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# Testing a Class I Appliance

**The IEE Code of Practice for In-Service Testing and Inspection of Electrical Equipment recommends the following:**

**1.** Formal visual inspection **2.** Earth continuity **3.** Insulation resistance / Protective conductor current **4.** Functional checks

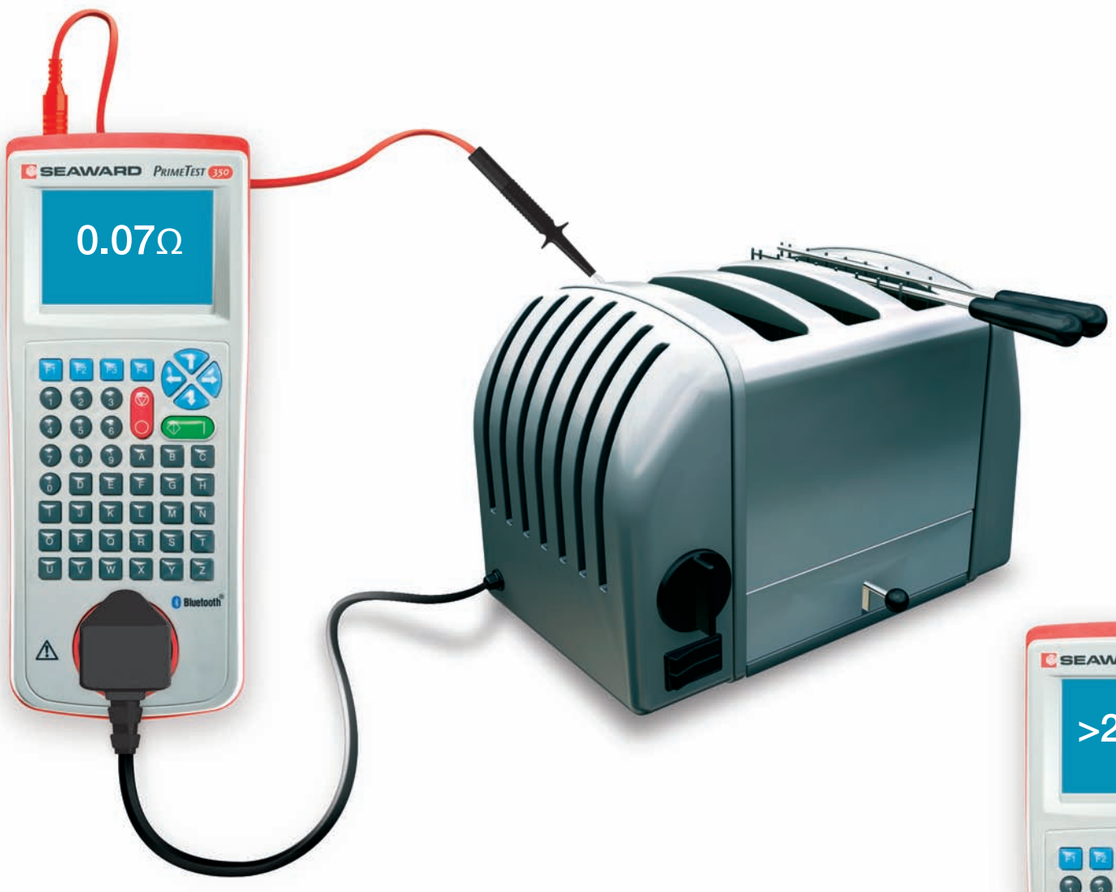
## 1 Formal visual inspection

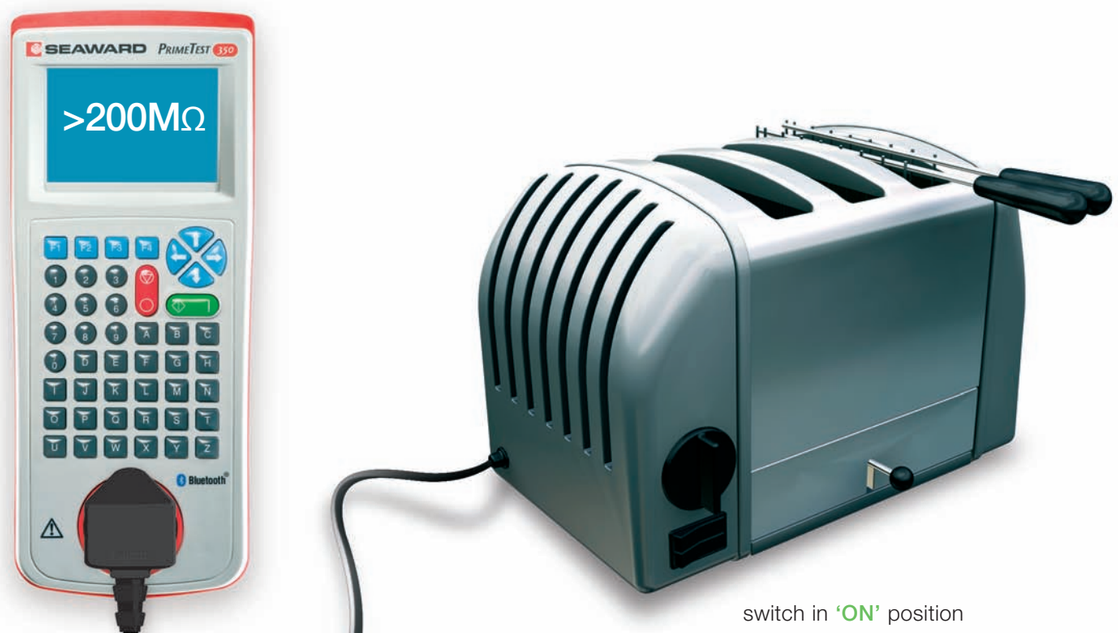
The formal visual inspection should include the following as a minimum:

