

Intrinsically Safe Digital Multimeter Model MX 57EX TRMS



IECEX
ATEX



The AEMC® Model MX 57EX TRMS is an intrinsically safe digital multimeter designed for use in dangerous or explosive atmospheres. This meter is considered a passive device without inductive or capacitive issues that are problematic in dangerous or explosive environments. This meter provides high functionality in a unique case designed for enhanced safety, reliability, ease-of-maintenance and protection from contaminants.

The meter is built into a rugged housing which provides a separate battery and fuse compartment to isolate the DMM's electronics from

contamination. This meter offers a complete set of measurement ranges and is in compliance with international safety and quality standards to ensure a professional and reliable measuring tool.

The Model MX 57EX measures AC Amps, AC Volts, DC Amps, DC Volts, Resistance, Continuity (with beeper) and has a Diode Test function.

The large and easy-to-read LCD features a 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%. The meter is equipped with a Data Hold function that freezes the measurement for later viewing.

Includes a pair of test leads (red/black), 9V Alkaline battery, hard carrying case and a user manual.

Features

- TRMS
- LCI 07: 0010X
- Safety rating: IEC 61010-1:2001
- Agency Approval: IECEx LC107.0010 X, LCIE 02 ATEX 6005 X, Ex ib I II 2 G D or Ex I M2 , Ex ib I , Ex ib IIC T5 or T4 or T3 Δ , Ex ibD 21 T Δ
- Logic signal measurement and ADP input
- Min/Max/Avg functions
- Bargraph with zoom (x5) and center zero
- Rugged design — IP67 rating
- Protection by 500mA intrinsic safety fuse for the current range
- Includes test leads

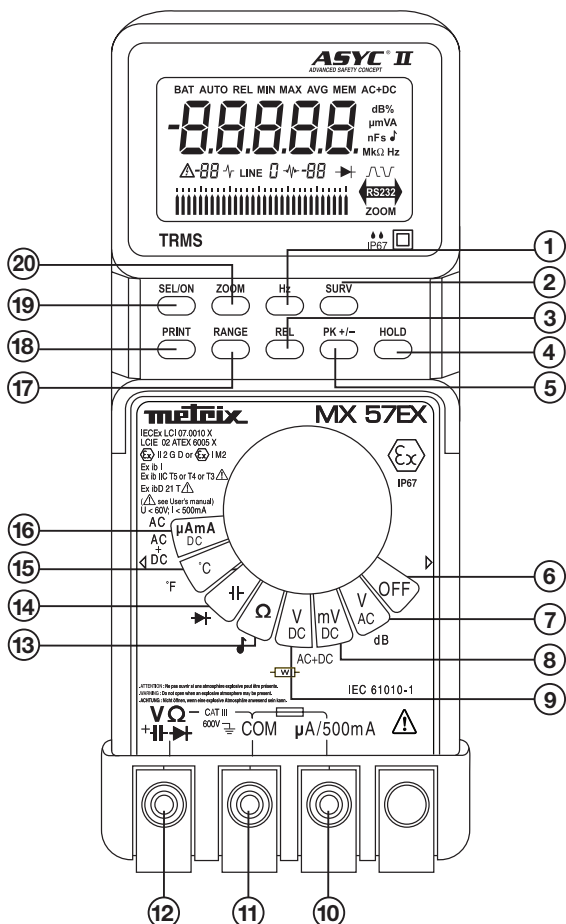
Applications

- Oil refineries
- Mining
- Pharmaceutical plants



Model MX 57EX used outdoors in a mine.

Construction



1. Time function selection
2. Monitoring values selection/display
3. Relative mode measurement
4. Display hold
5. Peak measurement
6. Power off
7. AC voltage measurement
8. 500mV voltage measurement
9. DC voltage measurement
10. μA mA range input terminal
11. Multimeter reference input (COM)
12. Range input terminal for positions 7, 8, 9, 13, 14, 15
13. Resistance measurement
14. Capacitance measurement
15. Temperature measurement
16. Current measurement up to 500mA
17. Range selection
18. Sends data to a printer
19. Power on (selects secondary functions)
20. Bargraph scale magnification

Specifications

Meets the EN 50014 and EN 50020 standards, Ex II 2 G/D EEx ib IIC T6 or Ex I M2 EEx ib I assigned specifications, IP 67 185°F (85°C) (electrical equipment for use in explosive atmospheres). CE certificate: LCIE 02 ATEX 6005X. Quality certificate: LCIE 02 ATEX Q8021.

