MIT200 Series
Digital/Analog Insulation and Continuity Testers



- **Insulation testing to 1000 MΩ**
- **Continuity testing at 200 mA down to 0.01 Ω**
- **Live circuit warning (voltage display) and test inhibit**
- **Digital/Analog display**
- **Alkaline or rechargeable batteries**
- **–10°C to +55°C operating temperature**
- **CATIII 600 V**
- **Conforms to EN61557-1**

DESCRIPTION

The MIT200 is one of the most compact insulation testers available on the market today. With options of one, two and three test voltage instruments, the MIT200 series offers a surprising range of safety and operational features.

The display offers a combination of digital readout and analogue display, using Megger's patented DART technology, so includes the benefits of an LCD display such as clear, accurate measurement and precise readings, with an analogue pointer response for evaluating circuit charge and discharge characteristics.

The instrument housing is in tough ABS, designed to withstand the rigours of hard day-to-day use, and is small enough to drop into your pocket or toolbag.

Battery requirements are 6 AA batteries of either standard alkaline or nickel metal hydride (NiMH) rechargeable type. A low battery warning indicator gives advanced warning of exhausted batteries.

Continuity testing

Automatic continuity testing is performed at 200 mA to ensure compliance with international requirements. The convenient autostart feature means there is no need to press the test button to begin the test -both hands can be used to hold the test lead probes.

All instruments will measure up to 100 Ω on continuity, with 0-10 Ω using 200 mA so meeting international electrical testing requirements.

Lead null is possible up to 9.99 Ω of test lead resistance, providing the ability to null fused, extended or standard test leads.

Continuity buzzer

A buzzer provides a means of rapid cable testing and circuit continuity identification, with voltage protection should you accidentally touch a live circuit. The buzzer operates at a 2 Ω threshold.

Insulation testing

There are four instruments in the range offering range configurations shown in the table on page 2, providing an ideal entry-level solution to most low voltage insulation testing applications. Insulation test ranges include 250 V; 500 V and 1000 V depending on model. Auto discharge ensures all circuits under test are safely discharged after testing.

Note: the 1000 V insulation test range provides a high voltage warning prior to test voltage being applied.

Safety

Every Megger instrument is designed with safety as its primary objective. There are in-built safety checks to warn of inadvertent connection to a hazardous live supply on all ranges, and all instruments meet or exceed the requirements of safety directive IEC 61010 and EN 61557 for insulation and continuity testing

Default volt meter

A built-in voltmeter is automatically activated and displays the system voltage when the instrument is connected to a circuit with an a.c. or d.c. voltage greater than 25 V.

Test inhibit

Circuits in excess of 25 V will generate a voltage warning as above. The instrument will inhibit testing on circuits over 50 V on both continuity and insulation test ranges, protecting the operator and the instrument from injury or damage.

600 V CAT III

The MIT200 series has been designed for use on applications up to 600 V CAT III.

APPLICATION

The MIT200 series will find applications when installing electrical installations, on both domestic and industrial systems, as well as within site maintenance and service departments.

The MIT200 series of insulation and continuity testers are also ideal for testing domestic appliances, power tools, transformers, motors, generators, switchgear, electrical panels etc., as well as fixed electrical wiring systems.

Their small size and light weight make them ideal for those engineers that need to carry an insulation tester for extended periods.

All instruments meet the requirements of most International Standards including VDE 0413 Part 1 and BS 7671 (the 17th Edition of the IEE Wiring Regulations).

FEATURES AND BENEFITS

- Meets the international requirements of EN 61557 for Insulation and Continuity testing
- Display of insulation measurement up to 1000 MΩ on a combined analogue arc and a digital display.
- Continuity range with 0,01 Ω resolution and a short circuit current in excess of 200 mA.
- Automatic continuity testing leaves both hands free. No need to press the test button.
- Automatic power-down if left unattended to preserve battery power.
- Automatic voltage detection and warning avoids accidental contact with hazardous live circuits.
- Test lead zero allows compensation for test lead resistance up to 10 Ω