**a)** Is the fuse rating correct **b)** Is there damage to the casing **c)** Is there damage to the mains plug or cord

## 2 ◀ Earth Continuity

A continuity test should be made between the earth pin of the mains plug and all exposed metal parts. This may require multiple tests on a single appliance.

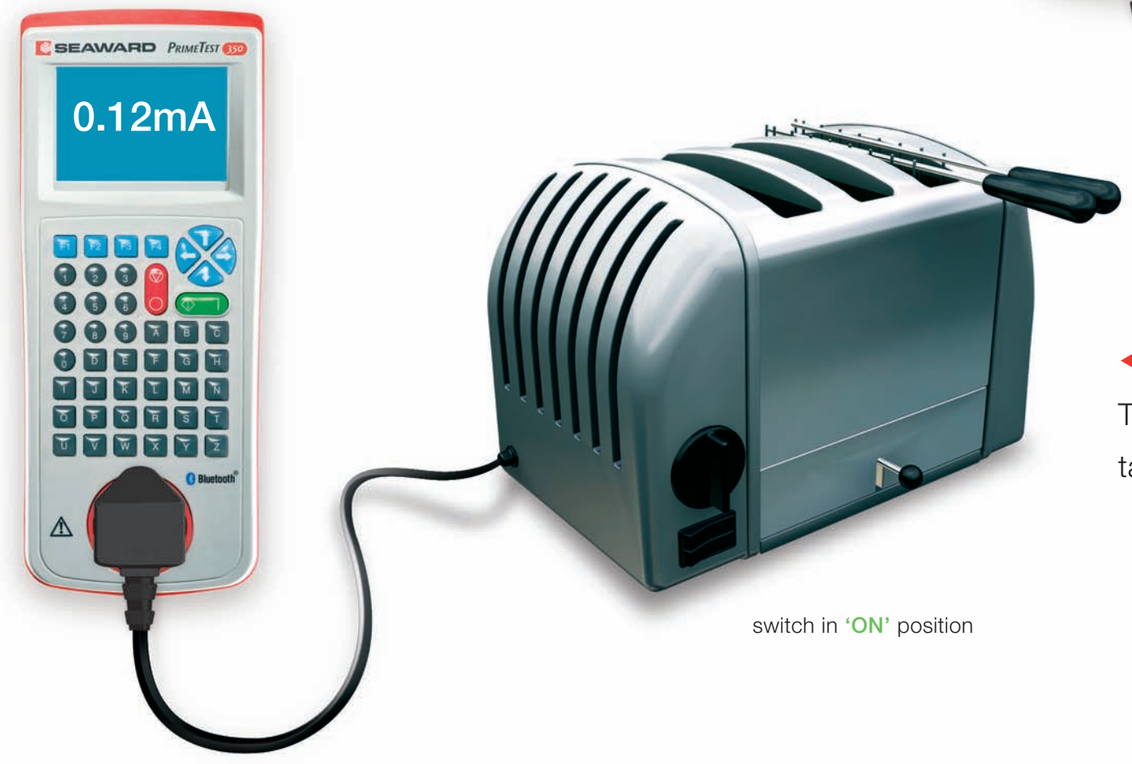



switch in **'ON'** position

## 3 Insulation Resistance ▶

Appliances should not be touched whilst carrying out insulation resistance tests. All power switches must be in the 'on' position. All covers should be in place.




switch in **'ON'** position

## ◀ Protective Conductor Current

The equipment must be switched on and so suitable precautions should be taken when testing equipment with moving parts or heating elements.

| Pass/Fail limits for Class I Equipment | |
|---|---|
| Earth continuity | (0.1 + R)* ohms |
| Insulation resistance | 1Mohm |
| Protective conductor current | Portable or hand-held Class I equipment - 0.75mA |
| | Class I Heating appliances - 0.75mA or 0.75mA per kW whichever is greater, with a maximum of 5mA |
| | Other Class I equipment - 3.5mA |

## 4 Functional Check

Ensure that the appliance is working properly.

