Your guide to easy

Socket Outlet Testing

and instructions for use of:

Loopcheck 106
Loopcheck 107
Miniature
Loop Testers

Caution

Before use check the tester case and pins for any signs of damage.

Do not use if the case is broken or damaged. To check the correct functioning of the tester plug it into a known correctly wired live 13A socket.

To clean the tester use only a soft dry cloth.

This unit is maintenance free and contains no user serviceable components. In the unlikely event that this unit malfunctions, it should be withdrawn from service and returned to Kewtech. This tester must not be used in a manner not specified by Kewtech.

Who should be testing socket outlets?

Basically anyone who wants to know the mains socket about to be used is correctly wired and safe to plug into.

In particular those with a responsibility of care for their own homes, employees and the public.
- Home owners
- Land lords
- Local authorities
- Police forces
- Hospitals, including home visits
- Schools and colleges
- Sports facilities
- Military housing and education
- IT managers
- Heads of department
- Health and Safety officers

Good work practice

Use of a Socket Tester will be seen to show a responsible attitude to electrical safety, plus the very reasonable price of Kewtech testers means they place a cost effective solution in the hands of many more users at the front end of responsibility and care.

BS EN
61010-1

The simple solution for testing socket outlets

Logical 'Green for Go'

Bright, easy to read LEDs

Clear audible indication

Error free testing

What a Kewtech tester WILL tell you

The Loopcheck 106 and 107 are unique in that they are the only socket testers that carry out a loop test at mains frequency to check the actual condition of the wiring.

Particular emphasis is placed on detecting very dangerous wiring conditions such as reversed live earth connections, disconnected wires and high earth values.

What a Kewtech tester will NOT tell you

Kewtech wiring testers are for simple first line diagnosis for use by those with and without electrical skills. If a problem at the socket is shown it should immediately be investigated by a suitably qualified electrician or contractor recognised by organisations such as:

NICEIC (www.niceic.com)

ECA (www.eca.co.uk)

ECA of Scotland (www.select.org.uk)

You can also contact our customer helpline on **01494 792 212** during business hours.

Product features

Bright, durable LEDs out-perform fragile, low visibility neons

Patented 'Fault Locate' shows actual position of Pin – Live, Neutral or Earth

Unique new Earth Loop Test

Tough, smooth-contoured construction

Eye-catching body colour – easy to find in toolkit

Advanced electronic circuits mean positive and reliable indication

Modern production methods ensure great performance and value

Audible signal gives additional information

Microprocessor control with built-in self check

Loopcheck 106 and 107

230V 13 amp BS 1363 Socket Testers with self-check and patented 'Fault Locate' plus Earth check

First Socket Tester to indicate actual fault location – Live, Neutral or Earth

Unique earth loop test at mains frequency to check the actual condition of the wiring

Built-in automatic visible self-check ensures total confidence in correct functioning at all times

Tri-coloured LEDs (green, red, orange) give clear and positive indication of Good wiring plus 17 possible fault conditions

This is an example of 'Fault Locate' showing live, neutral, reverse. LEDs flash red plus warble tone.

Loopcheck 107

230V 13 amp BS 1363 Socket Tester with self-check and patented 'Fault Locate' plus Earth check plus polarity check plus RCD check

This is an example of Earth Loop Test showing green – good less than 1.8Ω.

Instructions for use

Models covered Loopcheck 106 and 107

Note: This tester is intended for use only on a 230V mains 13A socket outlet. (BS 1363 configuration)

1 Plug the tester into a 13A socket outlet.

2 Switch on.

When first powered up the LEDs in the orange triangle flash green then red once as it performs a self test. This is immediately followed by a socket correct wiring test. The LEDs will show all green with a continuous tone if the wiring is correct.

Any other LED colour or warble tone indicates incorrect wiring and all further tests are inhibited. Check the indication displayed by the LEDs against the table for an indication of the wiring status.

After approximately 4 seconds the green LEDs turn off.

3 Read the socket outlet condition.

The tester will then check the condition of the wiring and show the result in the three LED Loop Test bar. Green LED with continuous tone indicates the wiring condition is good with safety earth path less than 1.80Ω.

