

# MIT510

## 5 kV Insulation Resistance Tester



- Mains or battery powered
- Digital/Analogue backlit display
- Selectable test voltage from 250 to 5000 V
- Automatic IR test
- Measures to 15 T $\Omega$
- Complete with calibration certificate

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### DESCRIPTION

The new 5 kV insulation resistance testers from Megger are designed specifically to assist you with the testing and maintenance of high voltage electrical equipment. The case is incredibly rugged and easy to carry, being made of tough polypropylene and achieving an ingress protection rating of IP65. In addition, the model number is marked on both sides of the case for ease of identification in stores or vehicles.

The instrument has a large easy to read backlit LCD display making it equally suitable for use in both bright sunlight and poorly lit environments. Information displayed includes resistance, voltage, leakage current, capacitance, battery status and time constant. In addition, the elapsed time of the test is displayed constantly removing the need for separate timers.

The instrument can test when being powered by the mains or its internal rechargeable battery, a great benefit when site conditions are unknown or long term testing is required.

The controls of the instrument are clear and unambiguous and a "quick start" guide is included in the lid of the instrument removing the need to carry bulky manuals under site conditions.

The instrument is fitted with a guard terminal to enhance accuracy. The guard test lead is included as standard with the instrument.

To further enhance the flexibility of the instrument the MIT510 has the facility to set the test voltage in steps from 250 V to 5000 V avoiding the expense of several insulation resistance testers to meet your application needs.

The IR tester is designed to meet the highest safety standards and meets the requirements of EN61010. In addition, the instrument measures the voltage at the terminals and if this is above 50 V then the instrument will display the high voltage warning and inhibit testing. At the end of the test the instrument will automatically discharge the energy transferred to the equipment during the test phase.

**SPECIFICATIONS**

**Voltage input range**

85-265 V rms, 50/60 Hz, 60 VA

**Battery life**

6 hours continuous testing at 5 kV

**Test voltages**

250 V, 500 V, 1000 V, 2500 V, 5000 V

**Accuracy (23°C, 5 kV)**

±5% @ 1 TΩ

±20% @ 10 TΩ

**Guard**

2% error guarding 500 kΩ leakage with 100 MΩ load

**Display range**

Digital display (3 digits) 10 kΩ to 15 TΩ

Analogue display 100 kΩ to 1 TΩ

**Short circuit/charge current**

3 mA @ 5 kV

**Capacitor charge time**

<3 seconds per μF at 3 mA to 5 kV

**Capacitor discharge time**

<120 ms per μF to discharge from 5000 V to 50 V

**Capacitance measurement (above 500 V)**

10 nF to 50 μF (dependent on test voltage)

**Capacitance measurement accuracy (23°C)**

±5% ±5 nF

**Voltage output accuracy (0°C to 30°C)**

+4%, -0% ±10 V of nominal test voltage at 1 GΩ load

**Current measurement range**

0.01 nA to 5 mA

**Current measurement accuracy (23°C)**

±5% ±0.2 nA at all voltages

**Interference rejection**

1 mA rms per 250 V test voltage up to a maximum of 2 mA

**Timer range**

Counts up to 99 minutes from start of test

**Test regimes**

Auto IR

**Lead set**

Three leads with compact clamp, flexible silicon insulated.

**Operating temperature**

-10°C to 50°C

**Storage temperature**

-25°C to 65°C

**Ingress protection (lid closed)**

IP65

**Humidity**

90% RH non-condensing at 40°C

**Safety**

Meets the requirements of EN61010-1:2001 CATIII 300 V

**EMC**

Meets the requirements of EN61326-1:1998 for use in heavy industrial areas.

**Dimensions**

305 x 194 x 360 (mm) (12 x 7.6 x 14.2 inches)

**Weight**

6.75 kg (15lb) approx

**ORDERING INFORMATION**

Item (Qty)	Order Code	Item (Qty)	Order Code
5 kV insulation resistance tester	MIT510	3 m lead set 1 kV insulated clips	6220-822
<b>Included Accessories</b>		3 m lead set 6 kV insulated clips	6220-820
3 m lead set	8101-181	3 m lead set 10 kV insulated clips	6220-811
User guide on CD-ROM	6172-929		
<b>Optional Accessories</b>			
3 m lead set with straight jaw clamps	6220-797		
15 m lead set	8101-183		
3 m screened lead set (5 kV)	6220-835		
15 m screened lead set (5 kV)	6311-080		

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**ISO STATEMENT**  
Registered to ISO 9001:2000 Cert. no. Q 09250  
Registered to ISO 14001:1996 Cert. no. EMS 61597  
**MIT510\_DS\_en\_V03**  
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