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Part No: 998A110
Rev 2

For your Free Guide to PAT Testing email sales@seaward.co.uk

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# Testing a Class II Appliance

**The IEE Code of Practice for In-Service Testing and Inspection of Electrical Equipment recommends the following:**

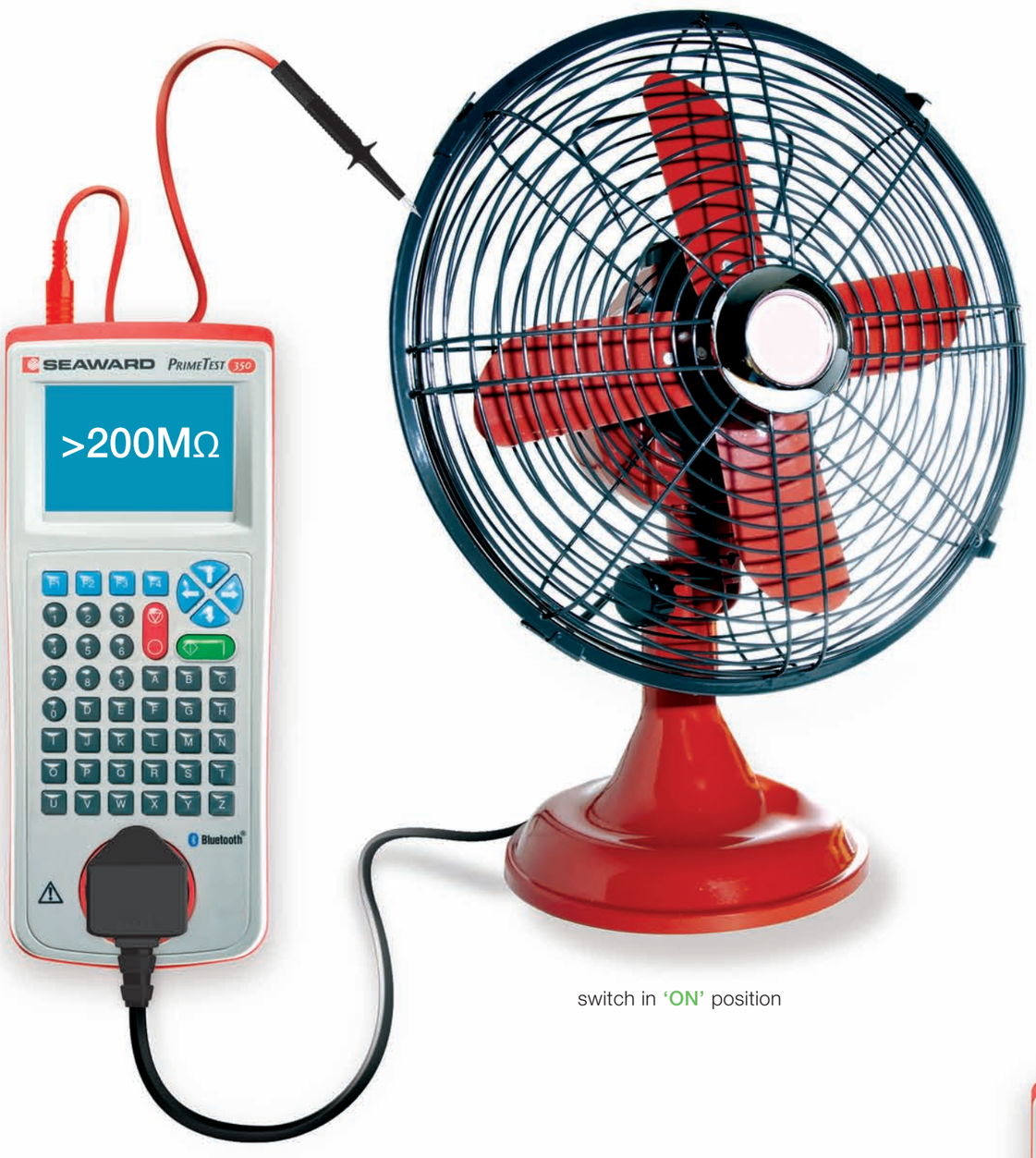
**1.** Formal visual inspection **2.** Insulation resistance / Touch current **3.** Functional checks

## 1 Formal visual inspection

The formal visual inspection should include the following as a minimum:

