

**METHOD STATEMENT****Method Statement  
of  
The Provision of Portable  
Appliance Testing****CONTENTS**

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## METHOD STATEMENT

### 1. SCOPE

This document has been prepared with a view to detailing and informing the customer in respect of the Portable Appliance Tests undertaken by Reaction Group. Reaction Group performs these tests under the guidance of The Code of Practice for In-service Inspection and Testing of Electrical Equipment, which is a document produced by and available from the Institution of Electrical Engineers.

The equipment within the scope of this document includes electrical appliances for household and similar use, certain IT equipment supplied by plug and socket, luminaries, and similar equipment. Generally speaking this document applies to all equipment fitted with the standard single-phase 3-pin plug.

The tests performed only indicate the status of the safety of the Unit Under Test and, although a functional test is performed, should not be misinterpreted as a verification of the unit's compliance with operational specifications.

It must also be understood that some appliances (Class1) rely upon the fixed wiring of the socket to ensure continuity of the Earth connection. These tests ensure the appliance under test has the correct Earth connection resistance but cannot ensure the continuity within the Fixed wiring of the supply and that further Fixed wiring periodic tests are required.

### 2. ABOUT REACTION GROUP

Reaction Group is committed to providing a quality cost effective PAT Testing Service to our Customers believing that our success is based on the success of our customers. We believe in an open and honest relationship and will endeavour to meet our customer requirements where practically possible.

### 3. THE LAW

The Code of Practice which was prepared by the Institution of Electrical Engineers with a view to determining the inspections and tests necessary to ensure that electrical equipment is maintained properly so as to prevent danger. Although some references may be made to legislation within this document, the specific legislation should be consulted.

The legislation of specific relevance to electrical maintenance is:

- The Health and Safety at Work Act 1974
- The Management of Health and Safety at Work Regulations 1999 (amended 2006)
- The Electricity at Work Regulations 1989
- The Workplace (Health, Safety and Welfare) Regulations 1992
- The Provision and Use of Work Equipment Regulations 1998

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**4. DEFINITIONS**

- **BASIC INSULATION**  
Insulation applied to live parts to provide basic protection against electric shock and which does not necessarily include insulation used exclusively for functional purposes.
- **CLASS 1 EQUIPMENT**  
Equipment in which protection against electric shock does not rely on basic insulation only, but which includes means for the connection of exposed-conductive parts to a protective conductor in the fixed wiring of the installation.
- **CLASS 2 EQUIPMENT**  
Equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as supplementary insulation are provided, there being no provision for the connection of exposed metalwork of the equipment to a protective conductor and no reliance upon precautions to be taken in the fixed wiring of the installation
- **CLASS 3 EQUIPMENT**  
Equipment in which protection against electric shock relies on the supply from a separated extra low voltage source (SELV), such as an isolating transformer to BS EN 61558.
- **EARTH BOND TESTING**  
Earth bond Testing is required on Class 1 Appliances to ensure there is a suitably low resistance between a metal plane on the appliance and the earth pin of the plug. Earth bond tests are designed to stress the Earth bond connection to ensure a satisfactory earth connection is present. Our test equipment has capability for Earth Bond Measurement at 100mA, 4A, 10A and 25A. It is recommended that Earth bond tests are performed at least 1.5 times the fuse rating in the plug top. It is however recommended that IT equipment is tested using the 100mA soft test current.
- **INSULATION TESTING**  
Insulation Testing is used to measure the Insulation Resistance of the appliance to ensure that no breakdown of the insulation has occurred. On 230V equipment 500Vdc is applied between live conductors and the body of the appliance.

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- **LEAKAGE TESTING**

Leakage Testing is used to measure the full leakage current of an appliance in situ. The supply voltage is applied to the appliance and the difference in currents flowing in the Live and Neutral is measured.

- **POLARITY TESTING**

Polarity Testing is performed on Class 1 Appliance cord sets and Extension leads. The Polarity tests ensure there are no breaks or cross wiring in these appliances.

- **VISUAL INSPECTION**

This test involves an in depth check of the visual integrity of the plug, flex, fuse and case of the Appliance under test. Power is required to be OFF for a complete visual inspection to take place.

### 5. INSPECTION AND TESTING

Reaction Group shall endeavour to minimise the disruption to your working environment, however power to the appliance under test requires to be switched OFF for the testing to be completed. Should this disruption be unacceptable Reaction Group offer an out of hour's service or the equipment can have a visual inspection only.

- Equipment will be shut down in a controlled fashion.
- Appliance type shall be defined and tested appropriately.
- Upon completion of testing, the appliance description, location and test results shall be input into Reactions PAT software.
- Bar-coded test label shall be attached to appliance. A green PASS label or RED FAIL label shall be attached to the appliance.
- FAILED appliances will be reported to the site contact.

### 6. LABELLING

- All tested appliances will be appended with a unique bar-coded & numbered asset label, Appliance type shall be defined and tested appropriately.
- Appliances which PASS the tests shall be appended with a green PASS test date label.
- Appliances FAILING the combined tests will be appended with a RED FAIL label.
- The labels used by Reaction are made from a high quality polyester gloss material.

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### 7. MICROWAVE LEAKAGE

Additional Requirements for Microwaves are covered by the BS EN 60335-2-25 Safety Standard. Reaction Group will perform additional tests to ensure the appliance under test is working optimally, this involves the measurement of the microwave leakage to ensure that the leakage does not exceed the recommended 50 W/m<sup>2</sup>

### 8. PERIODICITY

Reaction Group will as standard perform these tests on a yearly basis or on a period as required by the customer. In consecutive years a notification will be sent to the nominated person before the retests are due to allow adequate provision for the retesting to be scheduled.

### 9. REPORTS

Upon Completion of the testing a report shall be generated detailing the tests and results undertaken. This report shall be forwarded to the nominated customer contact. Reaction Group will provide the reports in pdf format and emailed to nominated customer contact.

### 10. RISK ASSESSMENT

Reaction Group is committed to working in a safe environment for its own employees, customer employees and visitors to customer premises at the time of testing. As such specific hazards in the testing environment have been identified in Reactions Risk Assessment RA-01, and can be discussed with the duty holder prior to commencement of the works.

## METHOD STATEMENT

## METHOD STATEMENT REVIEW

**Written by:** Mike Holland-Porter**Position:** Technical Director**Date:** 14/02/2020**Review Date:** 14/02/2021

This Method Statement is to assist with the process of carrying out Portable Appliance Testing activities on customers sites and works in conjunction with RA-01 PAT Engineer risk assessment.

If the work activity changes or deviates from that originally envisaged, we will seek further advice and request an amended method statement.



Mike Holland-Porter - Technical Director