MIT200 Series
Digital/Analogue 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/Analogue display**
- **Alkaline or rechargeable batteries**
- **–10ºC to +55ºC operating temperature**
- **CATIII 600 V**
- **Conforms to EN61557-1**

DESCRIPTION

The MIT200 is one of the smallest insulation testers available on the market today. With options of a two and three test voltage instruments, the MIT200 instruments offer a range of safety and operation features.

The display offers a combination of digital readout and analogue display, using Megger's patented DART display technology, which include the benefits of an LCD display, such as robust, clear and accurate measurement, 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 use, and is small enough to drop into your pocket when not in use.

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. No need to press the test button.

All instruments will measure up to 100 Ω on continuity, of which 0-10 Ω is performed at greater than 200 mA to meet international electrical testing requirements.

Lead null is possible up with to 9.99 Ω of test lead resistance, ensuring the ability to null fused test leads as well as standard leads.

Continuity buzzer

A continuity buzzer provides a means of rapid cable testing and circuit identification, with voltage protection should you accidentally touch a live circuit.

The buzzer operates at a 5 Ω threshold.

Insulation testing

The instruments offer one of two configurations as detailed on page 2, providing an ideal solution to most low voltage insulation testing applications.

Insulation testing is possible up to 1000 MΩ on all ranges.

Auto discharge ensures all circuits are safely discharged after testing.

1000 V insulation test ranges have a high voltage warning prior to test voltage being applied.

FEATURES AND BENEFITS SUMMARY

- Meets the international EN61557 requirements of the rated test voltage into a 1 mA load.
- Digital display of insulation measurement up to 1000 MΩ on a linear or logarithmic analogue arc and a digital display.
- Continuity range has 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-off if left unattended reduced wasted battery life.
- Automatic voltage detection avoids accidental contact with dangerously live circuits.
- Test lead zero allows compensation for test lead resistance.
- Buzzer range operates at <5 Ω.

Safety

Every Megger instrument is designed with safety as its primary objective. All instruments meet or exceed the requirements of safety directive IEC 61010 and EN61557 for insulation and continuity testing

Default fault meter

A built-in voltmeter automatically switches in when the instrument is connected to a circuit with an AC or DC voltage greater than 25 V.

Test inhibit

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

600V CATIII

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

APPLICATIONS

The MIT200 series will find applications in electrical contracting, both on domestic and industrial systems, as well as site maintenance and service departments.

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

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

All instruments meet the requirements of most International Standards including VDE0413 Part 1 and BS7671 (the 16th Edition of the IEE Wiring Regulations).

MIT200 OPTIONS

	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@ >200 mA	■	■
Continuity to 0.01 Ω	■	■
Test lead null (9.99 Ω)	■	■
Automatic continuity test	■	■
Continuity buzzer with 5 Ω threshold	■	■
Default volts warning	■	■
General		
Digital display + arc	■	■
Battery condition	■	■
Auto power down	■	■
Tough carry case	■	■
Test leads	■	■
CATIII 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:

2 mA +0% –50%

Test current on load:

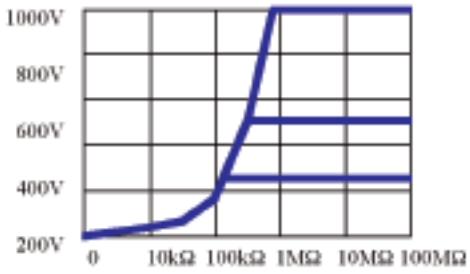
>1 mA at minimum pass values of insulation as specified in BS7671, HD384, IEC364 and VDE0413 part 1

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:

0,01 Ω - 100,0 Ω

(0 -50 Ω on analogue scale)

Open Circuit Voltage: 5 V ± 1 V

Short Circuit Current: 205 mA, ± 5 mA (0-10 Ω)

>20 mA (10 - 100 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 <5 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

Operating humidity:

93% R.H. at +40°C max.

Storage range:

-25°C to +65°C

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 600V 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 2Ah batteries.

Weight

All units: 530gms ±5%

Dimensions

All units: 195 x 98 x 40mm

E.M.C

In accordance with IEC61326 including amendment No.1