Flashing amber LED with warble tone indicates the incoming mains should be checked to see if the system is using an earth rod for protection. Safety earth path is between 1.80Ω and 92Ω. If the system is protected by an earth rod then an RCD should be present.

Flashing red LED with warbling means the earth path is over 93Ω. This may not be dangerous but

the value should be checked using an earth loop tester with a read out to check the value meets the wiring regulations.

The tester is designed not to trip RDCs.

If the main distribution board is fitted with an RCD and it trips during the test this could be:

a) there is already high leakage current between live and earth

b) the earth and neutral are reversed.

Either needs investigation by a qualified electrician.

Loopcheck 107 additional functions

Polarity Check

4 The LEDs in the orange triangle flash green with a continuous tone if it is correct.

5 If the LEDs flash red with a warble tone this is potentially a very hazardous condition – immediate attention required.

RCD Check (30mA RCD)

6 Press the purple test switch for at least half a second to start the RCD test.

7 If the LED goes out and the tone stops the RCD has tripped and is working.

If the LED remains illuminated and the tone continues, the test button has not been pressed for long enough to start the test. If the LED in the Loop Test bar goes out and the three LEDs in the orange triangle flash amber accompanied by a warble tone, the test current has been applied for 300ms and the RCD has not tripped. It should be investigated.

Loopcheck 106 and 107 specifications

Socket wiring check

Three green LEDs and a continuous tone indicate that the socket is correctly wired. Earth, live and neutral are all in the correct position. Any other indication, such as open circuit or swapped connections, is shown by an orange or red LED accompanied by a warble tone. The socket is incorrectly wired and all further tests are inhibited.

Note: Like all socket (and other similar) testers a neutral – earth swap cannot be detected unless the distribution board is fitted with an RCD in which case the RCD will trip (see page XX).

Socket condition check

This is carried out by injecting a loop impedance test current between live and neutral and neutral earth. If during the pre-test there is an indication the earthed metal work could raise to touch voltage of greater than 25V the test is inhibited.

The result is shown by one of three LEDs.

Loopcheck 107 only

Polarity test

This is a capacitively coupled pad. The user is the earth reference point for true earth.

This test is used to indicate there is not a live neutral swap of the mains supply at the supply entry point to the premises.

RCD test (30mA RCD only)

Operation of the test switch injects a test current of 30mA live to earth to provide an operational check for the RCD. The test current is restricted to 300ms.

Specifications

Rating 230V. Input current: <18mA (L–E <7mA)

Frequency: 50Hz.

Suitable for use in environmental conditions:

Temperature 0–40°C

Humidity: <95% non-condensing

This tester is not intended for continuous use – do not leave connected in a socket for longer than 2 minutes.

Kewtech Corporation Limited

Midas House, Unit 2b, Stones Courtyard, High Street, Chesham, Bucks HP5 1DE
T: 01494 792 212 F: 01494 791 826
E: sales@kewtechcorp.com
www.kewtechcorp.com

Loopcheck 106 and 107 Wiring Indication

LEDs mark actual pin location Live, Earth, Neutral

Condition number	Wiring condition	Socket Wiring			LED display	Buzzer
		N	E	L		
1	Correct	N	E	L		Continuous
2	L-E reverse	N	L	E		Warble
3	L-N-E miswire	E	L	N		Warble
4	L-N reverse	L	E	N		Warble
5	L-N-E miswire	L	N	E		Warble
6	Faulty N / L-E miswire	NC	L	N		Warble
7	Faulty N / E miswire	NC	E	L		Warble
8	Faulty N	NC	E	L		Warble
9	Faulty N / L-E reverse	NC	L	E		Warble
10	Faulty E / L-N reverse	L	NC	N		Warble
11	Faulty E	N	NC	L		Warble
12	Faulty E / N miswire	E	NC	L		Warble
13	Faulty E / L-N miswire	L	NC	E		Warble
14	Faulty L / N-E miswire	L	N	NC		Warble
15	Faulty L / E miswire	N	L	NC		Warble
16	Faulty L / N-E reverse	E	L	NC		Warble
17	Faulty L / N miswire	L	E	NC		Warble
18	No mains	NC	NC	NC		
19	Poor earth	NC	NC	NC		Warble

Note: SOK LEDs will also flash to indicate fault condition.

11   12   13   14   15   16   17   18   19   20