

# iTest Pro<sup>®</sup> ST007

## ELECTRICAL SOCKET TESTER

Professional device for testing  
the socket and the GFCI  
connected to the wiring system



ENGINEERED IN GERMANY

[www.itestp.com](http://www.itestp.com)

# iTest Pro®

Dear Customer,

We Thank you for purchasing our product,  
we are certain that it will assist you greatly.  
For your safety and knowledge of the product's  
features and advantages,  
please read this manual prior to use.

Our technical support team is available via  
the following channels:

Web site: [www.itestp.com](http://www.itestp.com)

Email: [support@offenheimer.com](mailto:support@offenheimer.com)

Tel: +49 030-346554207



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## GENERAL SAFETY



### Warning

This manual contains provisions and warnings that are crucial for the user's safety, and for the product's maintenance and function.

Please read this manual carefully and with high attention until full understanding; Failure to comply with the operating provisions could cause death or severe injury.

To prevent electrical shock, it is crucial to take all safety measures when working with voltages over 30V AC or over 60V DC.

This product should be operated solely by a skilled person that understands the consequences under the conditions.

Constantly verify that the product is functioning properly, and that there are no indications for defect or damage; Do not operate the product if its damaged.

Please use additional caution measures such as defensive gloves, goggles etc.

The manual and provisions are being updated timely. You can find the most updated manual and information on our website: [www.itestp.com](http://www.itestp.com)

### Definitions of symbols:



equipment complies with relevant EU Directives



alternating current (ac)



caution - risk of danger & refer to instructions



end of life disposal of this equipment should be in accordance with relevant EU Directives

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## 1. INTRODUCTION

### 1.1 Review

Verify that the product and the packing does not indicate any signs of damage. If there are signs of such, please contact your distributor immediately.

### 1.2 Description

The **ST007** will test the socket wiring and will indicate exactly each of the faults in the wiring system.

The **ST007** will check the operation of the GFCI and if the GFCI is damaged.

**! Note:** The **ST007** does not check the earth loop impedance which is a necessary test. To perform this test, you should use a Loop tester device. You can find this device and many other testers in our website: [www.itestp.com](http://www.itestp.com)

### 1.3 Health & Safety

Health and Safety regulations require that electrical installations will be checked periodically for satisfactory operation. The presence and quality of the wiring and of the protective device such as GFCI is crucial part of the check. Increasingly, protective devices are used for the Ground circuit, just as fuses or breakers are used in the Hot circuit. These GFCI's can be sensitive to test currents used during a temporary measurement link and trip out easily, which can cause both nuisance and loss of data in computer systems. More modern electronic protective devices are particularly sensitive, even being tripped out by instruments which were usable with the earlier electro - mechanical types.

## 1.4 Variants

The **ST007** is a plug device that plugs straight into a 16A socket.

## 2. PRODUCT SAFETY INFORMATION

### 2.1 Precautions

The design of this product was made while taking under high consideration your safety. Nevertheless, please Pay attention to the following warnings and provisions prior to use.



#### Warning

Prior of use, please examine and verify that the product is not defected. Verify that the unit is without dust, grease and moisture. Also examine any accessories or components related to the product. Please do not use or operate if there is a defect of any kind.



#### Warning

If the **ST007** does not power-up and none of the indicators illuminate this does not necessarily mean the circuit under test is dead. E.g. the Ground and Neutral lines could both be open circuit, or the mains supply voltage could be low but still at a dangerous level.



#### Warning

Wherever possible verify that the **ST007** is in a good working condition prior to use by testing it in a known correctly wired socket



### **Warning**

If the **ST007** diagnoses a fault condition in the wiring under test, always examine the wiring or have the wiring examined by a skilled person.



### **Warning**

Do not use the **ST007** at main incoming distribution boards, or any other area which would require a Cat. III / 300V instrument.



### **Warning**

Do not connect the **ST007** across two Phases of a three Phase supply.



### **Warning**

The **ST007** will not correctly test circuits using isolation transformers.



