC Amps, AC Volts, DC Amps, DC Volts, Resistance, Continuity, Capacitance, Frequency and have a Diode Test function. AC Voltage measurement can be displayed in Volts, in dB or in resistance power. Once the load impedance has been programmed the multimeter automatically calculates the value in dB and the power consumed (VA).

The large and easy-to read LCD features a selectable 50,000-count digital display. The display features comprehensive user interface symbols, such as low battery, Min/Max/Avg and a 34-segment analog bargraph for easy trend readings. Accuracy is 0.025%. All models are equipped with a Data Hold function that freezes the measurement for later viewing. All models are waterproof, IP67 rated as well as CE marked.

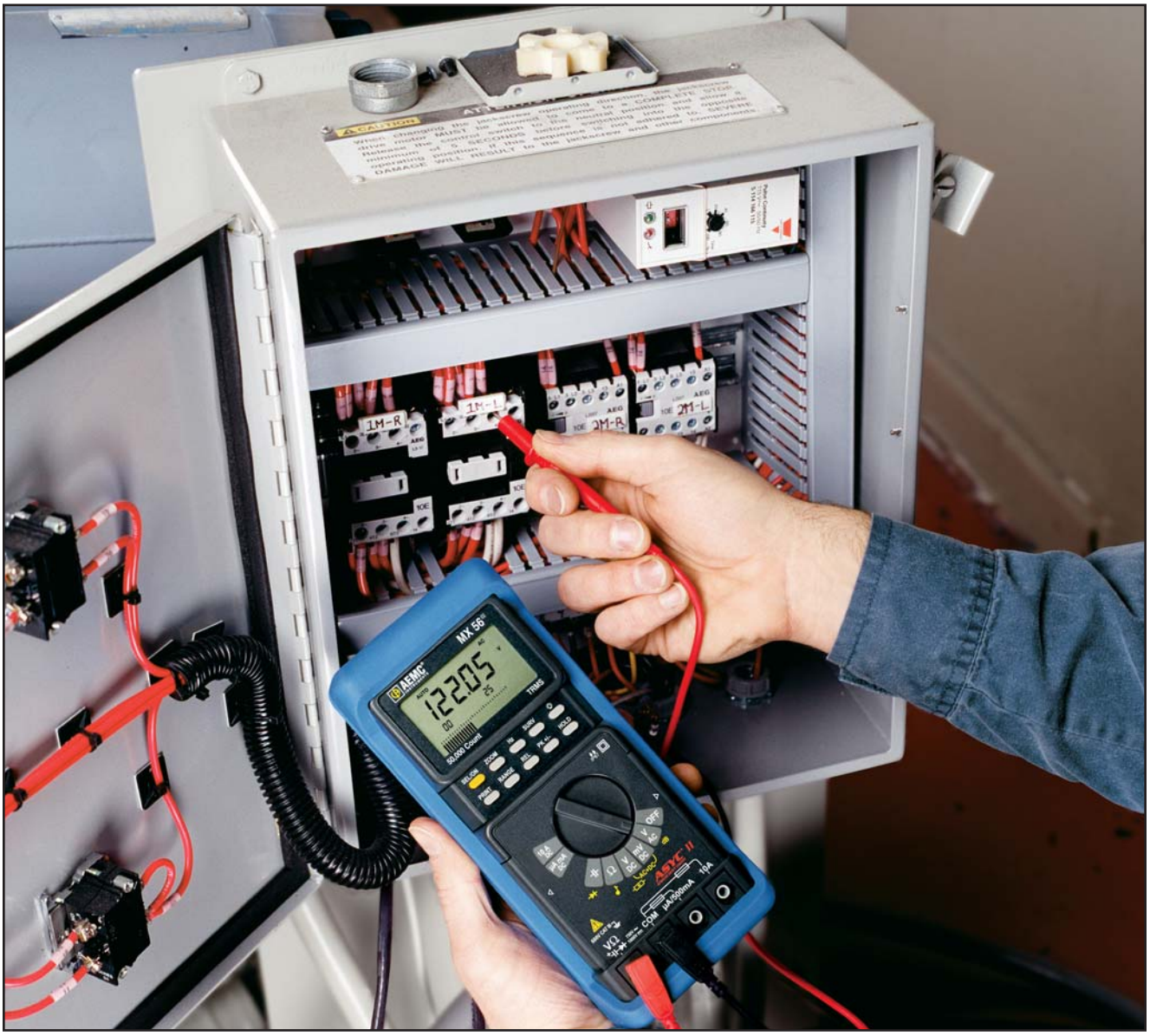
All models include a rugged, shockproof, protective, blue holster with Multistand (for lead and probe storage), test leads, 9V Alkaline battery and a user manual.