MIT200 OPTIONS

	MIT200	MIT210	MIT220	MIT230
Insulation testing				
250 V			■	■
500 V	■		■	■
1000 V		■		■
1000 MΩ range	■	■	■	■
Auto-ranging	■	■	■	■
Auto discharge	■	■	■	■
Test inhibit	■	■	■	■
Live circuit voltage display	■	■	■	■
Continuity testing				
Continuity at >200 mA	■	■	■	■
Continuity to 0.01 Ω	■	■	■	■
Test lead null (9.99 Ω)	■	■	■	■
Automatic continuity test	■	■	■	■
Continuity buzzer with 2 Ω threshold	■	■	■	■
Default volts warning	■	■	■	■
General				
Digital display + arc	■	■	■	■
Battery condition	■	■	■	■
Auto power down	■	■	■	■
Tough carry case	■	■	■	■
Test leads	■	■	■	■
CAT III 600 V	■	■	■	■
Environmental				
Operation temperature	-10 °C to +55 °C			
Storage temperature	-20 °C to +65 °C			
IP rating	IP40			

SPECIFICATIONS

Insulation ranges

Nominal test voltage:
1000 V, 500 V, 250 V (d.c.)

Measuring range
10 kΩ - 1000 MΩ on all ranges

Terminal voltage on open circuit (d.c.):
-0% +25% of rated voltage

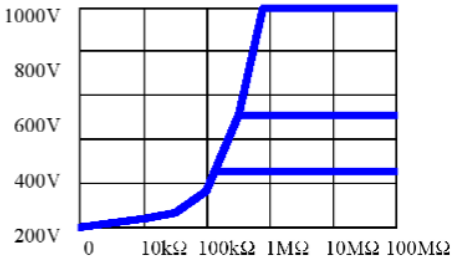
Short circuit current:
205 mA +10 mA –5 mA

Test current on load:
>1 mA at minimum pass values of insulation as specified in BS7671, HD384, IEC364 and VDE0413 part 1

Accuracy (at 20° C)
MIT220, 230:

±3% of reading ±2 digits up to 10 MΩ
±5% of reading ±2 digits up to 100 MΩ
±30% of reading up to 1000 MΩ

Terminal characteristics



Continuity ranges

Measuring range:

0,01Ω - 100,0 Ω

(0 -50 Ω on analogue scale)

Open circuit voltage:

5 V ±1 V

Short circuit current:

205 mA, ±5mA (0-10 Ω) >20 mA (0 - 100 Ω) Ω

Accuracy (at 20° C)
MIT220, 230:

±0,01 Ω to 9,99 Ω ±3% ±2 digits

10,0 Ω to 99,9 Ω ±5% ±2 digits

Zero offset adjust:

MIT220, 230:

0 to 9,99 Ω

Continuity buzzer
MIT220, 230:

Operates at <2 Ω

Default voltmeter

MIT220,230:

>25 V ac or dc. is applied display will operate as a voltmeter.

Test inhibit
If more than 50 volts is detected, testing will be inhibited.

Range:

25 V to 600 V @ 50/60 Hz & dc

Accuracy:

25 V to 450 V ac/dc ±1% ±1 digit

450 V to 600 V ac ±2% ±1 digit

Auto power down
Auto power down operates after 10 minutes if left in standby mode.

Temperature and humidity
Operating range:

-10 °C to +55 °C (14 °F to 130 °F)

Operating humidity:

93% R.H. at +40 °C max. (93% R.H. at 104 °F)

Storage range:

-25 °C to +65 °C (-13 °F to 150 °F)

Environmental protection:

IP40

Fuses
Terminals:

500 mA (F) 600 V, 32 x 6 mm Ceramic HBC 50 kA minimum.

Display shows if fuse is ruptured.

Safety
Meets the requirements of EN61010-1 Cat III 600 V phase to earth.

Automatic discharge
After an insulation test the item under test will be discharged automatically. Any voltage present will be indicated on the display so that the discharge can be monitored.

Power supply
Battery 6 x 1,5 V cells IEC LR6 type(AA alkaline).

Rechargeable NiMH cells may be used.

Battery condition is constantly shown on the display as a four-section bar-graph.

Battery life
3000 consecutive tests (5 seconds per test) on any test using 2 Ah batteries.

Weight
All units: 550gms approx. (1.2lbs)

Dimensions
All units: 195 x 98 x 40mm (7.7 x 3.9 x 1.6 inches)

E.M.C
In accordance with IEC61326-1



ORDERING INFORMATION

Item (Qty)	Order No.
250 V/500 V Insulation and continuity tester	MIT220-EN
250 V/500 V/1000 V Insulation and continuity tester	MIT230-EN
Included accessories	
Lead set with prods and clips	1002-001
Carry case	1007-168

Item (Qty)	Order No.
Optional accessories	
Replacement lead set	1002-001
Fused lead set	1002-015
Removable protective holster	1007-166
Carry pouch	6220-773

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