

# 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.

### FEATURES AND BENEFITS SUMMARY

- 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.

### 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.

### 600V CATIII

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

### 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, switch-gear, 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).

### MIT200 OPTIONS

	MIT220	MIT230
<b>Insulation testing</b>		
250 V	■	■
500 V	■	■
1000 V		■
1000 MΩ range	■	■
Auto-ranging	■	■
Auto discharge	■	■
Test inhibit	■	■
Live circuit voltage display	■	■
<b>Continuity testing</b>		
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	■	■
<b>General</b>		
Digital display + arc	■	■
Battery condition	■	■
Auto power down	■	■
Tough carry case	■	■
Test leads	■	■
CATIII 600 V	■	■
<b>Environmental</b>		
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

>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

**Accuracy (at 20° C)**

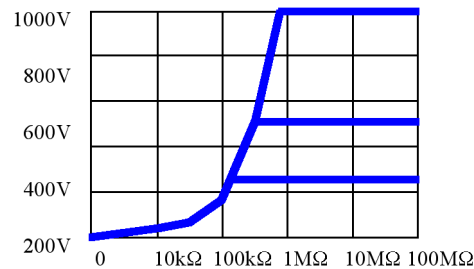
**MIT220, 230:**

±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**

**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 <3 Ω

**Default voltmeter**

**MIT220,230:**

>25 V a.c. or d.c. is applied display will operate as a voltmeter.

**Test inhibit**

If more than 50 V is detected, testing will be inhibited.

**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

**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 IEC61010-1 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 2 Ah batteries.

**Weight**

**All units:** 530gms ± 5 %

**Dimensions**

**All units:** 195 x 98 x 40 mm

**E.M.C**

In accordance with IEC61326-1



**ORDERING INFORMATION**

<b>Item (Qty)</b>	<b>Order No.</b>	<b>Item (Qty)</b>	<b>Order No.</b>
250 V/500 V Insulation and continuity tester	MIT220-EN	<b>Optional accessories</b>	
250 V/500 V/1000 V Insulation and continuity tester	MIT230-EN	2 wire test lead set	1002-001
		2 wire 500 mA fused test lead set	1002-015
		Removable protective holster	5410-346
		Carry pouch	6220-773
<b>Included accessories</b>			
2 wire test lead set	1002-001		
Carry case	5410-419		

**UK**  
Archcliffe Road Dover  
CT17 9EN England  
T +44 (0) 1304 502101  
F +44 (0) 1304 207342

**UNITED STATES**  
4271 Bronze Way  
Dallas TX 75237-1088 USA  
T 800 723 2861 (USA only)  
T +1 214 333 3201  
F +1 214 331 7399

**OTHER TECHNICAL SALES OFFICES**  
Norristown USA, Sydney AUSTRALIA,  
Toronto CANADA, Trappes FRANCE,  
Kingdom of BAHRAIN, Mumbai INDIA,  
Johannesburg SOUTH AFRICA and  
Conjure THAILAND.

Registered to ISO 9001:2000 Cert. no. Q 09290  
Registered to ISO 14001-1996 Cert. no. EMS 61597  
**MIT200\_DS\_en\_V07**  
[www.megger.com](http://www.megger.com)  
Megger is a registered trademark