Features

- 50,000-count, 5000-count selectable
- Accuracy to 0.025%
- True RMS (AC or AC + DC)
- Selectable input impedance — 10mΩ or 1GΩ on 500mV$_{DC}$ range
- DC to 100kHz
- Capacitance and frequency
- EN 61010, 600V Cat. III and 1000V Cat. II
- Includes rugged, shockproof, protective, blue holster with Multistand (for lead and probe storage) and test leads
- Three year warranty

Applications

- Installation, repair or maintenance of industrial equipment
- Design verification of prototypes/production units
- Troubleshooting failures and poor performance
- Quality analysis



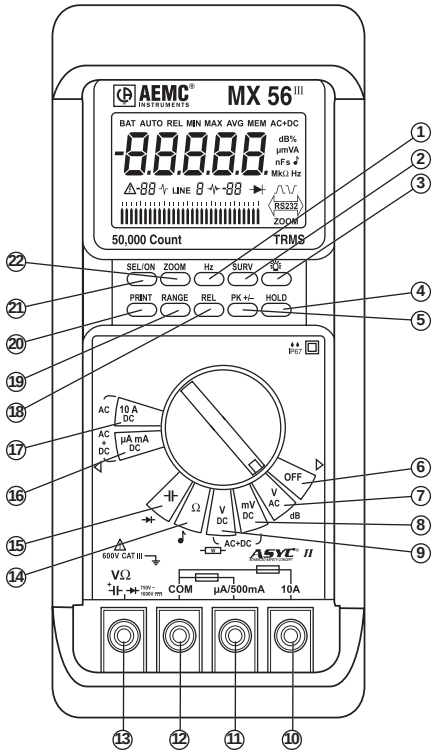
Model MX56^{III} measuring DC voltages in a signal control panel.