MODEL	MX 57EX TRMS				
AC CURRENT					
Measurement Range	500μA	5mA	50mA	500mA	
Resolution	10nA	100nA	1μA	10μA	
Bandwidth	DC to 5kHz	DC to 5kHz	DC to 5kHz	DC to 5kHz	
Accuracy	±0.75% of Reading ± 30cts	±0.6% of Reading ± 30cts	±0.6% of Reading ± 30cts	±0.7% of Reading ± 30cts	
Overload Protection	600Vrms	600Vrms	600Vrms	600Vrms	
AC VOLTAGE					
Measurement Range	500mV	5V	50V	500V*	1000V*
Resolution	10μV	100μV	1mV	10mV	100mV
Bandwidth	40Hz to 1kHz	1kHz to 4kHz	4kHz to 10kHz	10kHz to 30kHz	30kHz to 50kHz
Accuracy	±0.3% of Reading ± 30cts	1% of Reading ± 30cts	2% of Reading ± 30cts	2% of Reading ± 30cts	±3% of Reading ± 30cts
Input Impedance	11MΩ	11MΩ	10MΩ	10MΩ	10MΩ
Overload Protection	1100Vpk	1100Vpk	1100Vpk	1100Vpk	1100Vpk
DC CURRENT					
Measurement Range	500μA	5mA	50mA	500mA	
Resolution	10nA	100nA	1μA	10μA	
Accuracy	±0.2% of Reading ± 5cts	±0.2% of Reading ± 2cts	±0.05% of Reading ± 2cts	±0.2% of Reading ± 2cts	
Overload Protection	600Vrms	600Vrms	600Vrms	600Vrms	
DC VOLTAGE					
Measurement Range	500mV	5V	50V	500V*	1000V*
Resolution	10μV	100μV	1mV	10mV	100mV
Accuracy	±0.025% of Reading ± 2cts	±0.025% of Reading ± 2cts	±0.025% of Reading ± 2cts	±0.025% of Reading ± 2cts	±0.2% of Reading ± 2cts
Input Impedance	10MΩ/1GΩ**	11MΩ	10MΩ	10MΩ	10MΩ
Overload Protection	1100Vpk	1100Vpk	1100Vpk	1100Vpk	1100Vpk
RESISTANCE					
Measurement Range	500Ω	5kΩ	50kΩ	500kΩ	5MΩ
Resolution	10mΩ	100mΩ	1Ω	10Ω	100Ω
Accuracy	±0.07% of Reading ± 5cts	±0.07% of Reading ± 2cts	±0.07% of Reading ± 2cts	±0.07% of Reading ± 2cts	±0.3% of Reading ± 2cts
Max Open-Circuit Voltage	7V	7V	7V	7V	7V
Overload Protection	600Vrms	600Vrms	600Vrms	600Vrms	600Vrms
CONTINUITY					
Measurement Range	10Ω to 20Ω				
Response Time	1ms				
DIODE					
Test Voltage	0 to 2V				
Test Current	1mA ± 20%				
dB Function	Ref. Resistance Adjustable from 1-9999Ω, Resolution 100 W displayed in VA				
CAPACITANCE					
Range	50nF to 50mF				
Accuracy	1% of Reading ± 2cts				
FREQUENCY					
Measurement Range	0.62Hz to 500kHz				
Accuracy	0.03% of Reading ± 2cts				
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 x 40mm)				
Weight	0.8 lb (400g)				
ENVIRONMENTAL					
Operating Temperature	14° to 104°F (-10° to 40°C)				
Storage Temperature	-40° to 158°F (-40° to 70°C)				
SAFETY					
Safety Rating	NF EN 50014, EN50014: 1992; NF EN 50020, EN 50020: 1994				
Agency Approval	Agency Approval: IECEx LC107.0010 X, LCIE 02 ATEX 6005 X, ExII 2 G D or ExI M2, Ex ib I, Ex ib IIC T5 or T4 or T3, Ex ibD 21 T				
EMC	Emission and immunity as per NF EN 61326-1, 1998				
CE Mark	Yes				

*Operating voltages are limited to 60V peak value or currents to 500mA for intrinsically safe operation.

**User selectable





Leads included with MX 57EX



Case included with MX 57EX

ORDERING INFORMATION	CATALOG NO.
DMM MX 57EX IECEx (Intrinsically Safe, TRMS, 50,000-count, 0.025% Accuracy)	Cat. #2130.66