

MIT520 and MIT1020

5 kV and 10 kV Insulation Resistance Testers



- **Mains or battery powered**
- **Digital/analogue backlit display**
- **Variable test voltage from 50 to 5000 V**
- **Automatic IR, PI, DAR, SV and DD tests**
- **Measures to 15 T Ω (5 kV) and 35 T Ω (10 kV)**
- **RS232 and USB download of results**

DESCRIPTION

The new 5 & 10 kV insulation resistance testers from Megger are designed specifically to assist you with the testing and maintenance of high voltage electrical equipment. IEEE 43-2000 recommends the use of 10 kV for motor windings rated above 12 kV and the Megger MIT1020 facilitates this. The case is incredibly rugged and easy to carry, being made of tough polypropylene and achieving an ingress protection rating of IP54. In addition, the model number is marked on both the top and side of the case for ease of identification in stores or vehicles.

The instruments have 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 instruments both have the facility to set the test voltage in steps from 50 V to the maximum output voltage avoiding the expense of several insulation resistance testers to meet your application needs.

These IR instruments are 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.

The MIT520 and MIT1020 are equally suited to routine testing and diagnostic regimes being pre-programmed with IR, PI, DAR, SV and DD profiles.

ELECTRICAL SPECIFICATIONS

Voltage input range:

85-260 V, 50/60Hz

MIT 520 battery life:

8 hours continuous testing at 5 kV

MIT 1020 battery life:

4 hours continuous testing at 5 kV

MIT 520 test voltages:

50 V to 1 kV in 10 V steps, 1 kV to 5 kV in 25 V steps

MIT 1020 test voltages:

50 V to 1 kV in 10 V steps, 1 kV to 10 kV in 25 V steps

Accuracy (23°C):

±5% to 100 GΩ

±20% to 15 TΩ (MIT520) to 35 TΩ (MIT1020)

Display range:

Digital display 10 kΩ to 15 TΩ (MIT520) to 35 TΩ (MIT1020)

Analogue display 100 kΩ to 15 TΩ (MIT520) to 35 TΩ (MIT1020)

Short circuit/charge current:

3 mA

Capacitor charge time:

≤5 seconds per μF at 3mA

MIT520 capacitor discharge time:

≤5 seconds per μF to discharge from 5000 V to 50 V

MIT1020 capacitor discharge time:

≤5 seconds per μF to discharge from 10000 V to 50 V

Capacitance measurement:

1 nF to 50 μF (measured with test voltage ≥200 V)

Capacitance measurement accuracy (23°C):

±5% ±5 nF

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

±2% ±1 V of nominal test voltage at 100 MΩ load

±25 V for test voltages less than 500 V

Current measurement range:

±0.01 nA to ±5 mA

Current measurement accuracy (23°C):

±5% ±0.2 nA at all voltages

Display:

Analogue/digital 3 digits

1 mA rms per kV test voltage, 2 mA rms maximum

Timer range:

Up to 99 minutes

Test regimes

Auto IR, PI, DAR, SV and DD.

Lead set:

Three leads with compact clamp, flexible silicon insulated.

Environmental

Operating temperature:

-10°C to 55°C

Storage temperature:

-20°C to 70°C

Ingress protection (lid closed):

IP54

Humidity:

90% RH non-condensing at 40°C

ORDERING INFORMATION

Item (Qty)	Order Code
5kV insulation resistance tester	MIT520
5kV insulation resistance tester	MIT1020
Included Accessories	
3m lead set	8101-180
User guide on CD-ROM	
Optional Accessories	
3m lead set with straight jaw clamps	