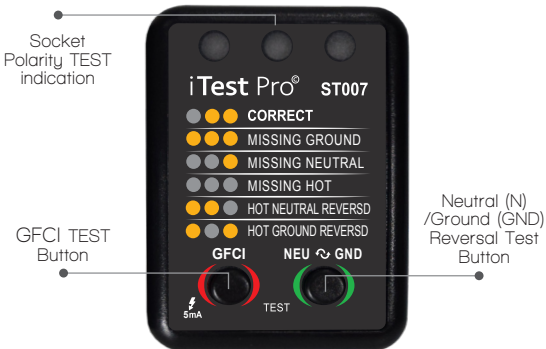
### **Caution**

**Prevent severe mechanical shock or vibration and extremely high temperature.**

### 3. OPERATION

#### 3.1 Description & Indicators

The **ST007** uses 3 LED's to indicate wiring faults.



**! Note:** The indicators will not illuminate if there is a wiring fault (missing Hot)

#### 3.2 Using the ST007

##### **Caution**

Please confirm that you have read carefully the precautions (section 2) and examined the product in a known correctly wired socket.



In order to start the test, you should Plug the **ST007** into the socket you wish to examine. The test should be started Automatically and the result should be indicated in few seconds.



### **Warning**

In case that the **ST007** does not turn on and none of the LED's illuminate this could indicate that the wiring is incorrect or that the supply voltage is low (REF. section 2: precautions). further examination of the wiring is necessary. Prior, please verify the **ST007** in a known correctly wired socket to confirm the necessity of further examination of the wiring.

## **3.3. Tests**

There are 3 major tests:

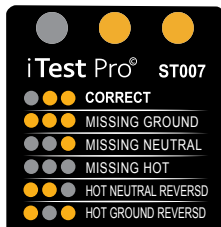
- Automatic – 1.) Socket Polarity TEST
- Manual –
  - 2.) NEUTRAL (N)/Ground (GND) REVERSAL TESTING
  - 3.) MANUAL TEST - RGFCI TESTING

## **3.4 Start the automatic tests**

Plug the **ST007** into the socket you wish to examine. The **ST007** will run an automatic test routine and will examine the socket for 5 seconds and will indicate the test result.

## 4. AUTOMATIC TEST RESULTS

### 4.1 Correct result



- The Ground is existent
- The Neutral is correct
- The Hot is correct
- There is no reversal between the Hot to the Neutral
- There is no reversal between the Hot to the Ground

After the result is correct You can proceed to Manual tests.

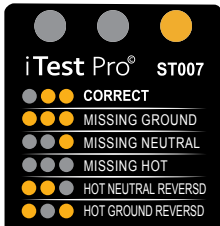
### 4.2 Fail result

In case that the result is different from correct result you should compare the status of the indicators with following figures:

### 4.3 SOCKET POLARITY TEST Failure



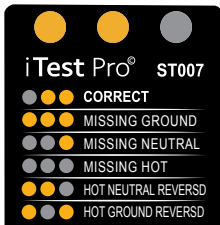
- Missing Ground



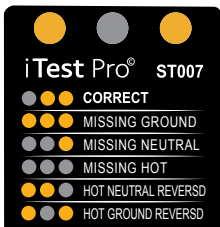
- Missing Neutral



- Missing Hot



- Hot - Neutral reversal



- Hot - Ground reversal

## 5. NEUTRAL / GROUND REVERSAL TEST

In order to complete the polarity test you should continue to Neutral / Ground Reversal Test.

Start the Neutral / GROUND Reversal Test:



Press  
Neutral  
/Earth (PE)  
Ground  
Button

### 5.1 Correct result

The GFCI will not be tripped.

### 5.2 Fail result

The GFCI will be tripped.

**! Note:** ST007 can detect Neutral-Ground reversal only if there is GFCI device by making current leakage higher than 5mA between Hot to Neutral.

### Warning

If the GFCI is damaged the **ST007** will consider the test as correct even though it might be not!

## 6. MANUAL TEST - GFCI TESTING

In case that you have finished the Neutral / Ground Reversal Test you can proceed to GFCI Test.

