MIT300 Series
Insulation and Continuity Testers



- **Extremely easy to use**
- **Tough rubber armoured case**
- **Self contained protective cover**
- **Live circuit warning**
- **Weatherproof to IP54**
- **Intelligent Safety System for protection.**
- **Result storage and downloading**
- **Download software included**
- **USB interface**

DESCRIPTION

The Megger MIT300 series features:

Digital or Analogue: The Megger MIT300, MIT310 and MIT320 all feature the popular Megger digital/analogue display. Large 20mm high characters provide very clear readout, combined with an analogue arc for the feel of an analogue instrument, with a true analogue response.

The Megger MIT310A has a moving coil display for those who prefer a real moving needle. Black decals on a white background give high contrast, even in poor light conditions.

Tough:-

- Designed to take the bashing that testers receive on site, the Megger MIT insulation testers are rubber armoured.
- The rigid display cover folds right out of the way during testing and locks down to protect the display when it is finished.

Simple to use:-

- No buried functions mean it is obvious how to use the Megger MIT.
- Colour coded ranges help test selection, reducing testing time and help with fault location.
- A user guide in the lid provides all the basic information.

Hands free use:–

- It hangs comfortably around the neck for hands-free use because the instrument is carefully balanced.
- Continuity and buzzer testing starts automatically on connection to the circuit.
- Insulation tests being activated from the instrument or the switch probe, supplied with MIT320 and MIT330 (not suitable for the use with the MIT300 or MIT310).

Backlighting:-

- Both the display and the range selected can be read in the dark because the MIT 320/330 has a backlit display and range selection.

Safety features:- To protect the user and the tester from incorrect use the MIT series all have an extensive range of features known as the Megger Intelligent Safety System including:

- Safety Interlock – prevents unsafe connection of test leads
- Safe contact detectors – Even if the MIT is connected to a live circuit whilst on continuity setting the tester will remain safe and not be damaged.
- Live voltage warning – alerts the operator when a circuit voltage over 25 V exists.
- Safety lockout – Prevents the test from operating when the circuit voltage is >50 V.
- Continuity check – prevents a continuity test or buzzer test on a live circuit.

The MIT300, 310, 320 and 330 meet or exceed the UK and International Wiring Regulations, including requirements of BS7671 and VDE 0413 parts 1 and 4, HD 384, IEC 364, NFC15-100, NEN3140, ES59009 and EN 61557.

In addition the range meets the requirements of IEC 61010-1 for safe connection to a 440 V Installation Category III supply (600 V Phase to Earth).

The MIT330 additionally offers the facility to save test results to internal memory. Over 1000 result can be saved on site, and downloaded to a computer when convenient. Data is stored in non-volatile memory, being retained when the instrument is switched off or batteries are exhausted.

A Job reference number can be selected for a range of results, allowing separate locations to be tested with the same tester and easily separated when downloaded.

A memory bar graph acts as a 'Fuel Gauge' showing how much memory has been used

Test results are downloaded to CSV (Coma Separated Variable) spreadsheets, and can be imported into Microsoft Excel. If certificates or reports are required, the results can be downloaded directly into Megger Powersuite Professional with a range of features for creating professionally finished documentation.

APPLICATIONS

The MIT300 series has applications in all aspects of domestic, commercial and industrial electrical contracting, building maintenance, testing, inspection and servicing.

Combining both Insulation testing and continuity testing, each instrument caters for all aspects of fixed wiring installations.

Further applications can be found in panel building, testing of motors, generators, switchgear and power tools, street lighting and low volume manufacturing environments etc.

All the MIT300 (except MIT310A) range is supplied with a full 3 years warranty.

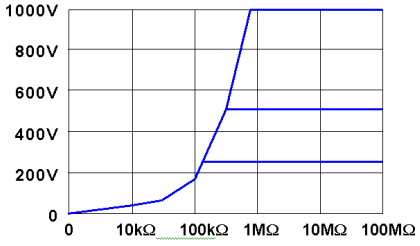
SPECIFICATIONS

Insulation ranges

Nominal Test Voltage

MIT310, 310A, 320, 330	1000 V, 500 V, 250 V (d.c.)
MIT300	500 V, 250 V (d.c.)

Terminal Characteristics



Measuring Range

All instruments	10 kΩ - 999 MΩ on all ranges
Short Circuit Current	1.5 mA nominal
Test Current on Load	1 mA at min. pass values of insulation (as specified in BS7671, HD 384 and IEC 364)

Accuracy (at 20 °C)

MIT300, 310, 320, 330	±3%, ±2 digits up to 10 MΩ, ±5% up to 100 MΩ, ±30% up to full scale
MIT310A	<2.5% of scale length (or 30% of reading 200 kΩ to 10 MΩ)

Continuity ranges

Measuring Range:	0,01 Ω - 99,9 Ω (0 -50 Ω on analogue scale)
Open Circuit Voltage:	5 V ±1 V
Short Circuit Current	
MIT300, 310, 320, 330	205 mA +10 mA –5 mA
MIT310A	200 - 250 mA