**a)** Is the fuse rating correct **b)** Is there damage to the casing **c)** Is there damage to the mains plug or cord

## 2




switch in **'ON'** position

### ◀ Insulation Resistance

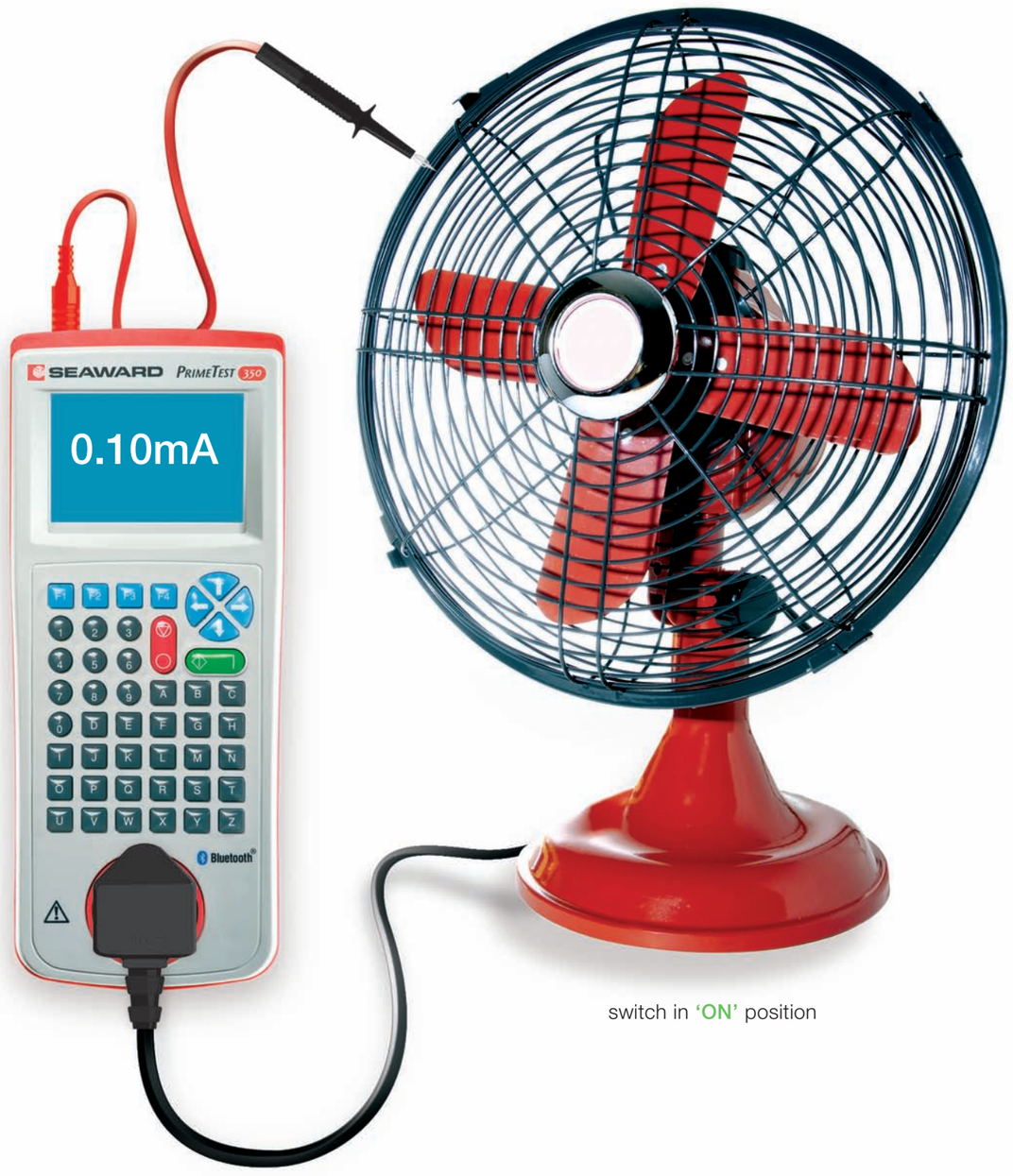
Appliances should not be touched whilst carrying out insulation resistance tests. All power switches must be in the 'on' position. All covers should be in place.

The test probe should be connected to any exposed metal parts or parts of the enclosure where the insulation may be suspect, for example, where conductive material may have accumulated.

### Touch Current ▶

The test probe should be connected to any exposed metal parts or parts of the enclosure where the insulation may be suspect, for example, where conductive material may have accumulated.

The equipment must be switched on and so suitable precautions should be taken when testing equipment with moving parts or heating elements.




switch in **'ON'** position

## 3 Functional check

Ensure that the appliance is working properly.

| Pass/Fail limits for Class II Equipment | |
|---|---|
| Insulation resistance | 2Mohms |
| Touch current | 0.25mA |

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