**Start the GFCI test:**



### 6.1 **Correct result**

the GFCI will be tripped.

### 6.2 **Fail result**

the GFCI will not be tripped.

### 6.3 **GFCI in the wiring under test**

**!** **Note:** The **ST007** should operate satisfactorily on circuits protected by most 5mA or higher GFCI's. Factors which should be considered are where equipment, such as computers may introduce Earth leakage currents due to internal noise filter circuits. This Earth leakage current can approach the trip threshold of a GFCI, and the **ST007** test current will add to it with the possibility of the protective device tripping.

### **Warning:**

Before using the **ST007** on critical circuits which supply computers, medical equipment, or other systems where loss of supply is unacceptable, ensure these are not being operated, in line with normal practice when using electrical test equipment.

## 7. **MAINTENANCE**

### 7.1 **Preserve long product life**

For long maintenance of the product, pull out the **ST007** from the socket in the end of each test and do not keep it plugged in the socket for long time.

## 7.2 Calibration

To keep the accuracy of measurements made using your **ST007**, **iTest Pro®** recommends that it is returned at least once a year to an approved Calibration Laboratory for recalibration and certification.

**iTest Pro®** can offer you this service.  
Please contact our Service Department for details.  
Email: [support@offenheimer.com](mailto:support@offenheimer.com)  
Tel: +49 030-346554207

## 7.3 Cleaning

The product can be cleaned by a soft and dry fabric. Please do not use moisture, abrasives materials, solvents or any detergents which can be conductive.

## 7.4 Repair & Service

There are no spare parts in the unit. However, our customer service department will act immediately to quote and repair any damage or defect that occurs beyond the warranty period.

## 7.5 Storage Conditions

To prolong the product's life period, The product should be kept in dry conditions and far from heat or sunlight.

For the safe keeping of the product, it should be kept and stored in the related case supplied inside the packing.

we highly recommend that the product will not be held in tool box next to other tools where it can be damaged.

## 8. WARRANTY AND LIMITATION OF LIABILITY

This **iTest Pro®** product is guaranteed to be free from defects in material and workmanship under standard usage and service. The warranty period is 3 years and commences on the date of receipt by the end user. This warranty ranges only to the original buyer or end- user customer, and does not apply to fuses, disposable batteries, test leads or to any product which, in **iTest Pro®** estimation, has been misused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation, handling or storage.

**iTest Pro®** approves resellers shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of **iTest Pro®**. **iTest Pro®** warranty responsibility is limited, at **iTest Pro®** discretion, to one of the following: refund the purchase price, or repair, or replace a defective product which is returned to **iTest Pro®** within the warranty period. This warranty is the customer's sole and exclusive remedy and is instead of all other warranties. This warranty shall be applied on our products solely, and it will overcome any other warranty, written, expressed or implied, as well as but not restricted to any implied warranty or fitness of such warranty to a certain purpose.

The restrictions of an implied warranty or restrictions relating to consequential damages are not always recognized and valid in some jurisdictions, as a result the restrictions mentioned in this warranty could not be valid on every customer. in such cases the invalidity of such restrictions shall not effect on the other terms in the warranty and they should be applied and valid on the customer.

**The mentioned above is without subtracting your statutory rights.**



## 9. SPECIFICATION

# iTest Pro<sup>®</sup> ST007

### ELECTRICAL SOCKET TESTER

The **ST007** is one of the leading socket testers to test the socket and give full indication for the socket polarity. The tester also indicates the existence & the Quality of the GFCI in the wiring system.

**Operating voltage & Frequency:** 110-120VAC 60Hz

**Temperature Range:**

-15°C to 45°C

**ST007 Dimensions:**

60mm x 50mm x 50mm

**Weight:** Approx 0.1kg

**Power supply:**

From mains

**Power consumption:**

< 0.25W

**Overvoltage category:**

Cat II / 300 V

**Pollution degree:** 2

**Warranty:** 3 years

**Safety:** Complies with UL and CSA



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