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**
- **–10 °C to +55 °C operating temperature**
- **CATIII 600 V**
- **Conforms to EN 61557-1**

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 2 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.

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 EN 61557 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 a.c. or d.c. voltage greater than 25 V.

Test inhibit

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

600 V CATIII

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

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APPLICATION

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 VDE 0413 Part 1 and BS 7671 (the 17th Edition of the IEE Wiring Regulations).

FEATURES AND BENEFITS

- Meets the international EN 61557 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 <2 Ω.

	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	■	■
CATIII 600 V	■	■
Environmental		
Operation temperature	-10 °C to +55 °C	
Storage temperature	-20 °C to +65 °C	
IP rating	IP40	

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SPECIFICATIONS

Insulation range

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

Measurement range

10 kΩ - 1000 MΩ on all ranges

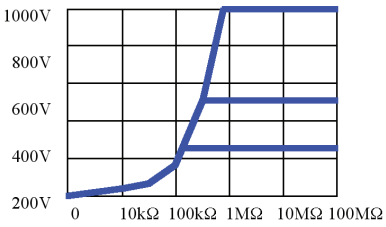
Terminal voltage on open circuit (d.c.):
-0 % +25 % of rated voltage

Short circuit current:
205 mA +10 mA -5 mA
>18 mA (10 - 100 Ω)

Test current on load:
>1 mA at minimum pass values of insulation as specified in BS 7671, HD 384, IEC 364 and VDE 0413 part 1

Chart/graphic

Terminal characteristics



Continuity range

Measuring range:
0,01 Ω - 100,0 Ω
(0 -50 Ω on analogue scale)

Open circuit voltage: 5 V ±1 V

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 a.c. or d.c. is applied display will operate as a voltmeter.

Range:
25 V to 600 V @ 50/60 Hz & d.c.

Accuracy:
25 V to 450 V a.c./d.c. ± 1% ± 1 digit
450 V to 600 V a.c. ± 2% ± 1 digit

Test inhibit	If more than 50 V is detected, testing will be inhibited.
Auto power down	Auto power down operates after 10 minutes if left in standby mode.
Operating temperature range and humidity	-10 °C to +55 °C 93 % R.H. at +40 °C max.
Storage temperature range and humidity	-25 °C to +65 °C
IP rating	IP40
Fuse	500 mA (F) 600 V, 32 x 6 mm Ceramic HBC 50 kA minimum. Display shows if fuse is ruptured.
Over-voltage safety category	Meets the requirements of IEC61010-1 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: 530 gms ± 5 %
Dimensions	All units: 195 x 98 x 40 mm
EMC	In accordance with IEC61326-1

ORDERING INFORMATION

Description	Order Code
250 V/500 V Insulation and continuity tester	MIT220-EN
250 V/500 V/1000 V Insulation and continuity tester	MIT230-EN
Included accessories	
Test lead set and crocodile clips	1002-001
Carry case	5410-419

Optional accessories	
Test lead set and crocodile clips	1002-001
Fused test lead set (1 pair)	1002-015
Removable protective holster	5410-346
Carry pouch	6220-773