Intrinsically Safe Digital Multimeter Model MX 57EX

The AEMC Model MX 57EX is an intrinsically safe digital multimeter designed for use in dangerous or explosive atmospheres. This meter is considered as 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 5000-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

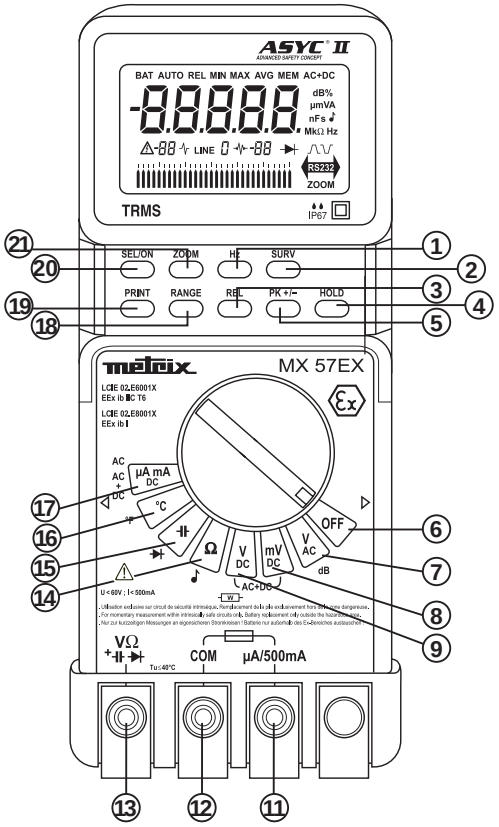
- ATEX 6005X, Ⓔx II 2 G/D EEx ib IICT6 or Ⓔx I M2 EEx ib I assigned specifications
- Logic signal measurement and ADP input
- MIN/MAX/AVG functions
- Bargraph with zoom (x5) and center zero
- Rugged design — IP67 185°F (85°C) rating
- Protection by 500mA intrinsic safety fuse for the current range

Applications

- Oil refineries
- Mining
- Pharmaceutical plants

Model MX 57EX used outdoors in a mine.

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. Temperature measurement
17. Current measurement up to 500mA
18. Range change
19. Data sending to a printer
20. Power on (selects secondary functions)
21. Bargraph scale magnification

Specifications

Meets the EN 50014 and EN 50020 standards, Ⓔx II 2 G/D EEx ib IICT6 or Ⓔx 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					
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*	750V*	
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	11MΩ	11MΩ	10MΩ	10MΩ	10MΩ	
Overload Protection	1100Vpk	1100Vpk	1100Vpk	1100Vpk	1100Vpk	
RESISTANCE						
Measurement Range	500Ω	5kΩ	50kΩ	500kΩ	5MΩ	50MΩ
Resolution	10mΩ	100mΩ	1Ω	10Ω	100Ω	1kΩ
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	±1% of Reading ± 2cts
Max Open-Circuit Voltage	7V	7V	7V	7V	7V	7V
Overload Protection	600Vrms	600Vrms	600Vrms	600Vrms	600Vrms	600Vrms
CONTINUITY						
Measurement Range	10Ω to 20Ω					
Response Time	1ms					
DIODE						
Test Voltage	0 to 2V					
Test Current	1mA ± 20%					
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	Ⓔx -40° to 158°F (-40° to 70°C)					
SAFETY						
Safety Rating	EN 50014, EN50020					
Agency Approval	II 2 G/D EEx ib IICT6 or I M2 EEx ib I assigned specifications					
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.*

Case included with MX 57EX

ORDERING INFORMATION	CATALOG NO.
DMM MX 57EX (Intrinsically Safe, TRMS, 5000-count, 0.1% Accuracy)	**Cat. #2130.65**

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

Contact Us

United States & Canada:

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
200 Foxborough Blvd.
Foxborough, MA 02035 USA
(508) 698-2115 • Fax (508) 698-2118
www.aemc.com

Customer Support – for placing an order, obtaining price & delivery:
customerservice@aemc.com

Sales Department – for general sales information:
sales@aemc.com

Repair and Calibration Service – for information on repair & calibration, obtaining a user manual:
repair@aemc.com

Technical and Product Application Support – for technical and application support:
techinfo@aemc.com

Webmaster – for information regarding www.aemc.com:
webmaster@aemc.com

South America, Central America, Mexico, Caribbean, Australia & New Zealand:

Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
(978) 526-7667 • Fax (978) 526-7605
export@aemc.com
www.aemc.com

All other countries:

Chauvin Arnoux SCA
190, rue Championnet
75876 Paris Cedex 18, France
33 1 44 85 45 28 • Fax 33 1 46 27 73 89
info@chauvin-arnoux.com
www.chauvin-arnoux.com