

MTB7671

Instrument test box



- Tests the full range of a testers capability
- Does not trip RCD protected circuits
- Tests to the regulations BS7671, BS EN 61557 and IEE On-Site Guide
- Checks insulation, continuity, loop, PFC and RCD functions
- Confirms testers continued performance between calibrations
- Colour coded test functions

DESCRIPTION

The MTB7671 is designed to provide confirmation that your testers continue to operate properly, and maintain their accuracy and consistency between calibrations.

The NICEIC, ELECSA and Corgi among others now request evidence that your testers comply with this.

The MTB7671 checks not only the basic functions of the testers, but also that the correct test current or voltage is being used during the test.

For example, a continuity test should not just give a result in ohms, but the short circuit test current should be greater than 200 mA and the open circuit voltage should be within the limits of 4-24 V.

The PASS/FAIL values are selected to ensure that where there is a published specification for a test parameter then the MTB7671 will test your tester to ensure that it meets these specifications using a series of simple Pass/Fail indications.

Additional test values are provided to ensure that the testers maintain consistent values across the range of their operating specifications.

The values chosen for MTB7671 test points are the same as those supplied on all new Megger test instrument calibration certificates which means that you can confirm that the tester continues to provide results that are consistent with its original calibration points.

Insulation testers

The MTB7671 provides confirmation that tester outputs the correct voltage and current (> 1 mA) for each of the test voltage points. (250 V, 500 V and 1 kV).

Additional test values are provided at 9 M Ω and 90 M Ω .

Continuity testers

The MTB7671 provides confirmation that the tester outputs the correct open circuit voltage (4-24 V) and short circuit current (> 200 mA). Test values at 0.5 Ω and 5 Ω are provided for resistance measurements.

Loop testers

The MTB7671 provides a direct loop measurement from the outlet socket which can be measured either with a Trip or No Trip test as the MTB7671 is designed to not trip RCD protected circuits. In addition it has Loop plus 1 Ω and loop plus 180 Ω for testing against TT measurements. It also has a switch position for PFC tests which is linked to the loop plus 1 Ω measurement point for consistency of measurements.

RCD testers

The MTB7671 provides three RCD values (10 mA, 30 mA and 100 mA). For each value the five standard tests (1/2I, I @ 0°, I @ 180°, 5I @ 0° and 5I @ 180° can be performed.

The MTB7671 has two LED indicators for RCD testing, one to show the RCD has tripped and one to show that a 5I test is being performed.

Voltage measurement

The MTB7671 also has 230 V output terminals to provide a quick check of any voltage measurement ranges on the instrument.

RCD Protection

The Test box can be used on either standard or RCD protected supplies without the risk of tripping the supply. The test box is itself protected by a 30 mA RCD to ensure any faulty testers cannot cause an unsafe situation.

Safety

The MTB7671 has been designed to meet the safety requirements of IEC61010.

EMC

In accordance with IEC 61326.

Environmental

Operating range: 0°C to 40°C

Operating humidity: 85% at 40°C

Storage temperature: -25°C to 65°C

Mains Supply 230 V 50 Hz 10 VA

Fuses

RCD plug 7 A (BS1362)
MTB7671 500 mA F 250 V IEC60127

Physical

Dimensions 320 x 280 x 100 mm
Weight 2.2 Kg

Accessories

The test box is supplied with a pack of 10 history cards and "Passed" labels, which can be stored in the test box.

| | BS7671 & BS EN61557 tester requirements | MTB7671 test parameters | Megger calibration points |
|---|---|---|---|
| Continuity short Circuit test Current | > 200 mA | > 200 mA Pass/Fail indication (Threshold limits $\pm 2\%$) | > 200 mA |
| Continuity test Voltage range | 4 V - 24 V | 4 V - 24 V Pass/Fail indication (Threshold limits $\pm 2\%$) | |
| Continuity resistance | | 0.5 $\Omega \pm 3\%$ | 0.5 Ω |
| Continuity resistance | | 0.5 $\Omega \pm 3\%$ | 0.5 Ω |
| Insulation test current | 1 mA | 1 mA Pass/Fail indication (Threshold limits $\pm 2\%$) | |
| Insulation test voltages | 250 V + 25% max 500 V + 25% max 1 kV + 25% max | 250 V + 25% 500 V + 25% 1 kV + 25% Pass/Fail indication (Threshold limits $\pm 2\%$) | |
| Insulation test resistances | 0.25 M Ω min 0.5 M Ω min 1 M Ω min | 0.25 M $\Omega \pm 3\%$ 0.5 M $\Omega \pm 3\%$ 1 M $\Omega \pm 3\%$ | 0.25 M Ω 0.5 M Ω 1.0 M Ω |
| Insulation test resistances | | 9 M $\Omega \pm 3\%$ 90 M $\Omega \pm 3\%$ | 90 M Ω |
| Loop | | Local mains impedance | |
| Loop + 1 Ω | | Loop + 1 Ω ($\pm 5\%$) | 1.0 Ω |
| Loop + 180 Ω (IEE On-site guide 10.3.5 Earth electrode resistance) | | Loop + 180 $^{\circ}$ ($\pm 5\%$) | 180 Ω |
| RCD currents (I) | | 10 mA, 30 mA & 100 mA | |
| RCD No trip (1/2 I) | No trip | > 1999 ms | |
| RCD (I) | < 200 ms | 40 ms @ 0 $^{\circ}$ 50 ms @ 180 $^{\circ}$ | |
| RCD (5 x I) | < 40 ms | 10 ms @ 0 $^{\circ}$ 20 ms @ 180 $^{\circ}$ | |

ORDERING INFORMATION

| Item (Qty) | Order No. |
|---|---------------|
| Instrument test box | MTB7671-EN-BS |
| Test Record Cards (pack of 10) | 6173-032 |
| Accessories | |
| Additional cards and labels are available | |