Specifications

MODELS	MX53™	MX54™	MX55™	MX56™
AC CURRENT				
Measurement Range	5mA to 10A	500µA to 10A	500µA to 10A	500µA to 10A
Resolution	1µA to 10mA	10nA to 1mA	10nA to 1mA	10nA to 1mA
Basic Accuracy(1)	±1% of Reading ± 3cts	±0.6% of Reading ± 30cts	±0.6% of Reading ± 30cts	±0.6% of Reading ± 30cts
AC VOLTAGE				
Measurement Range	0.5 to 750V	0.5 to 750V	0.5 to 750V	0.5 to 750V
Resolution	100µV to 1V	10µV to 100mV	10µV to 100mV	10µV to 100mV
Basic Accuracy(1)	±1% of Reading ± 3cts	±0.3% of Reading ± 30cts	±0.3% of Reading ± 30cts	±0.3% of Reading ± 30cts
Input Impedance	10MΩ	10MΩ	10MΩ	10MΩ
DC CURRENT				
Measurement Range	5mA to 10A	500µA to 10A	500µA to 10A	500µA to 10A
Resolution	100nA to 1mA	10nA to 1mA	10nA to 1mA	10nA to 1mA
Basic Accuracy(1)	±0.2% of Reading ± 2cts	±0.05% of Reading ± 2cts	±0.05% of Reading ± 2cts	±0.05% of Reading ± 2cts
DC VOLTAGE				
Measurement Range	0.5 to 1000V	0.5 to 1000V	0.5 to 1000V	0.5 to 1000V
Resolution	10µV to 100mV	10µV to 100mV	10µV to 100mV	10µV to 100mV
Basic Accuracy(1)	±0.1% of Reading ± 2cts	±0.05% of Reading ± 2cts	±0.025% of Reading ± 2cts	±0.025% of Reading ± 2cts
Input Impedance	10MΩ	10MΩ	10MΩ	10MΩ
RESISTANCE				
Measurement Range	500Ω to 50MΩ	500Ω to 50MΩ	500Ω to 50MΩ	500Ω to 50MΩ
Resolution	10mΩ to 1kΩ	10mΩ to 1kΩ	10mΩ to 1kΩ	10mΩ to 1kΩ
Basic Accuracy(1)	±0.1% of Reading ± 3cts	±0.07% of Reading ± 2cts	±0.07% of Reading ± 2cts	±0.07% of Reading ± 2cts
CONTINUITY				
Measurement Range	10Ω to 20Ω	10Ω to 20Ω	10Ω to 20Ω	10Ω to 20Ω
Response Time	1ms	1ms	1ms	1ms
DIODE TEST				
Resolution	1mV	1mV	1mV	1mV
Test Current	1mA ±20%	1mA ±20%	1mA ±20%	1mA ±20%
CAPACITANCE				
Measurement Range	50nF to 50mF	50nF to 50mF	50nF to 50mF	50nF to 50mF
Resolution	10pF to 10µF	10pF to 10µF	10pF to 10µF	10pF to 10µF
Basic Accuracy(1)	±1% of Reading ± 2cts	±1% of Reading ± 2cts	±1% of Reading ± 2cts	±1% of Reading ± 2cts
FREQUENCY				
Measurement Range	0.62Hz to 500kHz	0.62Hz to 500kHz	0.62Hz to 500kHz	0.62Hz to 500kHz
Basic Accuracy(1)	0.03% of Reading	0.03% of Reading	0.03% of Reading	0.03% of Reading
dB FUNCTION				
Measurement Range	–	10mVAC to 750VAC	10mVAC to 750VAC	10mVAC to 750VAC
Resolution	–	0.01dB	0.01dB	0.01dB
PULSE COUNT				
	–	Up to 99,999-counts	–	Up to 99,999-counts
PULSE WIDTH				
	–	20µs (min)	–	20µs (min)
POWER LINE NOISE ANALYSIS				
	–	1 to 100kHz	–	1 to 100kHz
RESISTIVE POWER (Programmable reference)				
Measurement Range	–	1 to 9999Ω	–	1 to 9999Ω
Resolution	–	100µW	–	100µW
TEMPERATURE				
Range (User selectable in °F or °C)	–	-328° to 1472°F (-200° to 800°C)	–	–
Sensor	–	PT100/PT1000	–	–
GENERAL				
Digital Display	50,000-count			
Analog Bargraph	34-segment			
Power Source	9V Alkaline battery			
Dimensions	7.4 x 3.2 x 1.5" (189 x 82 40mm)			
Weight	0.8 lb (400g)			
ENVIRONMENTAL				
Operating Temperature	14° to 140°F (-10° to 60°C)			
Storage Temperature	-40° to 158°F (-40° to 70°C)			
SAFETY				
Safety Rating	EN 61010, 600V Cat. III and 1000V Cat. II			
Double Insulation ☐	Yes			
CE Mark	Yes			

(1) Accuracy dependent on range

Construction



1. Time functions selection
2. Monitoring values selection/display
3. Display backlighting
4. Display hold
5. Peak measurement
6. Power off
7. AC voltage measurement
8. 500mV voltage measurement
9. DC voltage measurement
10. Input terminal range 10A
11. Input terminal range µA, mA
12. Multimeter reference input
13. Input terminal, ranges 11, 12, 13, 14 and 15
14. Resistance measurement
15. Capacitance measurement
16. Current measurement up to 500mA
17. Current measurement up to 10A (Model MX56III)
18. Relative mode measurement (Model MX56III)
19. Range change
20. Data sending to a printer
21. Power on (selects secondary functions)
22. Bargraph scale magnification

Test Leads included with MX50 Series

ORDERING INFORMATION	CATALOG NO.
DMM Model MX53III (50,000-count, TRMS, 0.1% Accuracy, with Holster)	**Cat. #2116.69**
DMM Model MX54III (50,000-count, TRMS, 0.05% Accuracy, with Holster)	**Cat. #2116.70**
DMM Model MX55III (50,000-count, TRMS, 0.025% Accuracy, with Holster)	**Cat. #2116.71**
DMM Model MX56III (50,000-count, TRMS, 0.025% Accuracy, with Holster)	**Cat. #2116.72**

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