Accuracy (at 20 °C)

MIT300, 310, 320,330	±3% ±2 digits
MIT310A	±2.5% of scale length (or 30% of reading 0.2 Ω to 2 kΩ)
Measuring range	0 - 2/20/200/2 kΩ
Open circuit voltage	1.5 V +/-0.5 V
Zero Offset Adjust:	
MIT300, 310,320, 330	0 - 9 Ω
MIT310A	0 - 0.5 Ω

Continuity Buzzer

MIT300, 310	Operates at <5 Ω
MIT320, 330	Adjustable 1 Ω to 20 Ω
MIT310A	Operates at <5 Ω
MIT300, 310, 320, 330	Response time <20 ms
MIT310A	Response time <100 mS

Resistance range MIT320/330

(can be used for diode testing)

Measuring Range:	10 Ω - 1 MΩ
Open Circuit Voltage:	5 V
Short Circuit Current:	1.5 mA
Accuracy (at 20° C):	±5% ±2 digits up to 100 kΩ

Measuring Range (MIT310A) 0 - 2 kΩ (refer to continuity)

Voltage range

Measuring Range:	0 - 600 V a.c. (50/60 Hz) or d.c.

Accuracy (at 20 °C)

MIT310, 320, 330	d.c. or a.c. (50/60 Hz): ±1%, ±2 digits
MIT310A	±2.5% of scale length for 50/60 Hz
Temperature coefficient:	<0,1% per °C on all ranges.
Default voltmeter	all modes except off
MIT310, 320, 330	>25 V a.c. or d.c. is applied display will operate as a voltmeter.
MIT300	Beeps and flash 'V' on the display
MIT310A	All modes including OFF
Test inhibit:	If more than 50 volts is detected, testing will be inhibited.

MIT300 SERIES BENEFITS	MIT300	MIT310	MIT310A Analogue	MIT320	MIT330
Insulation testing					
250 V	■	■	■	■	■
500 V	■	■	■	■	■
1000 V		■	■	■	■
Test range	999 MΩ	999 MΩ	999 MΩ	999 MΩ	999 MΩ
Insulation limit alarm (0.01 MΩ to 999 MΩ)				■	■
Continuity testing					
Continuity to 100 Ω	■	■	■	■	■
Continuity buzzer	■	■	■	■	■
Lead null to 9ohms	■	■	0.5 Ω	■	■
Adjustable buzzer 1 to 20 Ω				■	■
Audible buzzer disable				■	■
Voltage measurement					
Volts AC/DC		600 V	600 V	600 V	600 V
Resistance measurement					
10 Ω to 1 MΩ range				■	■
Features					
Voltage warning	■				
Default voltmeter		■	■	■	■
Backlit display				■	■
Backlight selector ranges				■	■
Locking test button	■	■	■	■	■
Auto powerdown	■	■		■	■
Switched test probe				■	■
IP54 weatherproof	■	■	■	■	■
Accepts rechargeable batteries	■	■	■	■	■
1000 Test result storage					■
Downloading					■
Calibration certificate	■	■		■	■
3 years warranty	■	■		■	■

AutoPower Down (MIT310, 320, 330)

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

Temperature and humidity

Operating Range: -10 °C to +60 °C

Operating Humidity: 93% R.H. at +40 °C max.

Storage Range: -25 °C to +70 °C

Test Result Storage (1000 results)

Job Number 255 locations

Distribution Board no. 99 locations

Circuits 99 locations

Phases P1, P2, P3

Last recorded result may be recalled to the display.

All data can be downloaded to a PC using Download Manager (supplied) or Megger Powersuite Professional of Windows software

Communications

USB interface

Environmental Protection: IP54

Fuses

Terminals 500 mA (F) 600 V, 32 x 6 mm Ceramic HBC 10 kA minimum.

Display shows if fuse is ruptured.

Safety
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:
8 x 1,5 V cells IEC LR6 type(AA alkaline).

Rechargeable NiCd or NiMH cells may be used.

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

Battery Life
5000 consecutive tests (5 seconds per test) on any test using 2Ah batteries.

Weight
All units: 980 gms

Dimensions
All units: 203 x 148 x 78 mm (8 x 5.7 x 3.2 inches)

E.M.C.
In accordance with IEC61326-1

ORDERING INFORMATION

Item (Qty)	Order Code
MIT300 250 V, 500 V insulation tester	MIT300-EN
MIT310 250 V, 500 V, 1000 V insulation tester	MIT310-EN
MIT310A 250 V, 500 V,1000 V analogue insulation tester	MIT310A-EN
MIT320 250 V, 500 V, 1000 V insulation tester	MIT320-EN
MIT330 250 V, 500 V, 1000 V insulation tester	MIT330-EN

Item (Qty)	Order Code
Included Accessories	
Test lead set and crocodile clips	1002-001
SP4F Switch probe (MIT320 and MIT330 only)	6220-809
Optional Accessories	
Fused test lead set	1002-015
PowerSuite Pro-Lite 16th	

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